

The world is doomed... Let's make apps!

Sliding Technology Talent Towards Social
Entrepreneurship

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Abstract

This project investigates the motivations of technology entrepreneurs and social entrepreneurs for starting new ventures. The driving personal motivations and external, systemic influences on entrepreneurs' decision making is explored and structured through analytical frameworks. Research consists of a comprehensive literature review that establishes the context and foundational knowledge around the catalysts of entrepreneurialism, both in the high tech and social enterprise sectors; a series of semi-structured one-on-one interviews with technology and social entrepreneurs; and a series of expert interviews with venture capital investors and organizations that support startups. The output of this research is new, primary-research driven insights on entrepreneurial decision making; a stakeholder matrix and systemigram that visually summarizes the problem system; a new framework with which to examine the challenge of shifting technology entrepreneurs towards social benefit efforts; and a series of design recommendations to stakeholders who benefit from implementing that shift.

Keywords: entrepreneurship, technology startups, social enterprises, systems thinking, psychology of motivation.

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Prologue

There are a number of stories from the tech startup world motivated me to embark on this research. One example was a tale of two different organizations that used unmanned aerial vehicles (commonly known as “drones”) for two vastly different purposes.

The first is an organization called Air Shepherd, which deploys drones to surveil African black rhinos in various regions in Sub-Saharan Africa. These beautiful animals are one of the most threatened species on the planet. The population of black rhinos from 65,000 in 1970s to about 2500 in recent years, all due to poachers killing them for their lucrative horns, selling them in the illegal ivory trade. However, there is some hope - in places where Air Shepherd operates, the rate of black rhinos killed per month had dropped to zero.

The second organization is a tech startup in Toronto that also builds drone technology. Their product, however, is a drone that flies around stadiums during concerts and sporting events with a mounted camera. Fans at the event could use a smartphone app to control the camera and take photos of themselves and their friends, and were made available to

them after the company slapped a “Sponsored by Nike” or other such marketing content around the image.

I had the opportunity to personally meet the two co-founders of this company. They were young, driven individuals with a lot of talent and potential in business and technology, as well as years ahead of them to take risks and do impactful things. Why did they choose to spend their prime years on this “problem”, versus a number of other issues they could work on?

At around the same time I began this research, I found myself leaving a well paying tech job and taking a risk by joining a fledgling tech startup - one whose value proposition leans more towards consumer products and less social benefit. For me, this research has been a way to better understand why someone like myself, and peers similar to me, are systematically encouraged to make such career choices, and what avenues we may have to contribute to society regardless of our chosen path.

1. Introduction

1.1 The Rise of Technology Startups

Entrepreneurialism, the pursuit of new business ventures, is a major driver of economic activity in any developed nation (Carter, 2001). For the individual citizen starting a business is a personal choice that can provide autonomy, the ability to do something impactful, and a multitude of other opportunities not realized by conventional work (Jayawarna, 2011).

In the 2010s, new technology companies, or *tech startups*, are considered a major area of new venture development. This boom of new startups has been made possible through two major developments. The first is the proliferation of personal computing devices including the success of smartphones, catalyzed by the release of the iPhone in 2007. As of 2015, 68% of Canadians (Catalyst, 2015) and over 2.5 billion people worldwide own a smartphone (Meeker, 2016). The second is the simplification of online hosting services, notably Amazon's Web Services, which allow companies to quickly and cheaply host software services and content (Meyer, 2015). The combination of these advancements in

computing has made it is easier than ever to establish a startup that reaches millions (Lu, 2014), making technology startups an attractive area for entrepreneurs.

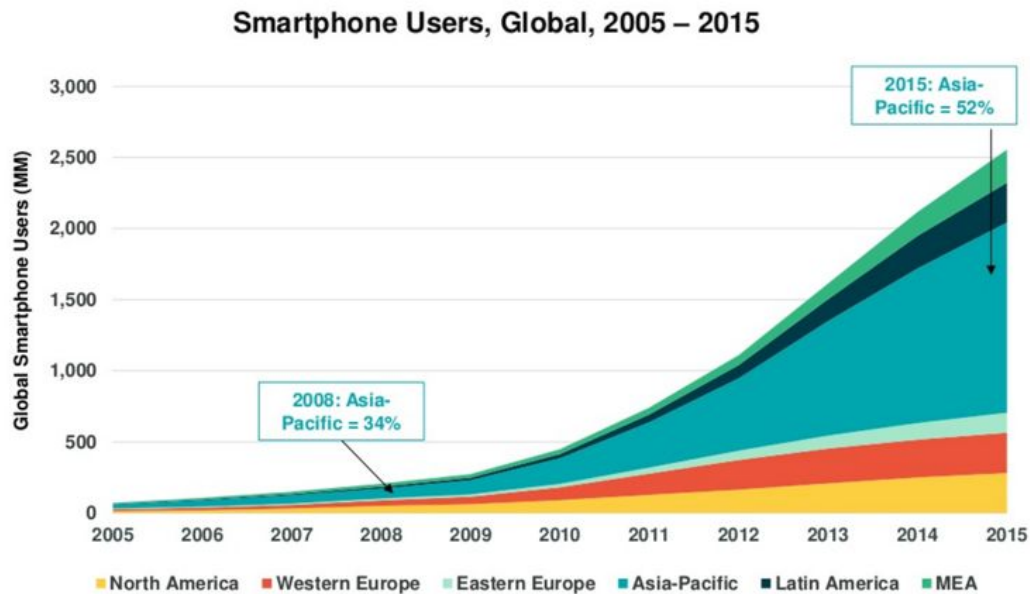


Figure 1. Smartphone Users, Global, 2005-2015. Retrieved from <http://www.kpcb.com/blog/2016-internet-trends-report>

A number of these tech startups have built products and services that have completely changed the face of entire industries, such as Uber for transportation (taxi) services and AirBnB for lodging and travel (disrupting the traditional hotel businesses). Others have created entirely new forms of value, such as Facebook for online connectedness.

Some of these tech startups seek to grow into the next giant company by going through an initial public offering (IPO), while others exit in a shorter timeline through mergers and acquisitions by incumbent companies in similar or adjacent sectors for large sums of money. A large number of these new technology companies have decided to tackle “solutions seeking a problem”, often leading to unused products with unsustainable business models, and no market need (Kumar, 2014).

1.2 The rising need for Social Enterprises

The world continues to face an increasing number of environmental and social challenges. Threats to stability include global challenges such as healthcare, education, and food security, as well as existential crises for humanity like climate change. These social issues are well recognized by international bodies such as the United Nations, whose Millennium Development Goals, and their successor, the Sustainable Development Goals (Sachs, 2015), are discussed and debated increasingly in the news media and in politics.



Figure 2. The Global Goals for Sustainable Development. Retrieved from <http://www.globalgoals.org/>

New entrepreneurial ventures have also sprung up in order to tackle these problems, commonly referred to as *social enterprises*. Social enterprises may be for profit or not for profit, but what they have in common is that their business models seek to address environmental and social issues. The *Stanford Social Innovation Review*, a leading resource on social enterprises, identifies the key sectors as poverty, urban development, healthcare, energy and the environment.

1.3 An Opportunity Cost

Social enterprise startups face similar challenges to tech startups. Social enterprises can fail through lack of funding, inability to innovate, failure to build the right team, or pursuit of the wrong business model (Rykaszewski, 2013), the same barriers that are also experienced by tech startups (Kumar, 2014). Simultaneously, social enterprises can use the same talent and technological ability to scale as tech startups to nudge their pursuits towards success.

Despite these similarities, the attractiveness of working for consumer technology startups, with their potential for large amounts of funding and lucrative exits (Lennon, 2013), could mean entrepreneurs who could be serving a social purpose are instead pursuing the next big smartphone app. Further, individuals working at tech startups are at a life stage willing to take career risks at new, small businesses (Jayawarna, 2011). Entrepreneurial individuals flocking to tech startups reduces the pool of people able to tackle social issues which can be seen as a major opportunity cost - it means fewer people with the skills to build scalable businesses that address the deep and complex social and environmental problems that matter to humanity.

1.4 Purpose, Scope and Limitations

Encouraging more entrepreneurs to tackle social issues is key to chipping away at them.

It is recognized that a successful new venture or innovative product or process that shifts economic resources from areas of less to more productivity is produced by the orchestration of various ideas, resources, and skills. However, entrepreneurial individuals play a crucial role in initiating and progressing such projects. (Cromie, 2000)

Yet the areas that need entrepreneurship the most are often the poorest at promoting it (Scott, 1988). It is this fact which motivates this research project and defines its purpose - to address this opportunity cost by shedding light on the decision making processes of the stakeholders in question.

This project aims to investigate the reasons why entrepreneurs in technology and social enterprise startups choose to pursue the businesses that they do. My aim is to shed light on the personal and systemic reasons these individuals end up where they are, by investigating the economic, social, and cultural climates that influence the decision making processes of entrepreneurs, as well as personal journeys of real entrepreneurs.

During this exploration, I will explore a number of questions related to this phenomenon: *What are the trends and systemic structures*

that guide entrepreneurs towards their domain of interest? What tools and methods can be used to understand this phenomenon? What are some example interventions that could address the above opportunity cost, nudging more entrepreneurs towards the field of social entrepreneurship?

The output of this inquiry is meant to be both conceptual and practical. I hope to create some formalization around how interested stakeholders can think about this phenomena with entrepreneurs. This will involve using existing tools for interrogating stakeholders and systems, as well as producing new insights and a new tool with which to view this space. This combination of insights and frameworks will be used to generate practical example design solutions, which are intended to serve as inspiration for what interested stakeholders can implement to address this opportunity cost.

These conceptual and practical goals are the drivers of the research question at the core of this project:

How might we encourage more individuals with technology skills and an inclination towards entrepreneurship

to pursue businesses that tackle social and environmental problems?

It is important to note that this research is not meant to answer the core research question or the sub-questions of inquiry definitively.

Instead, this project aims to help understand the contexts surrounding these challenges and to provide some clarity and structured knowledge around the questions by drawing upon pre-existing conceptual frameworks and generating new ones, and by making these concrete with existing new knowledge.

This pursuit begins in Chapter 2 with a literature review of academic papers and news articles that examine the contemporary context of technology and social enterprise startups. The review acts as the existing knowledge and foundation on which the primary research is built, and provides additional insights that help form the project outputs. I include news articles alongside academic papers as they are essential for understanding real events and stakeholders in the problem system as technology entrepreneurship is a rapidly changing space. They also provide a wealth of recent and relevant metrics not found in academic journals.

In Chapter 3 I outline the project design, describing the methods and approach of the primary research which will produce real data points on the subject matter, supplementing the contextual understanding built from the literature review. The primary research will also provide concrete insights from various stakeholders in the problem system, which will be reviewed in Chapter 4, finding patterns and enumerating data that will be useful in the synthesis and design stages of the project.

In chapter 5, I begin to present the output of the project, synthesizing the insights gleaned from the literature review and primary research through known analysis tools and methodologies, which act as formalized and structured summaries of the findings. I will also use the newly structured insights to form a new framework with which to think about this problem space.

In Chapter 6, I propose a number of design solutions using all the insights gathered throughout the body of this research. These insights are meant to be both practical and inspirational for those who wish to begin to address the problem area. Chapter 8 concludes the paper with a brief discussion of caveats to be aware of in this research, as well as opportunities for further research.

A potential limitation of this research is geographical in nature. Technology startups are found around the world, but this paper has a distinct view that is heavily biased towards Toronto and “Silicon Valley”, i.e. the San Francisco Bay Area, home to a vast number of tech startups. The former bias is because the primary research is conducted entirely on startups and startup stakeholders in Toronto, Canada. The second is because Silicon Valley has a disproportionately strong ecosystem (Compass, 2015) and therefore a large impact on how startups are reported on and perceived by others in the ecosystem. This fact affects this research as a number of the literature review sources are likely to be biased by the dominant nature of Silicon Valley.

This caveat creates two limitations on the research in this paper. The first, more broadly, is that this project tries to address technology startups (as well as social enterprises) generally, without full consideration for cultural and policy differences in different countries that may have an influence on the decision making process of entrepreneurs. Secondly, this means that the design solutions produced may be most (or only) effective in North American startup ecosystems, namely in Toronto and Silicon Valley.

Another limitation of this research comes from the broad definitions of technology startups and social enterprise startups. Within both of those domains there exist many sub-sectors of business - for example, technology startups include a wide range of categories of companies, from photo sharing apps to drone manufacturers, WiFi-enabled home appliance makers to marketplace companies. Though the primary research attempts to enlist a diverse group of entrepreneurs from various sectors, it is inaccurate to believe that those entrepreneurs share the same goals, influences and decision making processes as technology entrepreneurs in other completely different businesses.

2. Literature Review

2.1 Problem Background, Definitions and Contexts

In order to build up a structured understanding of the target problem, this project begins by developing an understanding of the existing contexts in which the target stakeholders, technology and social entrepreneurs, operate. The project builds this foundational knowledge through an extensive literature review, helping us understand the ecosystem and psychology behind entrepreneurs in general, and building an understanding of the present day cultural and social contexts behind the entrepreneurship boom at the center of this project's inquiry.

In order to query these two areas, this literature review draws knowledge from two complementary sources of information: traditional academic papers as well as news articles surrounding the relevant subject area. Insights from academic papers are essential to ensure that any continuing research on a topic is backed by rigorous, objective knowledge that has been interrogated through robust frameworks. From academic papers, this literature review covers the areas of entrepreneurship, the

behaviour of technology and social entrepreneurs, and more generally, the psychology of motivation.

