

The role and performance of accelerators in the Australian startup ecosystem

Author:

Bliemel, MJ; Flores, R; de Klerk, S; Miles, M; Costas, B; Monteiro, P

Publication details:

Commissioning Body: Department of Industry, Innovation & Science SSRN Electronic Journal 1556-5068 (ISSN)

Publication Date:

2016-02-01

Publisher DOI: https://doi.org/10.2139/ssrn.2826317

DOI: https://doi.org/10.26190/unsworks/25774

License:

https://creativecommons.org/licenses/by-nc-nd/4.0/ Link to license to see what you are allowed to do with this resource.

Downloaded from http://hdl.handle.net/1959.4/unsworks_38003 in https:// unsworks.unsw.edu.au on 2024-05-05



The role and performance of accelerators in the Australian startup ecosystem

Final report for the Department of Industry, Innovation & Science

Final version submitted 1 February, 2016

Role	Name	Organisation
Chief Investigator	Dr Martin Bliemel	UNSW Australia
Co-Investigator/s	Dr Ricardo Flores	UNSW Australia
	Dr Saskia De Klerk	UNSW Canberra
	Dr Morgan Miles	University of
		Canterbury, NZ
Student	Bianca Costas &	UNSW Study Abroad /
Investigator/s	Pedro Monteiro	Science Without
		Borders (SWB, CNPq)



Table of Contents

Ta Ta Ex 1	ible o ible o cecutiv Intro	f Fig f Tab ve S oduc	ures bles ummary tion	. 3 . 3 . 4 . 5
	1.1 1.1 1.1 1.1 1.1 1.1	.1 .2 .3 .4 .5	Startups need for seed capital in Australia Startups general need for a supportive ecosystem Australian startup ecosystems Australian startup ecosystem members How many startups are there?	. 6 . 6 . 7 . 7 . 9
2	Bac 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9	kgrc Incu Incu The Fou Wha Imp Prae Dire Indi	bund literature	10 11 12 14 15 16 16 17 18
3	Acc 3.1 3.1 3.1 3.1 3.1	elera Con .1 .2 .3 .4	ators and ecosystem fit text and trends Globalization: specialization and interconnection Australian context Global context Trends	18 19 19 20 20 21
4	Sta 4.1 4.2 4.2 4.2 4.2 4.2	rtup Met Bus .1 .2 .3 .4	supporters	21 22 23 26 27 28 29
	4.3 4.3 4.3 4.3 4.3 4.3 4.3	Bus .1 .2 .3 .4 .5 .6	iness models and metrics of other support organisations	30 30 31 33 36 37 38
	4.4 4.5 4.6 4.7 4.8	Rev Inte A no A no Sun	iew of performance metrics	39 40 40 42 42

5	Sta	rtups	3	. 42
	5.1	Met	hodology & sample	. 42
	5.2	Sup	ported startups	. 43
	5.3	Sup	porting organisations	. 44
	5.4	Wh	y join?	. 44
	5.5	Bes	at aspect of the support received	. 45
	5.6	Maj	or milestones achieved	. 45
	5.7	Maj	or milestones achieved by independent startups	. 46
	5.8	Attr	ibution of milestone achievement to support organisations	. 47
6	Poli	cv s	uggestions	. 47
•	6.1	Fra	ming of entrepreneurship policy	. 47
	6.2	Ind	ustry reports	. 48
	6.3	Ind	uctive analysis	. 49
	63	1	Co-investment and direct funding of accelerators	50
	6.3	. i つ	P&D tax inventive	. 50
	6.3	.∠ כ	FSOP	5/
	6.3	.5 ⊿	Other Suggestions	54
_	0.0			
7		sing	thoughts	. 56
8	Tha	inks	and Acknowledgements	. 56
9	Ref	eren	ICes	. 57
A	opena	ICes		. 62
	Appe	ndix	A – Distributions of application quality to accelerators	. 62
	Appe	naix	B – Rules for marking intensity of business model features	. 63
	Appe	naix	C – Support organisations identified	. 64
	Par	ticip	ating organizations	. 64
	lde	ntifie	ed and Invited	. 64
	Oth	ner C	Drganisations and Lists	. 65

Table of Figures

Figure 1: Age profiles of accelerators and support organisations	. 23
Figure 2: The business model of an archetypical accelerator	. 26
Figure 3: The business model of an accelerator with incubation	. 27
Figure 4: The business model of an archetypical co-working space	. 30
Figure 5: The business model of a co-working space including coordinated	
mentoring for its startups	. 31
Figure 6: The business model of an archetypical pre-accelerator	. 32
Figure 7: The business model of a pre-accelerator with equity option	. 33
Figure 8: The business model of an incubator with an on-demand programme	. 34
Figure 9: The business model of an incubator with an on-demand programme and	ł
seed capital	. 34
Figure 10: The business model of an incubator with a pre-accelerator programme	35
Figure 11: The business model of a germinator	. 37
Figure 12: The business model of a mentoring organisation	. 37
Figure 13: The business model of angel associations	. 38
Figure 14: Age profiles of startups across data sources	. 43
Figure 15: Comparison of year of launch versus year of support commenced	. 44
Figure 16: Estimated distributions of quality across an accelerator's application po	ol
vs a normal distribution	. 62
Figure 17: Estimated cumulative distributions of quality across an accelerator's	
application pool vs a normal distribution	. 62