However, literature reviews are not capable of covering the full problem context, as the subject of technology and social entrepreneurship is not only a newer subtopic of entrepreneurship, but it is a fast-moving and fast-changing field. So then, in order to have a full view of the research problem context, it is essential that news articles on the topic of technology and social entrepreneurship are included. Startup news more frequently exists as online articles rather than in printed form. Sources range from major news sites, to technology-specific online news aggregators, and even personal blogs. While these sources can provide useful insights through anecdotes as well as large-scale objective data on the topic, they also tend to provide editorial views and critiques as well. I acknowledge the importance of this subjective critique, but exclude them from the formal frameworks and design outputs created in this research.

2.2 Motivation for Entrepreneurship

The first area for review is the general subject of entrepreneurship, specifically the inquiry into of what motivates nascent entrepreneurs to

start and run a business. In addition, this inquiry attempts to understand what the decision making process of entrepreneurs looks like once their business is formed.

For most developed countries, entrepreneurship is a major driver of economic progress (Carter, 2001), and so it is important for bodies that govern a region's economy to understand what drives individuals to build new businesses and pursue entrepreneurship.

“Interest in entrepreneurship is intense in many parts of the world and this has arisen because of the association between new venture creation and economic development.” (Cromie, 2000)

This interest in entrepreneurship has lead to plenty of research on the topic of entrepreneurs and their motivations. It is important to note that it is simplistic to conceptualize motivations of entrepreneurs as singular or discrete (Jayawarna, 2011), and important to explore how motivations combine into distinctive profiles.

Before understanding entrepreneurial motivations, it is useful to consider the personalities and characteristics of entrepreneurial individuals. While there are many stereotypes in society about what characteristics are common amongst entrepreneurs, there is objective data demonstrating that the attributes of entrepreneurs include risk taking,

accomplishment, control, and creativity (Estay, 2013). People with a propensity towards entrepreneurial behaviour have also been shown to have an innate need for achievement, self-realization, independence, affiliation, competence, and power (Barba-Sánchez, 2012). Finally, though it may seem obvious due to the challenging nature of building new ventures, entrepreneurs who are successful are shown to share the quality of being extremely persistent (Holland, 2013).

The actual motivators of entrepreneurs as compared with non-entrepreneurs is well documented amongst a number of studies. The most common motivators include achievement, a desire for independence, and a higher drive for innovation and creation of new products (Barba-Sánchez, 2012; Carter, 2001; Jayawarna, 2011). Related to the desire for achievement is the desire for personal development (Jayawarna, 2011), another goal of nascent entrepreneurs.

Other common motivators include the desire for improved social status and recognition, financial success (Carter, 2001; Jayawarna, 2011), and an increased locus of internal control (Jayawarna, 2011; Barba-Sánchez, 2012). Also cited as important to some entrepreneurs is the emulation of role models, which is perhaps related to the the desire for improved social status (Jayawarna, 2011).

One particular study highlighted that gender differences in motivations also emerged – male nascent entrepreneurs rated financial success and innovation higher than females (Carter, 2001). This is relevant to my research as technology startups tend to have significantly larger proportion of male entrepreneurs - for example, a list of the “40 Hot Start-ups in Silicon Valley and New York City” listed 87 founders, of which only 3 were women (Kocialski, 2013).

An area of debate between entrepreneurship researchers is the question of economic incentives for entrepreneurs. While some research suggests that non-economic motivations are often most powerful for entrepreneurs (Jayawarna, 2011), other studies that observed different cross sections of entrepreneurs have shown contradicting results: that financial motives may be more important than non-economic concerns (Cassar, 2007).

There are contrasting reports of the importance of money when considering the dimension of timing, or progress in the new venture. One study looked at entrepreneurs that have already started their businesses, and found that the reported importance of financial success was lower than before they started (Cassar, 2007). However, other studies posit that entrepreneurs are realistic about the work required in a startup, and

expect a return on investment (Estay, 2013). These attitudes towards money may be related to the non-economic motivators around independence. In order to “be your own boss”, you also need to be able to pay yourself (and your employees) a salary, and therefore entrepreneurs hope that their business will bring them concrete financial and material results (Estay, 2013).

Further, as discussed above, the gender of the entrepreneur may also affect this preference, with male entrepreneurs rating financial success higher than their female counterparts as a reason for being an entrepreneur (Carter, 2001). Again, because of the larger proportion of male to female founders of technology startups, there is an implication that the stakeholder group of tech startup entrepreneurs is motivated by economic gain as an indicator of accomplishment.

2.3 Technology Startups

Paul Graham, a prominent Silicon Valley figurehead and venture capitalist, describes startups simply as “a company designed to grow fast” (Graham, 2012). However, the term “startup” is colloquially used today to describe a new business venture, and often one that involves some

technological product, service or capability that fuels their growth. For this research's problem area, that definition will be used, and more precisely focused on the category of information and communication technology (ICT) startups. Information and communication technology is “an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them” (Rouse, 2014).

It is useful to briefly describe characteristics of what entrepreneurs in a typical technology startup look like in this research's problem area. As stated above, they are predominantly male (Kocialski, 2013), and skew younger, with a median age between 28 to 31 (Lazauskas, 2015). A quantitative study analyzing over 100 million public profiles on LinkedIn shows that those that list themselves as a startup founder commonly have education in computer engineering, computer science, physics and electrical engineering, from schools well known for computer science, such as Stanford, Harvard and MIT. Clusters of them also have previous work experience with large technology companies, such as Google, Yahoo!, Microsoft and Apple (Hardawar, 2011).

Of interest to this research is the mindset behind the goal of startups - specifically around successful exits. An “exit” is defined as an event where the equity holders of a startup, such as the founders, investors, and some employees, get to exchange their shares in the company for actual money. This payout generally occurs either by the company going public on the stock market through an Initial Public Offering (IPO) or by being acquired by another company. In 2013, the average successful startup raised \$41 million USD, and exited at \$242.9 million USD (Lennon, 2013).

As a much revered figure in the world of technology startups, Paul Graham’s essays on the subject of startups are read by many tech entrepreneurs, and seen almost as a “bible” by the community. As a result, his writings are influential to the mindset of many technology entrepreneurs. On the topic of exits, Graham states that success for a startup approximately equals being bought by another company (Graham, 2005). He also suggests that if success probably means being acquired, it should be made into a conscious goal, and entrepreneurs should design their business around that goal.

This mentality of creating startups for the sole purpose of a sale has lead to a number of startups that, while technology-oriented, may not

actually be building something technically profound or innovative (Lu, 2015), but has the potential for attracting large sums of money. The “Yo” app is the example considered by critics to be the most egregious offender in this arena - it is a smartphone app that sends the single word “Yo” to other users, and does nothing else. Yet in 2014 its creator raised \$1.5 million US dollars, valuing it as a \$10 million US dollar company (Shontell, 2014). Companies like the aforementioned are building what are considered “[solutions] looking for a problem” (Alspach, 2014), or products and services that do not serve an actual need, or lack a viable business model. The lack of market need is why 42% of startups fail (Alspach, 2014). These failed businesses result in squandered investment dollars and wasted labour by highly qualified, risk-taking individuals – that opportunity cost, once again.

In 2014, venture capital funding reached its highest level in over a decade with the investment industry investing \$48 billion of capital in startups (Fairchild, 2015). Many experts in the field believe that there may be a bubble in technology investment; further, they suggest that venture capitalists will not be the ones affected the most by the bubble, but rather employees and founders will shoulder the burden (Goyal, 2015). With over 12.5 million (and growing) Americans employed in VC-backed companies

(Goyal, 2015), a lot of people are at risk of being hurt in real, financial terms.

Understanding this side of the complex world of startups summarizes the opportunity cost being addressed by this project: Millions of individuals are working for venture-backed startups, spending time on projects that are sometimes of dubious consequence to society, all for a shot at a lucrative exit that likely won't happen, and has a risk of financially harming the entrepreneur.

Interestingly, Graham states “If you try something that blows up and leaves you broke at 26, big deal; a lot of 26 year olds are broke” (Graham, 2005). This point further highlights the opportunity cost described at the core of this research: young entrepreneurs, the prototypical individual at a tech startup, have a higher propensity towards risk taking. If more of that pool of risk takers can be captured and directed at social entrepreneurship, one would expect more success in the building of social value and addressing known issues that affect mankind.

2.4 Social Enterprises

Research on social entrepreneurship is considered to be in very early stages compared to other topics in business and entrepreneurship (Shumate, 2014). The primary research in this project will add to that line of study, but existing knowledge in that area today was surveyed in the literature review, to serve two purposes. The first is to expose some useful data points to contextualize the primary research on social entrepreneurs. The second is to provide additional insights into opportunities to investigate during ideation in the design stage.

As with technology entrepreneurship, there is no single definition for what constitutes a social enterprise. I will use one simple but broad definition: Social enterprises are organizations that create public social value rather than private, shareholder gain (Austin, 2003), this means that a social enterprise may not necessarily be a for-profit organization. For additional context, it is worth noting that some groups define social enterprises based on the category or sector of social issues they operate in. For example, the Stanford Innovation Review uses the categories of Arts & Culture, Cities, Civic Engagement, Economic Development, Education, Energy, Environment, Food, Health, Human Rights, Security, Social Services and Water & Sanitation.

The individuals that operate social enterprises - social entrepreneurs - have a number of traits in common. They possess unique leadership skills, are passionate in the way they fight to realize their vision, they have a strong ethical fiber, and possess unique entrepreneurial qualities (Mair, 2005).

But why do social entrepreneurs emerge? What motivates them to pursue what they pursue? One study suggested that the psychological concept of “sentiments” is the cause (Mair, 2005). Sentiments - including perceptions, motives and emotions, thinking and learning - are the complex combination of opinions and feelings that lead to action and judgement, and focus the individual on the pursuit of relatively permanent ends (Asch, 1957).

In particular, social entrepreneurs develop a *social* sentiment, specifically defined as when an individual is dissatisfied by the status quo of how existing systems address social issues, and are motivated to act in a socially responsible manner (Prabhu, 1999). Social entrepreneurs experience similar sentiments to traditional entrepreneurs, but in a preceding stage, develop these social sentiments (Mair, 2005). Often, but not always, this social sentiment comes from family legacy and early childhood experiences (Shumate, 2014). It is also worth noting that the

formation of social sentiments does not automatically imply the creation of a social venture.

Individuals with strong social sentiments may act in various sectors and in a wide variety of professions (e.g. doctors) and vocations (e.g. religious or education). However, social sentiments seem to be an important element in the process of formation of intentions to create a social venture. (Mair, 2005)

There are key differences between social enterprises and traditional enterprises (including tech startups) in terms of operating the business. Social and traditional enterprises both compete with external forces, such as competition in the market, consumer demand, and sources of funding (Austin, 2003). However, for social enterprises, these sources of funding are much more diverse, including individual contributions, foundation grants, government payments, and more (Austin, 2003). This plurality of funding sources leads to many funder expectations, which may be more challenging to manage. These sources of funding are also tied to specific social problems or needs, making it much more difficult for a social enterprise to switch products or markets (also known as *pivoting*) than traditional enterprises (Austin, 2003). Despite multiple sources of funding, social enterprises do not receive as much absolute funding as tech startups enjoy from venture capital firms, limiting their access to the best

talent and restricting their access to resources, leading to inherent strategic rigidities (Austin, 2003).

Some experts suggest that the field of social entrepreneurship is full of business opportunities as many problems are still unsolved due to the fact that the customers cannot pay (Austin, 2003), therefore innovative business models need to be developed in order to address the social issues. However, an excess of opportunities does not necessarily imply a more appealing area in which to start a business, especially with the dearth of funding and the challenge of creating services for customers with limited buying power. The demand for social entrepreneurship far exceeds the financial capacity of social entrepreneurs to serve those needs, hence why it is important to address this gap.

2.5 Psychology of Motivation, Civic Engagement, and Activism

The literature review for this project concludes with a brief review of prior research on the psychology of motivation, with a specific exploration into the area of civic engagement and activism. This background provides an important perspective from sociology and psychology to complement the economic view behind the rise of

technology and social entrepreneurship. Like the preceding sections, this knowledge will prove useful in providing context for the primary research, and for informing the design output produced by this project.

Previously, the psychological concept of social sentiments was suggested as one explanation of why social entrepreneurship occurs, but a deeper dive into the related fields of civic engagement and activism provides more insight into what motivates - and discourages - individuals from getting involved in activities that build social value.

In addition to social sentiments, the interpersonal orientation of an individual has been found to be related to their willingness to participate in civic engagement and activism. Two traits found to be related to these outcomes were communal orientation and extraversion (Omoto, 2010). It is worth considering that these may be related to traditional entrepreneurship, and if so, then the availability of traditional vs. social entrepreneurship opportunities may need to be considered to determine which path a nascent entrepreneur may take.

A study by Ballard in 2014 reveals that there are clusters, or categories of personal motivation for individuals to become involved in civic engagement. One category, *personal issue or cause motivations*, captures specific civic issues or causes youth were passionate about.

Another is the category of *beliefs*. That is, individuals motivated to take social action as a result of the personal beliefs about the importance of civic action (Ballard, 2014). This may imply that individuals who have not developed these beliefs are less inclined to participate in civic engagement or activism.

Counter to this, research has shown that in places of work where work is specialized (for example, a business where employees have very separate roles such as managers, engineers, designers, and salespeople), employees are less likely to be aligned in terms of morals, ethics, and personal interests (Prendergast, 2008). If social action is indeed the result of individuals finding causes they are passionate about, and believing that social action is important, as Ballard implies, then social ventures with diverse roles may have a workforce less aligned with the goals of the company. This insight may imply challenges for social entrepreneurs trying to retain talent in their company.

Ballard also suggests the two additional categories of motivation towards social action, one being *self-goals* - motivations relating to some form of self-enhancement - and the final category of *responses to an invitation* - motivations stemming from being invited into civic involvement by another individual or group. The latter point is interesting

in relation to another insight from Prendergast's study, which suggests that if employees do not have aligned moral or ethical interests, they fall back to being motivated by monetary means, or compensation. This analysis suggests that social entrepreneurs are important catalysts for driving others without the above stated social motivations to do work that generates social value, through the creation of a sustainable business model - i.e. one that can hire and pay employees.

Inquiry into the challenges for civic engagement and activism have shown that both personal and systemic barriers exist. *Personal barriers* describe reasons why individuals don't have a strong interest in being civically involved, for example, because they lack interest, feel complacent, or describe ideological opposition to civic involvement. The research shows that this is especially evident for youth in highly resourced educational backgrounds (i.e. wealthy schools), suggesting that the lack of exposure to social issues that comes from being poor means reduces the likelihood that an individual may take up social entrepreneurship (Ballard, 2014). *Systemic barriers* also exist, describing individuals who feel that they can't be civically involved, for example, because they lack the opportunities, resources, experience, or knowledge (Ballard, 2014).

One interesting, final perspective to include in this project's discussion is a more philosophical examination into moral development and motivation for social action:

If society defines the right and the good, what is one to think when one recognizes that different societies choose differently in what they label as good and bad, right and wrong? [...] With the increasing exposure of everyone to how others live, there is a greater recognition of the fact that our way is only one among many. (Kohlberg, 1977)

What Kohlberg suggests is more true today than any time in history. The pervasiveness of internet connectivity means mankind is more aware of the social issues and problems of the entire world around them. This truth proposes two conflicting perspectives on the rise of social action and entrepreneurship: How does an entrepreneur start pursuing a solution to a social issue if they are inundated by an overwhelming plurality of problems? But at the same time - how can entrepreneurs, who believe that building new businesses is an effective way of affecting the world, stand still while the world burns around us?

3. Project Design

3.1 Conducting Primary Research

While literature review provides this research's area of inquiry with key insights on the existing state of technology and social entrepreneurship, there are some limitations to the findings. First, as admitted by a number of the secondary sources, research into entrepreneurship - and especially social entrepreneurship - is a new field of academic study, so the knowledge should be considered very limited. Secondly, the existing research tends to come from samples of large numbers of entrepreneurs from various sectors, not necessarily specific to the two stakeholder groups of technology and social entrepreneurs. Finally, the world of entrepreneurship, especially around technology startups, is an extremely fast changing field. It is critical to include insights from present day sources in order to keep this research's discourse relevant and accurate.

I wish to address, to the best of my ability, these limitations by conducting additional primary research. Through this process, I hope to confirm the existing research, add additional concrete data points and a

micro view to the macro context established earlier, and better inform the final design outputs with insights that are relevant and novel.

3.2 Methods and Approach

The primary methods of inquiry in this project include the literature review, summarized above, as well as a number of one-on-one semi-structured interviews with sets of subjects from two key stakeholder groups in this project's problem area. The first set are the entrepreneurs working at startups – including six entrepreneurs from technology startups, and six entrepreneurs from social enterprise startups. The second set includes associates working at venture capital firms or individuals involved in organizations that support startups, such as startup accelerator programs. This set is divided into one half of individuals that primarily invest in or support tech startups, and one half that primarily invest in or support social ventures.

These semi-structured interviews were designed to inquire into the entrepreneurs' reason for choosing their venture's problem area, as well as the goals of their ventures - interrogating how their business addresses their target problem area, and their expected exit scenarios. For the group

of startup supporters, the interviews focus on the views of their organizations towards the same concerns - what motivates and influences startups, as well as what their own expectations on the return on investment from their investees. In both cases, *semi-structured interviews* were used to allow some flexibility into understanding the qualitative nuances behind the decision making processes of these key stakeholders. The interview guides with the questions used in the interviews can be found in the appendix.

The primary method of analysis in this project are comparative analyses of codified interview results between the various interview subjects. For the entrepreneurs, the tech startups are compared amongst themselves, then to the social enterprises and vice versa. Patterns in their responses are identified and summarized in the synthesis that follows. Because the interviews with the four startup supporters are individual expert interviews, key insights were extracted from those interviews but do not necessarily compare their answers to the common questions due to the limited sample size.

The primary outputs are the formalized and structured summaries of the primary and secondary research into project's topic area, as well as design outputs that act as recommendations for how one might address

the problem area, as informed by the analysis and synthesis. The methods used as summaries are a stakeholder analysis and a systemigram, providing visual, systemic views into the ecosystem at the center of the problem area.

This research will also inform and inspire a new proposed framework for understanding and addressing the project problem area. The framework will be the main tool used to frame the brainstorming that leads to the design outputs. That framework will be described in the proceeding synthesis section of this report.

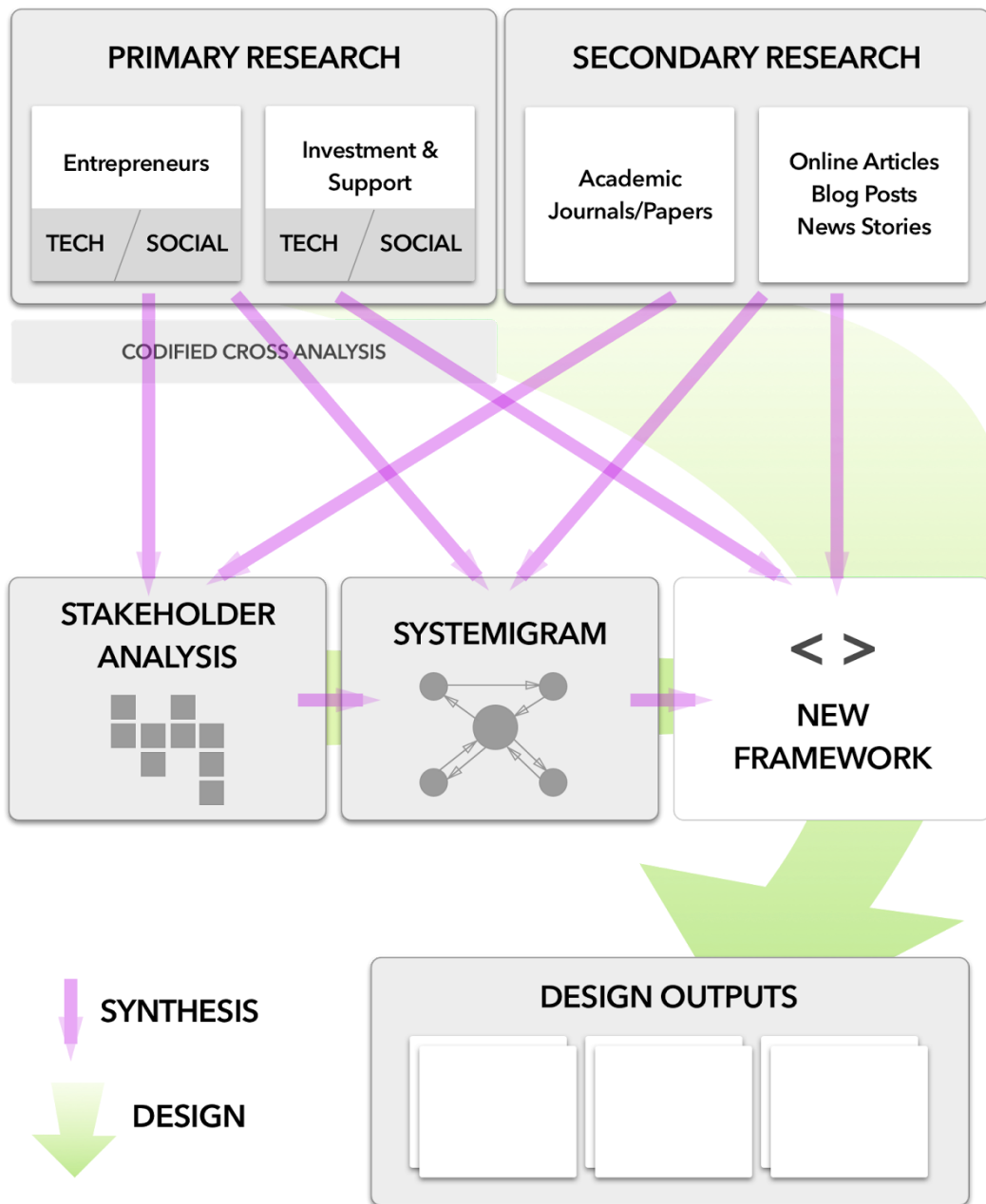


Figure 3. Research Process Flow Diagram, 2016

This process flow diagram shows an overview of the entire research process used in this project. One key point to note is that the primary

research and the literature review get summarized into various frameworks, but the raw insights from those sources are continuously integrated into future synthesis and the concrete outputs at the end. For example, even though the new (currently unknown) framework will be informed by the stakeholder analysis and systemigram, which are in turn informed by the primary and secondary research insights, the insights not used in the stakeholder analysis and systemigram may still shape the output of the new framework. The same holds true for the final design outputs.

3.3 Study Subjects and the Recruitment Process

In order to keep the research area as precise and rigorous as possible, the fact that some of the stakeholder groups have multiple, highly variable definitions should be addressed . For the stakeholder group of “tech startups”, the definition of ICT startups from earlier will be used. This happens to fit well with the source of these subjects, as the six entrepreneurs were recruited from the MaRS Discovery District, a publicly funded organization in Toronto, Canada, whose mission is to support the growth of businesses from Canada’s science, technology and social innovation, and the Ryerson University Digital Media Zone (DMZ), a tech

startup incubator in Toronto, Canada. MaRS uses a definition for ICT startups that falls under the umbrella used earlier. These entrepreneurs were recruited by requesting them through a director of the ICT division of MaRS and a coordinator at DMZ, to eliminate selection bias.

Similar to the tech startups, social venture entrepreneurs were recruited by requesting them through a director of the social enterprise division of MaRS. Again, this eliminated selection bias, and ensured that all the startups interviewed fell under the same definition for social enterprises.

The second set of interviewees are individuals that work at organizations that support the above two groups of stakeholders. The recruitment goal was to diversify their views as much as possible, and have an equal number of experts concerned with both tech and social startups. Since investors are believed to have a large influence on how startups behave, an investor interviewee is included on either side. One investor was invested from a firm that primarily has technology startups in their portfolio, and another investor from a firm that is a known “impact investor”, or a group that primarily funds social enterprises.

These investor experts are complemented with additional perspectives from startup support groups. For tech startups, the expert

was a marketing manager from the Ryerson DMZ, which is known to house a large number of primarily technology startups. For social enterprise startups, the expert was the director of social enterprise at the Center for Social Innovation, a coworking community in Toronto, Canada, that provides office space only to social purpose businesses.

Though the limitations of this study will be discussed in more detail at the end, it is relevant to acknowledge two limitations of the primary research approach as it informs the rest of the project. The first limitation is the geographical limitation of the recruitment process – the fact that all the subjects interviewed are from Toronto, Canada. There are two obvious issues stemming from this fact. The first is that, of course, the views are very centralized to the concerns of the Toronto startup ecosystem. The second is the fact that Toronto is not San Francisco and the Silicon Valley, which is well known to be the main source of technology startup influence in the world. These limitations are acknowledged, taking care to not over-generalize the insights from this project to the global technology and social enterprise ecosystem.

The second limitation of the primary research is the inherent bias that is found in expert interviews. Experts can provide a wealth of knowledge on a system that they participate in, as they have a detailed

high-level view of the system, as well as a historical understanding of the system. However, they are also likely to provide answers that benefit their organization's position. The potential bias that comes from these experts' perspectives should be acknowledged, and care taken to prefer a more nuanced view over absolute declarations from the sources.

4. Analysis

4.1 Tech Startup and Social Enterprise Insights

The two groups of entrepreneurs from tech startups and social enterprise startups were interviewed using the same set of guiding questions organized by four major themes, and so the insights are presented here under those themes.

4.1.1 The Founding Story

The first set of questions asked of the subject were about the founding story of the venture – what was the entrepreneur’s background, and what influences and motivations led up to the formation of the tech or social enterprise startup. This line of questioning was intended to elicit some anecdotes to determine if there were common paths to forming a tech or a social enterprise startup. The principal findings from this set of questions was regarding the entrepreneurs’ backgrounds in the sector of their startup, and the likelihood that the entrepreneur had institutional support prior to starting their business.

When asked about their work experience and education prior to starting their companies, none of the six tech startup founders had any background in whatever sector their company's offering was currently addressing. For example, one tech entrepreneur built a product around fashion retail, but personally had no experience working in the fashion retail industry at any level. Social enterprise entrepreneurs were more likely to have some relation to the sector their company operated in – five out of six cited previous experience. In a number of cases, this was because they were trying to address a frustration they experienced while working in that sector.

Interestingly, this is contrary to studies in the literature review that showed that most entrepreneurs built a company in the same area where they had previously worked. This may be because technology is generally applied agnostically to solve problems in different sectors outside of the ICT sector. For example, the individual working in fashion retail was building an artificial intelligence solution for the fashion retail sector, but the artificial intelligence software could be generalized and applied to other, completely different sectors. This insight suggests that the existing work of technology entrepreneurs may be repurposed for social benefit.

Four of the six technology startup founders had gone through a startup incubator program prior to where they were with their business at the time of the interview. In contrast, none of the social entrepreneurs reported this for their venture, despite being sourced from a organization (MaRS) that is known to run such programs for startups in general. This difference may imply that there is more systemic support in place for tech startups, and less for social enterprises, demonstrating a need for additional social enterprise infrastructure.