Table of Tables

Table 1: The importance of six factors while applying to accelerators and afte	r being
in the programme (Li et al., 2012)	16
Table 2: Frequencies of reasons why participants joined a supporting organis	ation 45
Table 3 : Frequencies of aspects of support that were most useful	45
Table 4: Frequencies of milestones achieved since joining	46
Table 5 : Frequencies of policies used by supported startups	49
Table 6: Frequencies of policies used by independent startups	50
Table 7: Frequencies of policy recommendations by independent startups	50

Executive Summary

The scope of this project was to assess the value-add of Australian incubators and accelerators to the high-growth innovative startups they support, as well as to the local, regional and national innovation ecosystems. This scope includes exploring their impact on the development of entrepreneurial networks, improving the performance of the supported startups, and providing generally positive economic and social outcomes. While the focus was nominally on incubators and accelerators, other support organisations for startups were considered, including co-working spaces, angel groups, mentoring programs and training services.

This report is structured around 6 major sections. The first major section is the Introduction, which summarises the phenomenon of Australian high-growth potential startups and their need for a supporting ecosystem. This section synthesises recent industry reports, press releases and other publicly available resources. Overall, there are approximately 1,500 startups in Australia (with estimates ranging as low as ~300 and as high as ~3,000) which can benefit from the availability of investment capital and other supporting resources in order to achieve their growth potential.

In the second section, we cover the background literature and distinguish between incubators and accelerators. This is followed by a summary of related performance metrics in the literature. Consistent with the emerging literature on accelerators, this report identifies *five* defining features of accelerator business models: (i) Seed funding, (ii) cohort-based entry and exit, (iii) co-location, (iv) a structured programme, and (v) mentoring. These features are also partially interdependent, and the cohort-based entry and exit feature is one of the strongest driving features. For example, seed funding terms are standardised across all participants in order to enable scalability of simultaneously funding a cohort of startups. Similarly, co-location in a full-time structured program enables peer learning within a cohort, as well as economies of scale when bringing in guest speakers and overseas mentors.

In studying accelerators, it is important to note that they, as well as many other support organisations, are startups themselves. They frequently adapt their business model, which increases the difficulty in imposing strict criteria to categorise them. While the literature proposes dozens of metrics for support organizations, some studies highlight that only a small number are practical to measure or are meaningful (as also seen in our field research).

The third section reveals the explosion of support organizations in Australia as well as globally; in particular accelerators and co-working spaces. Many of these organizations only emerged within the last 3-4 years, highlighting that their business models are also relatively new and prone to changing.

In the fourth section, we discuss our field research and analysis of 18 support organizations. We intended to collect data on as many accelerators as possible, while also interviewing organizations that are representative of the other types of support organizations. For each type of support organization (and some of their variants), we visualise their business model and list primary and secondary performance metrics.

The expansion in scope to include other support organisations revealed considerable heterogeneity in the business models, while also finding significant overlap with the business models of other organisations that support startups. In the short-term, their operational performance is largely determined by the survival, growth and follow-on

funding of the startups they support. In comparison, their strategic performance metrics are longer-term, including multiples from exits and contributing to developing the startup ecosystem. While operational performance metrics are often available, they are secondary to the strategic performance metrics, for which is remains too early to tell which form of support is meeting its own goals.

The fifth section analyses 76 startups (44 supported and 32 independent) and their growth in relation to support organizations. The sample shows that the startups are quite young in age, and seek support early on (often simultaneously to launching the startup). Their expectations of the support organizations are primarily intangible, and related to network and skill development. The importance of intangible support (above and beyond the expected financial support) is reinforced in their reviews of the areas of support which had the greatest impact on developing their startup. The top three types of impact due to receiving support were (i) finding a product-market fit, (ii) increasing revenues, and (iii) follow-on investment.

Supported startups attributed their achievements to the support organizations and indicated that their expectations were usually exceeded. Nonetheless, this study finds that the economic impact is inconclusive, since independent startups are also able to attain similar economic results (new jobs, revenues, follow-on funding). The support organizations demonstrate a significant impact with regards to developing entrepreneurial skills and professional networks within a compressed time frame.

Recommendations for accelerators include clearly defining their point of differentiation to other accelerators and investing considerable amounts of time in their own professional network development in order to maintain a portfolio of high quality mentors.