When asked about their professional networks and relationships prior to starting their businesses, tech and social enterprise startup founders also reported different levels of support. Three of the six tech startups stated that they started “from scratch” in terms of their relationships – they had a limited to no network of potential investors, customers, or mentors prior to starting their venture. Five of the six social enterprises, however, had institutional allies prior to starting their companies. This distinction may indicate a need for established external support before an individual is willing to leap into the risky business of starting a social enterprise. This distinction was also seen in the literature review, with a specific indication that that social entrepreneurs develop

perceptions of feasibility after securing support, both from individuals and organizations. (Mair, 2005)

4.1.2 The Problem Domain

The next set of questions asked was about the problem domain being addressed by the venture – what specific problem area was being addressed, what was some of the evidence that the problem was real, as well as some inquiry into what made the entrepreneur interested in the specific problem area. The principal findings from this set of questions were regarding whether or not the startup founder had a personal, motivating story behind their venture's origin, and whether or not the founder was driven by an interest in the problem domain or the technology behind their solution to that problem.

The technology and social enterprise startups had fairly similar answers under this theme; both groups were likely to start their business because of a personal reason or motivator. This insight was in contrast to the fact that tech startups are unlikely to have experience in the sector, while socials entrepreneurs have a background in domain of their business. Both groups frequently had a motivating story behind why they started their company in the domain that they are in.

In terms of their thinking on the vision for their sector or problem domain, both showed some rigor in their thinking – companies in both groups of entrepreneurs mostly had established mission statements, could state concrete customer pains and gains that they were addressing, could describe their long term vision, and, most importantly, were equally capable of providing concrete anecdotes or statistics that demonstrated that their problem area was indeed a problem area and not an imagined issue.

There was one difference, however. Three of the six tech startup founders started their companies because of an interest in investigating and learning more about a particular area of technology that they are interested in. For example, one entrepreneur said that they specifically “wanted to do something new and interesting with wearable technology.” This insight demonstrates one possibility of motivating technology-oriented entrepreneurs to tackle problems with a social purpose as it suggests that their true career interests may be applicable outside of consumer products because their technology skills are transferable.

4.1.3 Measuring Success

The next set of questions was related to how the entrepreneur's venture measured success. The intent here was to gain some insight into the decision making process that the different groups of entrepreneurs went through, which may provide some insight into what motivates them, explicitly addressing economic interests as one angle. The principal findings of this inquiry was regarding what key metrics the entrepreneurs used to measure the progress of their business, and whether or not the entrepreneur could cite cross-sector benefits from their business.

When asked about the key metrics the entrepreneurs used to measure the success and health of their businesses, each provided a variety of responses. The metrics ranged from revenue and economic measures, engagement measures (for example, if the product was an app, they would look at number of downloads, returning users, app ratings, etc), and direct or tracked feedback from customers. The variation in metrics employed by entrepreneurs is consistent with the fact that all the businesses were from diverse sectors, and so tracked progress across very different concerns.

The one key insight observed was that five of the six social enterprises listed revenue as a key metric, but only three of the six

technology startups did. The technology startups were more interested in engagement metrics, such as the number of users they've collected and how often those users came back to use their product or service. The finding is consistent with the idea that many technology companies are intentionally accruing a form of value that may not be sustainable from an immediate profitability standpoint, but may be of interest to other large companies to acquire, and therefore potentially increases their future return on investment

The other major difference in the findings was that social enterprises were more likely to be addressing a problem that had a positive cross-sector effects. Four of the six social enterprises stated that their company could indirectly affect other domains, compared with only one of the six tech startups. For example, one social enterprise was focused on building administrative tools for other social enterprises working in multiple sectors, and so if they were successful they would aid success in other sectors. This finding further emphasizes the importance of the opportunity cost this research is trying to address, because it further demonstrates the impact of social enterprises as compared to consumer technology startups.

4.1.4 The Exit

The final set of questions is perhaps the most interesting and telling: the subjects were asked what their idea of an “ideal exit” is for their company – that is, if they want their company to end in a sale, go public, or continue to grow and address their problem domain on a smaller scale. The principal findings in this final section was regarding the startup founders’ attitudes towards a future exit for their business, and what they considered to be preferred terms for an acquisition or merger.

Founders of tech startups were more likely to have an idea of their ideal exit – five of the six tech startups cited a preferred exit scenario. Conversely, founders of social enterprise startups almost unanimously had no plans or vision for an exit, with five of six founders expressing no interest in an acquisition, or stating that it was too early in their journey to think about an exit. It is worth noting that both groups of entrepreneurs have been working on their companies anywhere from several months to over a year, with no particular bias towards longer or shorter tenures in either group.

When asked for further details on an possible future exit, more differences were seen between the two groups of entrepreneurs. When asked about what exit terms the founder would ideally negotiate for, two of

the six tech startups stated explicitly that they would want to completely cut ties with the company if acquired, and be given the freedom to take their share of the acquisition proceeds and move onto something else. Asked the same question, two of the six social enterprise entrepreneurs said that the acquisition or merger terms must involve the vision of the company living on in some capacity. That is, they did not want to sell the company and abandon the problem area they were addressing; they would wish to see their original goals continue to be addressed in some way, perhaps at a larger scale or on a faster timeline as a takeover from a larger company usually results in more resources. This fundamental difference between the two approaches to business present a challenge with encouraging technology entrepreneurs to create social ventures, as their propensity towards short tenures may not be sufficient for solving severe and intractable social issues. An opportunity also presents itself from this fact – if an entrepreneur’s values shift to wanting to pursue solutions to social issues, their increased engagement may lead to longer tenures and willingness to see a business through.

When asked about the timeline for an exit, tech startup founders were more likely to have an ideal period of time in mind, with some citing periods as short as 6 months, and as long as two years. The social entrepreneurs did not state a real exit timeline and either saw their

business as a long term endeavour, or have not seriously thought about leaving it.

The varied answers to this set of questions demonstrated the starkest differences in mindset between the two types of entrepreneurs. Technology startups mostly fell in the hypothesized mindset of being more interested in building a business to sell, rather than being around to build a long term sustainable business model, or seeing a problem to the end.

4.2 Startup Investors and Support Organizations Insights

Two groups of technology and social venture support organizations were examined separately for insights related to this project's inquiry. The individuals in these organizations were treated as experts in their space, and so provided additional insights into the two groups of entrepreneurs and how they coexist with outside stakeholders. Interesting contrasts were drawn between what the experts had to say about startup versus social enterprise entrepreneurs.

4.2.1 Tech Venture Capital Fund and Tech Startup Incubator

When asked about the characteristics and influences of technology startup entrepreneurs, the experts described them as passionate and

self-driven individuals. Further, when asked about what drives entrepreneurs to build their businesses, the individual at the venture capital firm stated that “entrepreneurs are the types of creature that are crazy enough to go against the grain and take such a high amount of risk. The willingness to take risk must be personal.” They suggested that because technology is more and more pervasive, individuals are driven to make life better through technology. When asked directly about entrepreneurs’ interests in the monetary outcome from potential big exits, the VC associate stated that it is “naive to suggest that nobody wants that kind of success”.

In response to an inquiry regarding what the organization gains from investing in, or supporting, a tech startup, the two organizations presented different desired outcomes. For the venture capital firms, of course, it is about return on investment. Alternately, for the incubator, it was about feeding successful startups to their associate investment teams in other parts of their umbrella organization - which in turn means looking for a return on investment at a later stage. However, the two organizations also suggested the same secondary incentive – their reputation and networks. Incubators and venture capitalists both need to add successful

entrepreneurs to their networks as the new businesses are essential to helping these organizations find the next company to invest in or incubate.

The two organizations were asked about the importance of the media and success stories in how they influence startups. They agreed that the media has a strong influence on startups, but also stressed the positive economic effects of this influence. The associate at the tech startup incubator stated:

“Success stories like Blackberry and Kik are celebrated in the media and that celebration has a positive encouraging effect on the population of entrepreneurs and would be entrepreneurs”

In addition, the VC firm associate stated that media reports on successful companies are important because they set a precedent for new technology ventures to form by establishing trends; and these trends are what help VC firms pick the next winner. However, they also re-emphasized the challenge in finding a good investment amongst a sea of similar startups following the same trend, suggesting that “it can be a hit-driven business, sometimes”.

4.2.2 Impact Fund and Social Enterprise Co-working Space

The impact fund associate shared a number of insights related to startups in general, rather than specific to social enterprise ventures. They stated that their relationship with startups was “very loaded”, and suggested that some entrepreneurs try to fit their companies to what venture capital firms are looking for, and “reaching” to make themselves more appealing as an investment, rather developing a sound business. The impact fund associate suggested that there is a general herd mentality, “VCs chase trends like entrepreneurs chase trends”, and so you find a lot of “me-too” companies that try to replicate the business models of other companies.

The associate also suggested a troubling problem around unconscious bias they have witnessed VCs exhibiting - some VCs are looking for specific traits in a entrepreneur or a startup, whether or not it is related to how robust the business model is, and has been seen in other successful companies. For example, they cited the idea that people who look like Mark Zuckerberg, the founder of Facebook, may be considered by some investors to be a better pick than someone who doesn't (for example, a woman, or a person of colour). The associate, who was a caucasian man, went as far as describing this problem as “perverse”.

The director of the social enterprise coworking space shared interesting thoughts on challenges that social enterprises face, but also why it is important that they must overcome these challenges. The director noted that social entrepreneurship is an emerging sector, and the support structures around it are still very *ad hoc* compared to other sectors in business. In particular, they noted that few business schools are teaching students about social enterprise, and that this can lead to a “huge economic loss”. They stated that humanity is “faced with intractable and massive problems that endanger the planet”, and that it is important that society supports ventures that try to tackle those problems.

When the two social enterprise support groups were asked about the intersection of technology and social entrepreneurship, both supported the thesis related to opportunity cost, specifically that it is important that more technology-inclined entrepreneurs work on social problems. The coworking space director stated that a lot of the companies at their space are built on technology, because without technology, we “wouldn’t have opportunities for massive scale”. The impact investment associate stated that “impact comes at scale, and technology is a quick way to get there”.

5. Synthesis

5.1 Stakeholder Matrix

The first tool used in the synthesis of these findings is a stakeholder matrix. A stakeholder matrix is a visual form of a stakeholder analysis, which can be used to represent and order the concerns and needs of different parties (individuals or groups) affected by a decision in a system.

I use a stakeholder matrix to better understand the hierarchy of needs of key stakeholders in the ecosystem that technology startups and social enterprises participate in. The different stakeholders in the system, their needs, and the ordering of their needs is inferred from findings in the literature review, and from comparing the insights gathered in the one-on-one interviews, especially the expert interviews, as the experts have a high level and historic view of how the different stakeholders interact with and rely on one another.

To give a more comprehensive view of the tech and social enterprise startup ecosystems, a few new stakeholders are added to the four that were actually interviewed. Those stakeholders include potential acquirers of the tech or social enterprise startups, such as a larger tech startup, or an

incumbent tech company such as Google or Microsoft; the government, which could range from municipal to federal governing bodies; and the media, which includes the mainstream media and online news outlets similar to the ones used in the literature review.

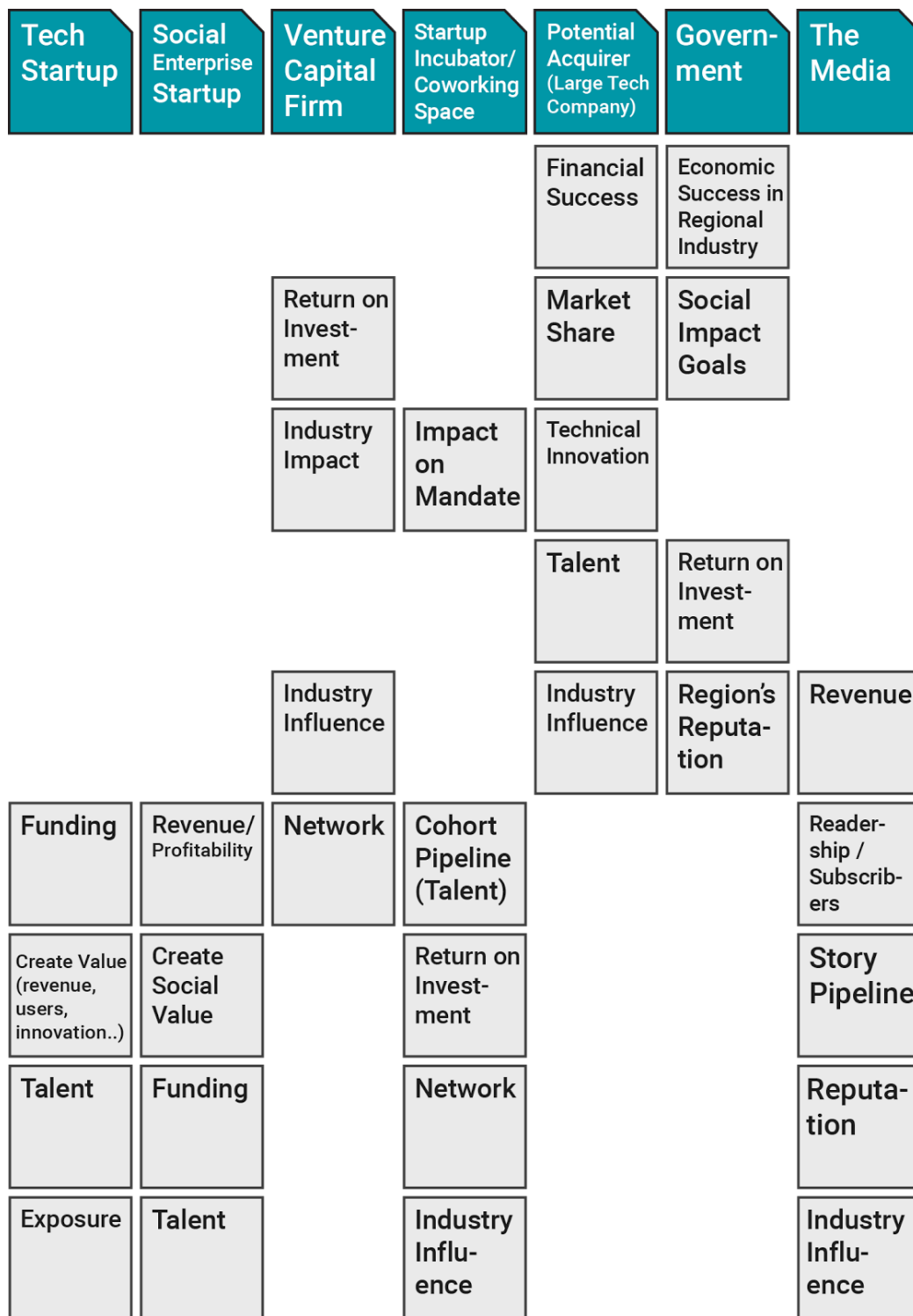


Figure 4. Synthesized Stakeholder Matrix, 2016

The first immediately evident result from the stakeholder matrix is that a sort of “food pyramid” becomes apparent in the relationships between the needs to the stakeholders in the system. The potential acquirers and the government bodies have the most influence in the group, with some of their needs placed well above all others. They are quickly followed by the venture capital firms. After these needs are the needs of the tech startups, social enterprises, and the media. The startup support groups are also lower in the list.

The main takeaway from this hierarchy is that the entrepreneurs in either technology startups or social enterprises find themselves at the whim of essentially every other stakeholder in the system. This valuation is not surprising, however, given that a core need of a startup is to acquire funding and other resources in order to keep the business running, and those needs are met by the stakeholders at the top of the matrix. Whether or not a VC firm or governing body will provide funding to a startup is predicated on the startup meeting their other, higher-order needs, which will come first.

The relationship of the startup to the startup incubator/coworking spaces is similar to the relationship of the startup to the VC fund, but at a lower order. For example, instead of direct funding, the

incubator/coworking space may provide mentorship or office space to the ventures, which many companies can do without in their early stages. As a result of the difference in availability of financial resources for the startup, the needs of VC firms have priority over the needs of the incubators.

A closer look at the difference in needs between tech startups and social enterprises reveals some of the deeper insights uncovered in the semi-structured interviews. First, note that funding is a higher priority for tech startups than social enterprise startups, as well as the absence of revenue/profitability in the needs of the tech startups. Tech startups rely on funding for their day-to-day operations when they are at scale, or have most of their efforts dedicated to becoming fundable when they are at an early stage of development and not yet at scale. Social enterprises rely on reaching profitability quickly in order to stay alive, likely because funding (through venture capital or government grants) is not as readily available as it is for tech startups, coupled with the social entrepreneur's penchant towards building sustainable solutions to problems. These two goals push social enterprises towards seeking sustainable business models, contrasted with technology startups that are designed for quick exits through acquisitions, often before reaching sustainability profits.

The second difference in the prioritizations of needs is that both organizations prioritize building value, though the type of value technology startups are trying to build is different from social enterprises; tech startups are trying to build something that either makes their business more likely to be funded, or more likely to be acquired. This definition of value includes goals such as gathering more users, or building some new innovative technology or product that may be enticing to a potential acquirer.

The position of talent in the hierarchy of needs is the final difference worth noting between the two stakeholders. Technology startups are well known for competing extremely hard for talent, offering up salaries and perks that attract the best talent. Most social enterprises cannot afford to offer such compensation, making it much more difficult to attract top talent.

Finally, it is worth addressing how the needs of the media fit into the matrix. The needs of the media are also pushed below the top stakeholders, as the financial needs of those stakeholders (funding for startups, return on investment for VCs) to operate takes precedence over the needs of media organizations. However, in the systemigram synthesis

output, it will become apparent that the media still has a profound amount of influence on the entire system through their publications.

5.2 Systemigram

The second tool used in the synthesis is a systemigram. A systemigram is a diagram that illustrates the stakeholders within a system, and the influences they direct at one another. Unlike the stakeholder matrix, the systemigram emphasizes the major influences in the system and goes into less detail about individual needs.

A systemigram is produced in order to better see patterns and “leverage points” within the system, so that someone viewing the diagram can clearly observe how different forces in the system affect each other, and what forces can be applied to move the system towards a desired outcome. The links in the systemigram are informed by the primary and secondary research, and also borrows from some of the structure provided by the stakeholder matrix.

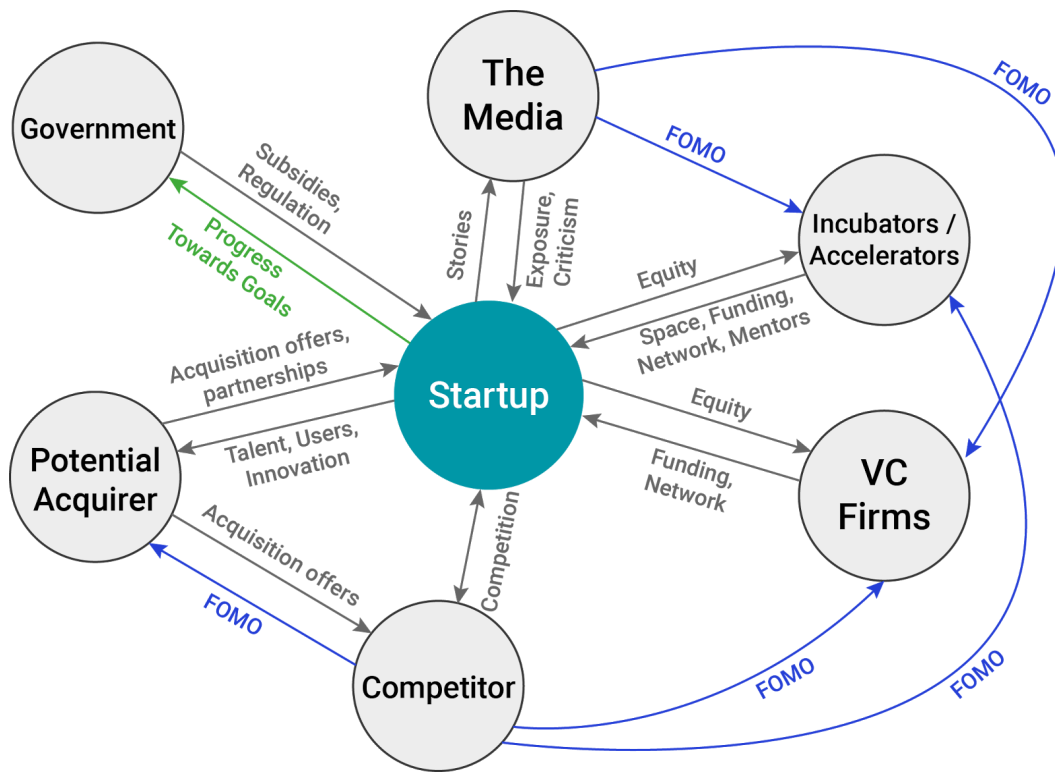


Figure 5. Synthesized Systemigram, 2016

One major change in the systemigram from the stakeholder matrix is that tech startups and social enterprise startups are folded into one. The reason for this is brevity, as most of the relationships for either venture is the same. However, the intensities of the relationships can be vastly different depending on whether the startup is a tech company or a social enterprise. For example, as stated earlier, technology startups enjoy a much higher rate of venture capital funding than social enterprises. The amount of subsidization and regulation can differ between the two groups as well, depending on their sector; for instance, if a social enterprise is

working on a green energy product, they may face scrutiny from the government for how their products are deployed and how they comply with regulations. A smartphone app that sends the word “Yo” will not face the same level of scrutiny.

Two new stakeholders/parties were added to this systemigram that were not present in the Stakeholder Matrix: customers and competitors. Customers are individuals who use the products and services produced by the tech startup or social enterprise. It is important to include customers as they complete the picture of what the companies are trying to achieve, in terms of building value and revenue.

The second new stakeholder is the competitor. This player in the system is interesting as they would be a company that is similar in its goals or business model to the startup in the center of the diagram. It is vital to include competitors as they illustrate the tension in the system exerted towards and between the company, investors, and acquirers, and helps explain why those members of the ecosystem behave the way they do. The media also has the ability to exert that same pressure, which has been labelled in the diagram as “FOMO”. “FOMO” is short for “Fear of Missing Out”, and it is the informal but colloquial term used in the technology industry to describe the tension that drives a lot of the competitive activity

in the startup economy. The prototypical example of this is how VC firms tend to invest in companies based on trends; if a prominent VC firm has made an outsized investment in a specific biotech firm, many other VCs may find themselves investing in competitors of that firm, trying to get in on a piece of that sector, fearing that they might miss the “next big thing”. FOMO is a type of informal signalling that goes on between the stakeholders in the system that is amplified by the competitors and the media. The media is well known to report on large investments and impressive new companies in a particular sector. This publicity only drives more entrepreneurial and investment interest in those sectors.

Finally, it is worth examining the difference between tech startups and social enterprises when it comes to their relationships with the government. Most governments understand that new venture creation is an important part of economic growth and development, and both tech startups and social enterprises, to some extent, end up assisting economic development through the creation of new jobs, the production of goods and services, and the growth in innovation from the local population. The compelling distinction in what social enterprises tend to do for the government, that most tech startups do not, is create progress towards other government developmental goals, such as The Global Goals for Sustainable Development, mentioned at the beginning of this paper. In the

pursuit of social value, social enterprises help their local regions (or external regions, when they are at scale) move the needles on those government sanctioned targets.

5.3 A New Framework: The Tech-to-Social-Entrepreneurship Slide

From the above primary and secondary research, followed by the synthesis of the research, I use my findings to develop and propose a new framework that puts the insights and prior syntheses to work. The goal of this framework is to further formalize a way to think about the opportunity cost at the center of this research. Concretely, this framework helps stakeholders who are dissatisfied with the current system and move technology-inclined entrepreneurs towards the realm of social enterprise.

This framework is called the *The Tech-to-Social-Entrepreneurship Slide*, and it presents visually as follows:

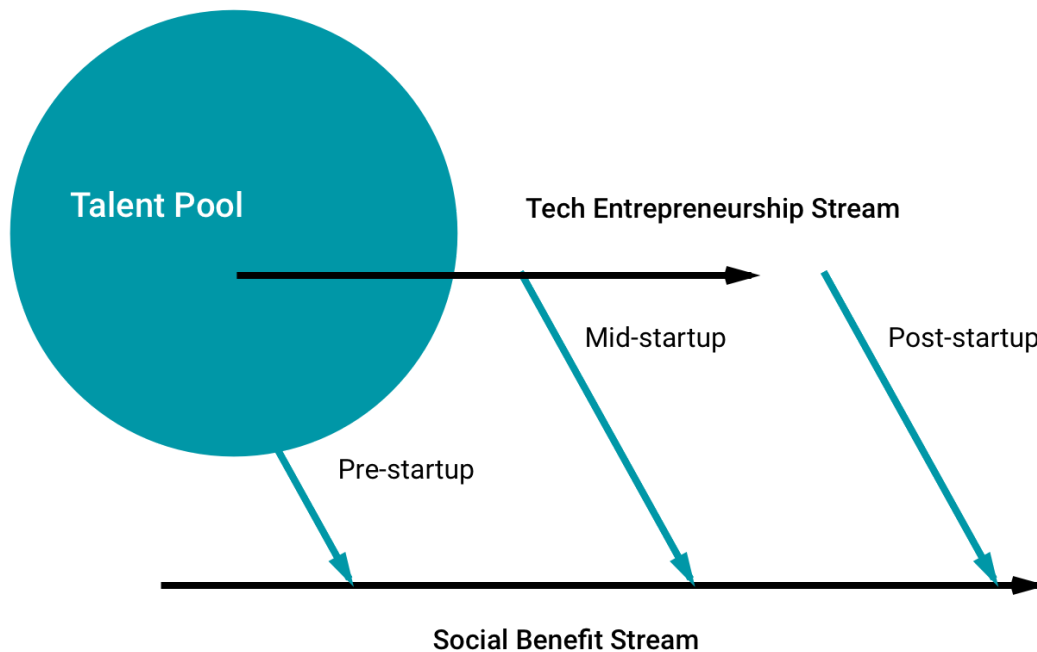


Figure 6. The Tech-to-Social-Entrepreneurship Slide, 2016

This framework breaks down the potential journeys an entrepreneur (or nascent entrepreneur) can make from the realm of technology entrepreneurship to social entrepreneurship. In the top-left is the pool of talent, representing individuals who find themselves choosing to participate in a technology startup as either a founder or an employee. Participants can include anyone from students (often coming from top tech universities) or previously employed individuals (not necessarily from the sector of technology), to those forming or joining tech startups without previous formal education or experience. The archetype is made up of the

the individuals interviewed in the primary research, as well as those profiled in the literature review.

The line across the top of the diagram represents the technology entrepreneurship stream, the path taken by the above individuals. The line across bottom represents the stream of social entrepreneurship. The diagram as a whole is meant to help us understand how to slide an entrepreneur from the top stream to the bottom - from working on a typical technology startup, to working in the sector of social entrepreneurship.

Through the inquiry in this project, three potential intervention points have been identified. Those points are represented by the diagonal arrows in the diagram, and are chronological in nature:

1. **Pre-startup:** Moving nascent entrepreneurs directly from the talent pool into the social entrepreneurship stream.
2. **Mid-startup:** Moving established entrepreneurs from the technology entrepreneurship stream into the social entrepreneurship stream.

3. **Post-startup:** Moving entrepreneurs that have “completed” their startup - through some successful or unsuccessful exit, into social entrepreneurship and related activity.

The three intervention points, or “tracks”, are abstract archetypes derived from observations from the one-on-one interviews with entrepreneurs. In the *pre-startup track*, a scenario is imagined where a budding entrepreneur may have some personal experience or external incentive that leads them to build a social enterprise with their skills in building technology. From the interviews, one of the six social enterprise founders founded a company that built an online platform that connects volunteers with social-benefit organizations that need them. That individual had both university-level training as well as real work experience working in software technology, but chose to build a technology company that served a social purpose. They had shared that their previous experience doing volunteer work while in university was a major influence as to why they started this organization.

In the *mid-startup track*, a scenario is imagined where an entrepreneur already at a startup may redirect the activities of their technology company towards social purposes rather than purely consumer use cases. One of the six technology entrepreneurs interviewed had

suggested that the wearable technology software they were developing, which aided in increasing performance in a sport, could have a future in supporting health-related use cases, such as physiotherapy. Another entrepreneur from the tech startup interview group had suggested that the artificial intelligence they were building for e-commerce purposes could, in theory, be retooled for other use cases, such as use cases with medical or environmental benefit.

Finally, in the *post-startup track*, I imagine a technology entrepreneur who has exited their startup, and how they may divert the capital earned in that exit for a social benefit, or how they may take their learnings to start a new startup - but with a social purpose. When asked about exits, one of the six technology startups suggested that they were open to quickly selling their company, and so they can “redeploy the capital” for another - possibly social - purpose. The popular example of this is Bill Gates, co-founder of Microsoft, who pledged the majority of his wealth (\$44.3 billion USD in 2014) as part of the Bill and Melinda Gates Foundation, which addresses various areas of social development, such as enhancing healthcare and reducing extreme poverty both in developing countries and domestically (Gates Foundation, 2015).

In addition, there are entrepreneurs that leave a startup for reasons other than an exit and may be seeking a more socially-oriented opportunity as part of their next career move. One entrepreneur tells their story of their transition post-startup:

“After having our first child, we decided that startup lifestyle and compensation were not compatible with our ideas of raising our son. Along with a few other factors we decided that I would step back from an active role at [my startup]. Once that decision was made, I did some soul searching and [searched the] Toronto job market scanning for firms that had a social mission. I wanted to apply my skills and knowledge to a field or sector that I didn't have to rationalize why I was working hard. I wanted to feel good about the output and make a contribution to something that aligned with my values. Healthcare Human Factors is a design consultancy focused purely on healthcare, specifically looking at making medical technology safer and more user friendly, as well as designing solutions to empower and monitor patients with chronic conditions. This focus resonated with me. [...] Overall it was an ambitious and exciting opportunity without any question marks around the ethics of our business.”

- Mike Lovas, Design Director, Healthcare Human Factors (Lovas, 2016)

With this framework in place, insights from the primary and secondary research can be fed into it, using the framework as a constraining tool to focus the brainstorming into design interventions that can positively affect this systemic problem.

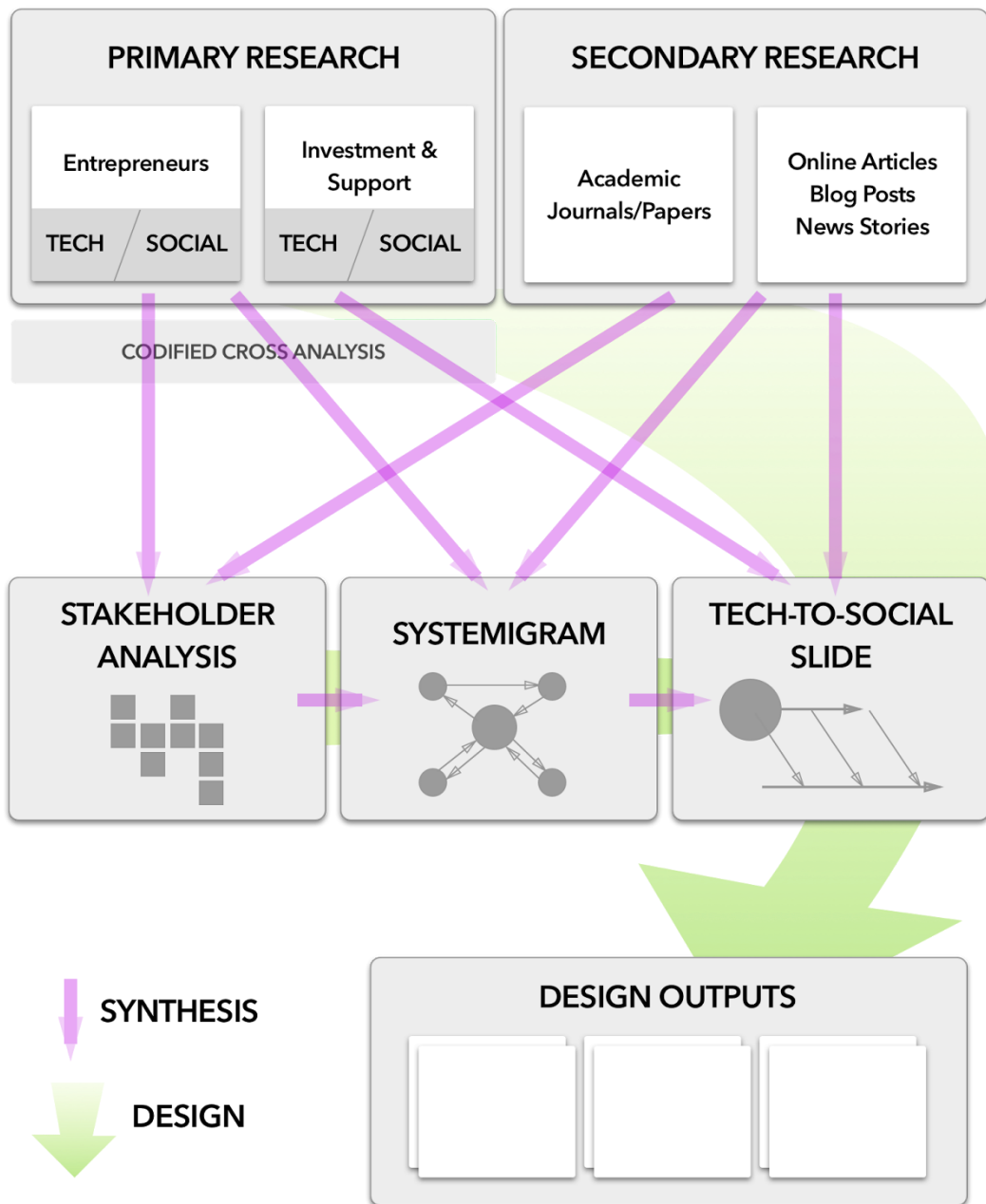


Figure 7. Completed Research Process Flow Diagram, 2016

6. Design Proposals

6.1 Target Audience for Design Proposals

What follows is a selection of possible interventions and ideas designed to address the opportunity cost from different parts of the system identified by the research insights and the preceding synthesis. It is assumed that the audience that would be interested in the following proposals are organizations that benefit directly from growth in social enterprises. From the system identified in the above synthesis, those organizations would be venture capital firms that have interest in social enterprise (sometimes called *impact investors*), and the government bodies whose social development mandate would benefit from the success of social enterprises. These proposals are therefore designed with those organizations in mind – assuming they are the right agents in the system to take such action.

I refer to these ideas as “proposals” and “interventions” rather than “solutions”, recognizing that the opportunity cost at the center of this research is a challenging systemic problem, and that no one can guarantee any one idea can fully address the problem.

6.2 Pre-startup Track

6.2.1 Social Immersion in Post-Secondary Education

A number of universities around the world have been developing programs that encourage entrepreneurship amongst students. Examples include the VeloCity entrepreneurship program at the University of Waterloo, in Waterloo, Canada, and the Yale Entrepreneurial Institute, at Yale University, in New Haven, Connecticut. These programs are generally well situated to attract students from areas of study that see interest in technology entrepreneurship, as they exist within universities with a strong pedigree in those areas of study, such as computer science and engineering. A number of students exit these programs primed to start a technology startup immediately following graduation.



Figure 8. Waterloo's VeloCity Incubator Program. Retrieved from <http://trepcore.com/trep-community-waterloo-ontario/>

One possibility for guiding students into the stream of social entrepreneurship is having these programs provide some level of immersion in social issues to the participating students. These programs are already well resourced to organize special events and activities for the participating students, but what if one of those activities was a volunteering trip to a foodbank, instead of to the local tech company? What if they brought in social entrepreneurs to give a talk, rather than the usual tech entrepreneurs? What if one of their weekend hackathons were focused around finding solutions for energy conservation or health care solutions for the elderly, instead of building the next mobile dating app?

This approach to event planning would direct the energies and interests of the entrepreneurial students towards more social issues, rather than just consumer problems, and increase the likelihood of social startups being incubated by these programs.

Implementation of such a change does not need to be difficult or complicated – most of the work is done just by having a critical mass of target stakeholders (budding tech entrepreneurs) in the same program. For example, the 4 month term that students spend at VeloCity already has a number of events planned at different stages, including the talks, outings and hackathons mentioned above. One of the program coordinators could champion social versions of these events periodically – such as every third event, to ensure that the core entrepreneurship content is still delivered. For example, the coordinator could reach out to a number of social benefit organizations in the Kitchener-Waterloo area, requesting speakers, tours, and the possibility of organized events at those spaces. Example social benefit organizations could include local Kitchener-Waterloo food banks, social enterprises housed in the Communitech startup space, and the offices of charities or non-profits headquartered in the region, such as Habitat for Humanity.

These programs already bring together a critical mass of individuals poised to become technology entrepreneurs. Any amount of immersion in social issues increases the chances of building “social sentiment” as discussed in the earlier literature review of the psychology behind social entrepreneurship. This social sentiment would be key to shifting the values of these new entrepreneurs so their focus is on social issues rather than making a fortune from building businesses intentionally to be acquired.

6.2.2 Social Enterprise Early-Accelerator Programs

The previous idea is situated in post-secondary institutions, therefore it is an area that government bodies may be able to influence or implement. However, there are programs where a similar idea can be applied by private investors - one example being *The Next 36*. *The Next 36* is a program that is meant to provide mentors to nascent entrepreneurs - individuals who are entrepreneurial but have not yet started a startup. Very often, the ventures formed in this program become technology startups. This program is generally backed by venture capital funds, hoping to find larger investment opportunities from the most successful graduates of these programs. The idea of having socially immersive activities and speakers/mentors very much so applies here as well, as the core benefit that these programs provide are mentors. If some number of

these mentors are instead from the stream of social entrepreneurship, there may be a higher likelihood that the individuals will form social enterprises rather than consumer technology companies at the end of the program.

One benefit to this approach is its flexibility. Since impact investors tends to have fewer resources than traditional venture capital firms, they can augment one “stream” of support to these programs. For example, the mentors could be 80% from tech and 20% from social enterprise. If there is monetary funding associated with the program, the impact investor could fund just the individuals leaving to start a social enterprise, for whatever criteria the investor wishes to enforce, depending on their mandate.

6.3 Mid-startup Track

6.3.1 Funding Social Pivots

A “pivot” is when a startup repurposes their existing product or service to fit a new business model that has a higher likelihood of success. This decision often occurs when the startup has realized that there is no product-market fit for their existing offering, and that there may be more

opportunities if some changes are made to what they are building or how they sell it. This inflection point in a startup's trajectory can itself be taken advantage of by impact investors or government bodies to strategically "turn" technology startups into social enterprise. Investments or grants from these agents can be earmarked to specifically fund startups looking to make a pivot. This idea is effective because startups are often running low on cash at the time a pivot is considered.

The impact investors or government body would have to be active in this process, as they would have to "match make" the startup's existing offering to an area of social need that meets their mandate or development goal. For example, the ministry of the environment may offer specific grants to startups that are building technology solutions that can be repurposed for environmental benefit. Areas of computer science and engineering, such as artificial intelligence and sensor technology is heavily used in consumer products, but could be repurposed for environmental benefit.

This may be appealing to technology entrepreneurs not only because it saves their company from folding, but because the interview insights suggest that the entrepreneurs are as interested in working in the

core technology as they are in the specific consumer application it is used in.

6.3.2 Accelerating Tech-to-Social Sales

Rather than turning technology startups into social enterprises, social value can also be extracted out of technology startups while maintaining their commercial business model. This can be achieved by incentivizing business-to-business (B2B) technology startups to specifically seek out social purpose organizations as customers. These organizations may be for-profit social enterprises, non-profit organizations, charities, government departments, or other entities.

The government is poised to create a strong incentive for both the buyer and seller in this arrangement through creative tax structures or deployment of funds. The government could encourage social benefit organizations to seek out products and services for technology startups by providing a tax break. For example, they could allow B-Corp certified organizations to buy HR software from new tech startups tax free. The government could also provide grants for marketing campaigns targeting social purpose organizations. These initiatives would encourage

technology startups to cater their product offerings more to social benefit organizations, and therefore *indirectly* produce social value.

The HR software example can be easily executed almost entirely online. The government body that would want to implement this initiative can create a website that lists a number of different startup products and services that they subsidize. Startups that build HR software can then submit product discount codes through the website, as well as some basic information, images and a link to their product page. The web page would also include a portal for social benefit organizations seeking software, allowing them to submit a basic summary of what their organizations do, which would be quickly reviewed by the program coordinator to ensure that they fit within the mandate the government is trying to support. If the social benefit organization is approved, they would then be granted access to these discount codes. The government body could advertise this service on the same pages where they list other tax exemptions and subsidies – for example, Ontario’s Scientific Research and Experimental Development Tax Incentive Program, where both tech startups and social benefit organizations naturally go to seek out tax and funding information.

It is important to emphasize that this intervention would not only benefit the missions of the social benefit organizations, as they receive

access to better technology tools and services, but it also benefits new up-and-coming startups, as it reduces their barrier to entry and customer acquisition cost, by creating a population of customers they can easily sell to. Through government interventions, the opportunity costs can be addressed by routing the efforts of technology startups towards social issues, even if indirectly through other organizations.

6.4 Post-startup Track

6.4.1 Social Entrepreneurs-In-Residence

An Entrepreneur-in-Residence (EIR) is a role found at venture capital firms where an entrepreneur, often one that has exited a previous startup, is given space and resources to work on their next venture (Nash, 2013). These roles are temporary and the EIR is expected to already be in the process of starting or expanding their next company. Venture capital firms support this role as a way to build their networks, and incubate a potential new investment, especially when they source entrepreneurs with a track record of building successful companies (i.e. have had successful exits such as acquisitions). The EIR role is well known in traditional venture capital firms, and therefore a number of the entrepreneurs that

take on the role are from venture scale companies, often technology driven. Impact funds can create a social EIR role, which is similar to a traditional EIR, except that the concept that the EIR is working on would have a social purpose.

EIRs are generally unpaid, though the entrepreneur is given desk space and plenty of resources and networking opportunities by the hosting VC firm. However, government bodies may be interested in providing grants to social EIRs to assist in covering a salary, if the EIR is working in an area that aligns with government development goals. Government bodies are less likely to back an EIR at a private VC firm, but they could make the case here if there is a match for their mandate. One final combination of interest is that the government could fund a *social* EIR at a *traditional* VC firm, so long as there is alignment between the EIR's business idea and government development goals. A rigorous application process would be necessary to ensure this alignment criteria is met. This approach would likely occur if an entrepreneur has a successful exit at a tech company, but then decides to work on a social enterprise next. The additional benefit in this approach is that the entrepreneur could start turning more traditional VC firms towards social impact investment,

assuming their track record holds up and they can demonstrate strong ROI from their social enterprise.

6.4.2 Pre-Emptive Philanthropy

This final opportunity for directing tech entrepreneurs towards social benefit at the end of their startup journey is one that is already implemented by an existing organization, but is worth mentioning here as it fits within the Slide framework and addresses the philanthropic approach to the post-startup track. Though this idea does not literally move the founder to social entrepreneurship, it still directs the individual's efforts towards social benefit through philanthropic giving, which is compatible with the goal of this research.

The Founders Pledge is a not-for-profit organization that allows entrepreneurs to preemptively pledge some percentage of the proceeds from a future exit towards philanthropic giving (Goldberg, 2016). The Founders Pledge brings together many entrepreneurs behind this common commitment, creating a movement with critical mass, thereby making it easier for other founders to consider the same. By turning this pledge towards philanthropy into a publicly recognized statement, The Founders

Pledge allows the entrepreneur to enjoy benefits of philanthropy before they even have the funds to donate. For example, The Founders Pledge suggests that such an act is good for corporate culture, as many employees want to work for companies with values that align with their own, and is positive for sales, as 92% of global citizens want to do business with brands that share their values (Goldberg, 2016).



Figure 9. Founders Pledge. Retrieved from <https://founderspledge.com>

The additional benefit to this approach is that the startup founded by the pledging founder does not necessarily have to be a social enterprise. It can in fact be a venture-scale tech startup that is targeting an acquisition exit. This idea takes advantage of the observation in the interviews that technology entrepreneurs may have a higher propensity towards building

quick exits with quick financial gains rather than long-term sustainable businesses.

6.4 Moving the Media

As demonstrated by the research insights and the proceeding synthesis, the news media have a strong influence on the ecosystem that tech startups and social enterprises operate within. News reports on successful tech trends drives future investment dollars and therefore they also determine the sectors where entrepreneurs start companies by publicizing and sometimes glamorizing areas of major growth. Today, technology startups seem to have a monopoly over that realm of high-growth companies, but there may be ways to leverage the news media to shine a spotlight on social enterprises as well.

A common public relations and marketing strategy employed by technology startups is producing “white papers” with content that promotes their product or service. These white papers are published on websites and blogs that see a lot of traffic from their target audience, and so they can reach many potential customers at once. In exchange for publishing these white papers, the news sites charge the company a fee.

Once again, government funding can be effectively spent here to support social enterprise startups. Government grants and tax breaks can be given to social enterprises to reduce or eliminate the cost of publishing their white papers and other content through media outlets, so long as the specific paper or purpose of the venture is in alignment with government development goals.

The above is just one opportunity around how to use the news media as a leverage point within the opportunity cost system. Given the strong influence that the media has over the public mind, this research shows that this is an area for further brainstorming, along with the three tracks exposed by the Tech-to-Social Enterprise Slide framework.

7. Conclusions

7.1 Considerations and Limitations

In order for this research to be complete, it is important to recognize the possible bias behind the declaration that the opportunity cost at the center of this paper is a “problem”. Technology startups are not inherently “wrong” or “worthless”, but what this research hopes to expose are possibilities for bolstering the ranks of social enterprises by encouraging technology-inclined entrepreneurs to consider opportunities of social benefit. This paper does not make a judgement that startups are building “worthless apps”, but rather demonstrates that there are other possibilities for the same entrepreneurs to do social good.

Technology startups, in their purest form, are of high value. By definition they have the potential to create economic gain and be literally of high value in dollar terms. Two additional perspectives that underline the importance behind the existence of tech startups are worth mentioning for completeness – *trickle-down economics*, and cultural significance.

Trickle-down economics is the concept that benefits made for the privileged and wealthy will eventually provide a boon to the less privileged (Investopedia, 2003). When applied to technology startups, the idea is that high tech products and services built today that only the wealthy can afford will one day be commoditized and find their way to everyone else. The smartphone boom described at the very beginning of this paper is one example.

“Innovation in California is at its absolute peak right now. Sure, half of the companies are silly, and you know two-thirds of them are going to go bankrupt, but the dozen or so ideas that emerge out of that are going to be really important.”

- Bill Gates (Goodell, 2014)

In addition, it is important to recognize the cultural significance behind what is produced by technology startups, even if they provide minimal progress towards social development goals. Facebook’s \$1 billion dollar acquisition of Instagram, a photo sharing app, in 2012 was criticized as a very large sum of money for just a way to share JPEGs (Wood, 2012), but now Instagram is a widely used platform for sharing ideas, art, and beauty. One must believe that a service that enables creative endeavour is of value to society.

Not only should the products and services created by iconic technology startups be considered culturally valuable, but so should the

creation of the ventures themselves – the striving to build something of your own from scratch. This journey may well be considered the modern embodiment of mankind’s progress.

“People no longer think of business as the antithesis of art, but as an opportunity to express their vision.” (Segan, 2015)

These two considerations, in addition to the fact that new enterprises, based or otherwise, drive economic growth, provide an argument for the existence of tech startups. The goal of this paper is not to undermine the importance of technology startups, but to question the distribution of entrepreneurial talent, and propose a framework for distributing more effort towards social benefit.

It is worth acknowledging the limitations behind the research explored in this project, as well as opportunities for future learning. A key part of understanding the system behind the research problem was collecting first-hand knowledge from various stakeholders through one-on-one interviews. One clear limitation to this is the small sample size of individuals that can be interviewed within the scope of this research. Quantitative verification of the patterns found in this research as true trends would help solidify the synthesis and design outputs proposed in this paper. Further research could not only survey larger and statistically

significant numbers of individuals, but strive for variety as well. The primary sources in this research were just from startups, venture capital firms, and incubators. In order to robustly verify the stakeholder matrix and the systemigram, further primary research into the other stakeholder groups would be needed, such as relevant government organizations and news outlets.

This research can also be extended and continued by focusing on the systemic issue through a more macro lens. The insights from the primary and secondary research lead to design ideas for pushing technology entrepreneurs to start social enterprises or direct their energy towards social issues. A subsequent investigation could instead, for example, take a more macro view of the system and address another systemic leverage point, such as venture capital funding, which our research revealed to be a driver of stronger interest in technology startups over social enterprise startups. Further investigation of the stakeholders in the realm of venture capital funding would be required to identify opportunities to intervene at that more macro level.

As described earlier, there is a geographic limitation to the primary research completed in this project, as all of the interview subjects were limited to the Toronto, Canada area. While I believe that there are

common experiences shared between entrepreneurs from Toronto and those abroad, I cannot state that the patterns observed here apply to entrepreneurs internationally – and the same holds with the expert interviews. One line of further inquiry would be to replicate this research globally, and particularly in the San Francisco/Silicon Valley area, the nexus of startup activity, to see if the patterns presented in this report are borne out to global trends.

There is also a chronological limitation to this research that must be acknowledged. The world of entrepreneurship and technology is an extremely fast-moving and ever-changing landscape. Even during the course of this research, it felt as though the discourse around the state of tech startups and entrepreneurship has subtly or greatly shifted in various areas including trending sectors, venture capital investment and the public perception of startups. For example, the concern around a tech bubble has greatly intensified between 2015 and 2016. As a result, some of the insights gathered in this project are time-sensitive and may shift in meaning or value over time. This research should be re-verified for relevance as time passes.

This limitation brings us to an interesting opportunity for further learning. Because technology and entrepreneurship is fast moving and

trends-driven, a foresight approach to the same research questions and opportunity cost may expose additional opportunities and insights, which can be fed through the Tech-to-Social Entrepreneurship Slide to produce more design ideas for addressing the opportunity cost.

7.2 Next Steps

There are a number of avenues with which to take this research next and enact concrete action on the problem area explored above. The first is to make the contents of this research publically available so other parties, academic or otherwise, can disseminate the structure knowledge established by this paper, and build on top of it. I will accomplish this by summarizing the key findings of this paper in a post on Medium.com, which is a publishing platform where individuals from the startup community frequently write and read. It is the ideal place to reach the people that this research is about, and could be a starting point of a wider conversation on the problem area.

The second actionable step is to summarize this research into a presentation that can be disseminated online as a shareable slide deck, and also presented at events, meetups and conferences which may have

stake or interest in this research. For example, I could reach out to organizations like the Center for Social Innovation within Toronto to inquire if this is a topic area that the companies hosted there would be interested in learning about. I can also see this research being of interest to conferences around systems thinking and startup ecosystems.

The third possible path for pursuing this research problem is to talk to key agents within stakeholder groups discussed in the design proposals part of this paper, and actually push the implementation the above ideas. For example, I could approach the University of Waterloo's VeloCity program and pitch the Social Immersion in Post-Secondary Education concept, as well as connect them with real speakers and events that they could use to implement the intervention idea. The strategy here is to make the work done by the agent nearly negligible, while helping them understand how the social immersion could benefit their core mandate.

7.3 Final Words

Consumer technology is a popular area for entrepreneurship, and will remain a popular domain for new ventures so long as technology continues to affect more aspects of our lives. As appealing as this sector of business can be, with the glamorization of technology in the media, the

abundance of venture capital support, and the opportunity to influence large populations of consumers, it is important to not lose sight of the intractable social and environmental issues that mankind is continually faced with. Entrepreneurship and the building of new businesses are effective ways for individuals to affect change in the world, and so it would benefit society at large if more of these individuals directed their work towards social issues.

This paper provides three contributions towards this challenge. First, through new primary research, this paper uncovers number of key insights of how technology startups and social enterprise startups differ from one another, adding more knowledge to what is a still a new area for academic inquiry.

Secondly, this paper formalizes a few of those methods. One is through a stakeholder matrix, which helps us understand the hierarchy of needs amongst the players in the startup ecosystem. The second is a systemigram, which helps us visualize the interconnected influences between the various stakeholders. And the final is a newly proposed framework, the Tech-to-Social Entrepreneurship Slide, which highlights three chronological intervention points in the problem space, providing a frame around which to discuss possible solutions.

Finally, the paper utilizes all of the above knowledge and methods to recommend a number of opportunities to directly address this challenge of encouraging technology entrepreneurs to build social value, directly or indirectly.

I hope that these contributions will open up new conversations around the importance of driving more technology entrepreneurs towards social enterprises, and provide some formalized knowledge and methods of understanding and addressing the challenge. It is my belief that technology can be a critical driver for the solutions to mankind's deepest problems, and so the more individuals working on those social issues, the higher the likelihood of a positive outcome for us all.

Epilogue

At the beginning of this project, I had a much more black and white and cynical view of technology entrepreneurs and biases around why they chose to tackle the problems that they tackle. I thought that they were driven by greed and were overly influenced by the news media, unable to escape the hype and “cool-factor” of being in a high tech company.

After completing this research, I think that my views are now much more nuanced. In addition to understanding the subtle and not so subtle ways the overall tech startup ecosystem pushes and pulls on new entrepreneurs, I’ve also discovered a number of avenues that tech entrepreneurs, like myself, can contribute to societally important issues while working at a tech startup - or plan to do so after leaving.

This project will throw significant weight at how my career path is directed in the future, and I hope the outputs from the project can influence other entrepreneurs, new or established, to consider options that are better aligned with their own values as well as the needs of society and the planet.

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Appendix A - Letter of Invitation - Entrepreneur

Dear [name of candidate],

You have been invited to participate in an interview for a research project on entrepreneurialism and motivation. This interview is part of a major research project at the Ontario College of Art and Design University (OCADU) Masters of Design in Strategic Foresight and Innovation program.

We are seeking individuals interested in sharing their stories and insights in their careers as entrepreneurs. In particular, we are looking for participants who are:

- A founding member of a startup, or someone in a role that dictates the product direction of the company, such as a Chief Executive Officer, Chief Product Officer, or Director of Product
- Are willing to allow at least the sector of the startup (ex: communications, entertainment, health, clean-tech, etc.) and the category of product or service my organization produces (ex: mobile app, wearable technology, professional services, apparel, etc.) be published in the project (all other identifiers, such as names or titles of individuals, or name of the company, can remain confidential).

Note that all identifiers will be anonymized in the final report, and, at the end of the project, all raw interview and intermediate analysis data will be destroyed. Up until a specified date, you may contact the principal investigator to withdraw parts of or all of your interview data from the project.

Your participation will lead to a better understanding of what motivates entrepreneurs to tackle the problems that they do through their ventures, an area with limited exploration within academia. You may also find the opportunity to reflect on your venture beneficial to yourself and your organization.

If you are interested in participating and believe you meet the above criteria, please respond to this email and we will get in touch to set up the interview.

Thanks in advance for your interest,

Steven Truong

Principal Investigator

Email: s.c.truong@gmail.com Phone: 647-772-3429

MDes candidate - [OCADU](#) - [Strategic Foresight and Innovation](#)

Appendix B - Letter of Invitation - Investors

Dear [name of candidate],

You have been invited to participate in an interview for a research project on entrepreneurialism and motivation. This interview is part of a major research project at the Ontario College of Art and Design University (OCADU) Masters of Design in Strategic Foresight and Innovation program.

We are seeking individuals interested in sharing their stories and insights in their careers as startup investors. In particular, we are looking for participants who are:

- A member of a venture capital fund, startup accelerator/incubator, or other organization that provides funding or support to entrepreneurs
- Someone who has previously made decision(s) to fund or support a startup through their organization (i.e. made an investment or invited a startup into an incubator program).

Note that all identifiers will be anonymized in the final report, and, at the end of the project, all raw interview and intermediate analysis data will be destroyed. Up until a specified date, you may contact the principal investigator to withdraw parts of or all of your interview data from the project.

Your participation will lead to a better understanding of what motivates entrepreneurs to tackle the problems that they do through their ventures, an area with limited exploration within academia. You may also find the opportunity to reflect on your practices beneficial to yourself and your organization.

If you are interested in participating and believe you meet the above criteria, please respond to this email and we will get in touch to set up the interview.

Thanks in advance for your interest,

Steven Truong

Principal Investigator

Email: s.c.truong@gmail.com Phone: 647-772-3429

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Appendix C - Interview Guide - Entrepreneurs

Introduction of Interviewer

Hello, my name is **Steven Truong**, and I am here to interview you about your startup venture. This interview should last no longer than an hour.

During this interview, I will like to discuss the following topics: the founding story of the company, the mission of the company, what are some goals of the company - how do you measure success, and ideal exit scenarios for the strategy.

Let me remind you that the specific contents of this interview (notes, recording, etc) will be kept confidential between myself as the primary researcher, and yourself as the interviewee. We will be analyzing your responses and aggregating data points as part of our research on startup ventures. In the final report, we will not use any identifying labels of yourself, your employees, or even your organization unless you give us explicit permission to do so. In fact, after the completion of research project, we are required to destroy all raw and intermediate data created in the process of completing the final report.

You may decline to answer any question I ask. In addition, after the interview, you may contact me at any point to have any part of the interview redacted. You may also choose to withdraw entirely from the research project at any point during or after the interview.

Do you have any questions before we begin?

[Allow interviewee to ask questions]

Let's start by getting your name, the name of your organization, and a description of what your organization does, including the sector your startup operates in, and what product or service you produce. Remember that, aside from the sector and what your startup produces, these labels will be anonymized in the final report unless you consented to allowing them to be published.

[Allow interviewee to answer]

Intro Topic: The Founding Story

MAIN QUESTION	ADDITIONAL QUESTIONS	CLARIFYING QUESTIONS
How did your venture come to be?	<p>What were you doing leading up to the forming of the venture?</p> <p>Did you have a partner before starting the venture?</p> <p>Did you have any allies before starting the venture (potential customers, partners, investors)?</p> <p>How did it grow to become what it is now?</p>	<p>Can you expand on that a little?</p> <p>Can you clarify what you mean by [jargon or situation]?</p> <p>Can you give me some examples?</p> <p>Can you tell me anything else?</p>

The Problem Area/Domain

MAIN QUESTION	ADDITIONAL QUESTIONS	CLARIFYING QUESTIONS
It sounds to me like your startup is working on solving _____. Why are you interested in that problem area?	<p>What's your mission statement?</p> <p>What are the pains resolved/gains earned by tackling this problem?</p> <p>What is the scope of the problem?</p> <p>What are some statistics or anecdotes that highlights this problem?</p> <p>Were you motivated by personal experiences to address this problem area?</p>	<p>Can you expand on that a little?</p> <p>Can you back that up with some numbers or evidence?</p> <p>Can you clarify what you mean by [jargon or situation]?</p> <p>Can you give me some examples?</p>

	What influenced you to explore this problem area?	
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Measuring Success

MAIN QUESTION	ADDITIONAL QUESTIONS	CLARIFYING QUESTIONS
What are some ways in which your startup measures success?	<p>What are some revenue measures that you have, and how do they indicate success for your venture?</p> <p>What are some measures of the problem domain itself that you use?</p> <p>Are there some other metrics that you use to measure the success of your venture?</p> <p>What's the impact of your company in other realms?</p>	<p>Can you expand on that a little?</p> <p>How is that done/measured, exactly?</p> <p>Can you clarify what you mean by [jargon or situation]?</p> <p>Can you give me some examples?</p> <p>Can you tell me anything else?</p>

Concluding Questions: The Exit

MAIN QUESTION	ADDITIONAL QUESTIONS	CLARIFYING QUESTIONS
In addition to tackling the problem area, there are a number of ways in which your venture could exit. What's an ideal exit scenario in your mind?	<p>Have you considered an IPO, merger, or acquisition?</p> <p>In the case of a merge or acquisition, who would be a target or ideal buyer?</p> <p>What would be the terms of such an exit?</p> <p>In what timeline would you</p>	<p>Can you expand on that a little?</p> <p>Can you give specific numbers?</p> <p>Can you clarify what you mean by [jargon or situation]?</p> <p>Can you give me some examples?</p>

	like to see such a scenario occur?	Can you tell me anything else?
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Interview Conclusion

Thank you again for participating in this interview. Again, I will remind you that the contents of this interview will be kept confidential and will be eventually destroyed at the end of the project. However, parts of it will be analyzed and synthesized into research findings that will be published.

I will also remind you that you can contact me at any point between now and when the research is published to redact anything you shared in this interview. You may also choose to withdraw entirely from the interview. However, I must be informed of such a decision by October 15, 2015, in order to allow sufficient time for the final report to be adjusted before being submitted to review committee.

Thank you!

Appendix D - Interview Guide - Investors

Introduction of Interviewer

Hello, my name is **Steven Truong**, and I am here to interview you about your role and work as an venture capital investor. This interview should last no longer than an hour.

During this interview, I will like to discuss the following topics: finding investment opportunities, the process of making investments and influences on entrepreneurs.

Let me remind you that the specific contents of this interview (notes, recording, etc) will be kept confidential between myself as the primary researcher, and yourself as the interviewee. We will be analyzing your responses and aggregating data points as part of our research on startup ventures. In the final report, we will not use any identifying labels of yourself, your employees, or even your organization unless you give us explicit permission to do so. In fact, after the completion of research project, we are required to destroy all raw and intermediate data created in the process of completing the final report.

You may decline to answer any question I ask. In addition, after the interview, you may contact me at any point to have any part of the interview redacted. You may also choose to withdraw entirely from the research project at any point during or after the interview.

Do you have any questions before we begin?

[Allow interviewee to ask questions]

Let's start by getting your name, the name of your organization, and a description of what your organization does. Remember that these labels will be anonymized in the final report.

[Allow interviewee to answer]

Intro Topic: Finding Opportunities

MAIN QUESTION

ADDITIONAL QUESTIONS

CLARIFYING QUESTIONS

How does your relationship with a venture start?	<p>Do the investees usually seek you out, or do you reach out to potential investees?</p> <p>What are the channels where you hear about startups and potential investment opportunities?</p> <p>Do you have partners that bring you investment opportunities, and if so, what background do they have?</p>	<p>Can you expand on that a little?</p> <p>Can you clarify what you mean by [jargon or situation]?</p> <p>Can you give me some examples?</p> <p>Can you tell me anything else?</p>
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Making Investments

MAIN QUESTION	ADDITIONAL QUESTIONS	CLARIFYING QUESTIONS
What is the process of making an investment like?	<p>What criteria do you use to decide if you should invest in a startup or not?</p> <p>What are some typical metrics that startups show you when asking for investment?</p> <p>How do you get startups to demonstrate that their product or service “works”?</p> <p>What types of startups do you prefer to fund?</p> <p>What is an ideal exit for a startup you’ve invested in?</p>	<p>Can you expand on that a little?</p> <p>Can you clarify what you mean by [jargon or situation]?</p> <p>Can you give me some examples?</p> <p>Can you tell me anything else?</p>

Influences

MAIN QUESTION	ADDITIONAL QUESTIONS	CLARIFYING QUESTIONS
In what ways do you think investors influence what startups choose to work on?	<p>Do you find that your asks of the startup before investment changes the business model or solution they are working on?</p> <p>Do you believe that there are specific problem domains that enjoy a lot of venture capital funding (for example: clean tech, messaging apps)?</p> <p>After investing, do investors have a large influence in how the venture continues to pursue their problem area?</p>	<p>Can you expand on that a little?</p> <p>Can you clarify what you mean by [jargon or situation]?</p> <p>Can you give me some anecdotes or examples?</p> <p>Can you tell me anything else?</p>

Concluding Questions: Systemic Influences

MAIN QUESTION	ADDITIONAL QUESTIONS	CLARIFYING QUESTIONS
What external influences have you see on startups you've invested in?	<p>What about influences from news/media?</p> <p>What about market influences (trends)?</p> <p>What about personal experiences of the entrepreneur?</p>	<p>Can you expand on that a little?</p> <p>Can you give specific numbers?</p> <p>Can you clarify what you mean by [jargon or situation]?</p> <p>Can you give me some anecdotes/examples?</p> <p>Can you tell me anything else?</p>

Interview Conclusion

Thank you again for participating in this interview. Again, I will remind you that the contents of this interview will be kept confidential and will be eventually destroyed at the end of the project. However, parts of it will be analyzed and synthesized into research findings that will be published.

I will also remind you that you can contact me at any point between now and when the research is published to redact anything you shared in this interview. You may also choose to withdraw entirely from the interview. However, I must be informed of such a decision by October 15, 2015, in order to allow sufficient time for the final report to be adjusted before being submitted to review committee.

Thank you!

Appendix E - Consent Form - Entrepreneurs

Full Name: _____ Date: _____

Signature: _____

I, the undersigned, understand the following:

I am participating in an interview as part of a major research project at the Ontario College of Art and Design University, as part of the Strategic Foresight and Innovation program, hosted by principal investigator Steven Truong.

I consent to have any data collected in this interview be published in the project report, with the following clauses:

- All recorded information from my interview will be kept confidential between the principal investigator and myself, and will be destroyed at the end of the project.
- Any identifiers of myself or my organization (names, titles, contact information) will be anonymized in the final report unless explicitly allowed below.
- Specific quotes by me will not be used unless the principal investigator requests permission from me, and I consent by email.
- I retain the right to withdraw some or all of the data captured in this report. I can do this by contacting the principal investigator my email at s.c.truong@gmail.com, or by phone at 647-772-3429. I can do this until December 31 2015, as the investigator requires time to complete the report.s
- The sector of my organization (ex: communications, health, entertainment, clean-tech, etc.) and the category of product or service my organization produces (ex: mobile app, wearable technology, professional services, apparel, etc.) is explicitly allowed to be published in the final report.

In addition, I approve the following identifiers to be published in the final report:

First name ☐ YES ☐ NO

Last name ☐ YES ☐ NO

Title at organization/company ☐ YES ☐ NO

Organization/company name ☐ YES ☐ NO

Appendix F - Consent Form - Investors

Full Name: _____ Date: _____

Signature: _____

I, the undersigned, understand the following:

I am participating in an interview as part of a major research project at the Ontario College of Art and Design University, as part of the Strategic Foresight and Innovation program, hosted by principal investigator Steven Truong.

I consent to have any data collected in this interview be published in the project report, with the following clauses:

- All recorded information from my interview will be kept confidential between the principal investigator and myself, and will be destroyed at the end of the project.
- Any identifiers of myself or my organization (names, titles, contact information) will be anonymized in final report unless explicitly allowed below.
- Specific quotes by me will not be used unless the principal investigator requests permission from me, and I consent by email.
- I retain the right to withdraw some or all of the data captured in this report. I can do this by contacting the principal investigator my email at s.c.truong@gmail.com, or by phone at 647-772-3429. I can do this until October 15 2015, as the investigator requires time to complete the report.

In addition, I approve the following identifiers to be published in the final report:

First name ☐ YES ☐ NO

Last name ☐ YES ☐ NO

Title at organization/company ☐ YES ☐ NO

Organization/company name ☐ YES ☐ NO

Appendix G - Letter of Thanks

Dear [name of candidate],

I wanted to write you to thank you again for participating in the interview.

Your contributions to this research will help academics as well as the startup community better understand entrepreneurs and what motivates them to tackle the problems that they do. We will be sending you an electronic copy of the report upon its completion.

Further, I hope that having a chance to talk about your experiences gave you an opportunity to reflect on your organization, perhaps leading to a better understanding of your goals and strategy.

As a reminder, the data in the interview will be kept confidential between yourself and me. Any identifiers (names, titles) will be anonymized in any intermediate analysis and the final report unless you explicitly allowed them to be shared on the consent form signed before the interview. I may also get in contact to request permission to quote specific parts of our interview. You may, up until November 15 2015, contact me to request that all or specific parts of the interview be redacted.

Thanks again for your time,

Steven Truong

Principal Investigator

Email: s.c.truong@gmail.com Phone: 647-772-3429

MDes candidate - [OCADU](#) - [Strategic Foresight and Innovation](#)

Appendix H - Research Ethics Board Approval

The research described within complies with the Tri-Council Policy Statement version 2 (2014). REB approval number: 2015-39. Associated documentation is on file in the Office of Research at OCAD University.