The last major section develops policy suggestions based on the literature, industry reports and inductive analysis of the field research conducted for this project. Policy recommendations include (i) considering direct funding of support organizations and (ii) improving the R&D tax incentive process. Direct support for accelerators (and other support organizations) may be in the form of co-investment in the startups or co-funding of the organization's operating costs. Supporting more accelerators in order to increase the quantity of startups is recommended, but only if there is a mechanism to maintain a minimum level of quality of service from the support organizations with at least some operational performance, or by supporting new accelerators (Startup Brasil and the Yozma in Israel provide interesting models to consider). Recommended improvements to the R&D tax program are relatively straightforward: enable more regular (quarterly) cash flows to startups and potentially broaden the type of activities in startups that the program can support.

1 Introduction

1.1 Overview of Australian support ecosystem:

This report focusses on the role of business accelerators in the Australian startup ecosystem. Due to a lack of clear boundaries across organisational types and interrelationships between organisations, their role and impact must be considered in context and in comparison to other organisations in the ecosystem, including but not limited to incubators, co-working spaces, angel organisations, and mentoring organisations.

1.1.1 Startups need for seed capital in Australia

Seed capital is a central theme to startups. Beyond the time and energy of the founder, capital is often required for startups to survive until they develop a sufficiently valuable product from which they can generate revenues. In many cases, this capital comes from the personal reserves of the founder. However, with an increasing emphasis on technology development towards a goal of creating an internationally scalable startup, there comes a reliance on external sources of seed capital.

The lack of publicly supported seed capital in Australia was initially noted in the Espie report (1983) and was not enacted on until over decade later with the creation the Australian Association of Private Equity and Venture Capital (AVCAL) in 1992 and the creation of the first Innovation Investment Fund (IIF) in 1998 (Bliemel et al, 2014). Almost simultaneously, the Australian government also launched the Building on Information Technology Strengths (BITS) program as a continued commitment to develop the IT sector in Australia. The BITS program consisted in the establishment of 11 incubators across Australia to help entrepreneurs turn their ideas into globally competitive businesses. The program was backed by \$158M over 5 years (ending in June 2004) to establish business incubators in conjunction with seed stage funding. By this time, the dotcom bubble had grown to its peak. The timing of its implosion was unfortunate for the nascent seed and venture capital industry. Many of the fund managers never got a chance to learn how to be good investors. In comparison US venture capitalists had already learned their lessons through several rounds of government programs (Hsu & Kenney, 2005), and were more experienced and effective with their investments.

1.1.2 Startups general need for a supportive ecosystem

More recently, perhaps due to the rise in popularity of Silicon Valley, our understanding of what contributes to the emergence of large numbers of high quality startups is based on a more holistic ecosystem view (e.g., Nelson 1993; Saxenian 1994; Storper 1997). Previously, the perspective was more of a question of raw resources provided in the hopes that entrepreneurs could figure out how to fit them all together. In comparison, the ecosystem (or innovation system) view places greater emphasis on the diversity of supporting organisations, their interconnections and the paths by which entrepreneurs navigate them. This perspective spans the local ecosystem (Garnsey & McGlade, 2006) through to the global economy (Dolphin & Nash, 2012), making it increasingly difficult to draw boundaries around the scope of the phenomenon of startups and the ecosystem that supports them.

As a reaction to the fixation on creating the next Silicon Valley, academics, practitioners and governments are recognizing that these regional ecosystems cannot be cloned and take time to develop, based on existing regional strengths (Isenberg, 2010). This has resulted in many regions taking stock of their ecosystem in order to create a visual map. These maps help articulate the origins, history and social structure of the ecosystem, and give members a sense of community. In North America, organisations like PwC¹ and Endeavor² are professionalizing the process of creating these maps, too.

¹ <u>http://cie-unsw.blogspot.com.au/2012_06_01_archive.html</u>

² http://nyctechmap.com/

1.1.3 Australian startup ecosystems

Australian examples of ecosystem maps include Perth,³ Adelaide,⁴ and Melbourne and Sydney,⁵ and Brisbane.⁶ Each of these maps and their various iterations reveal how rapidly communities are forming that increase the transparency of who is doing what within each ecosystem. Even if the maps are only schematic interpretations, they show the composition of each ecosystem's support organisations. For example, Adelaide's 2014 ecosystem includes 87 support organisations, of which 15% are coworking spaces and 2% are accelerators. Across Australia data collected as part of the 2013 PwC "The Startup Economy" report indicated 172 support organisations." Lists of these organisations or initiatives can include university courses, workshops, hackathons, incubators, accelerators, venture capital funds, and more. For example, f6s.com tracks 3,757 accelerators, events, contests or investment funds, globally; albeit only 88 in Australia and New Zealand.⁸ Collectively, these ecosystem maps and lists document the emergence of an increasingly sophisticated and interconnected ecosystem for startups. They also capture some of the dynamics within the ecosystem, such as accelerators that cease operations⁹ or change business models.¹⁰

1.1.4 Australian startup ecosystem members

Each type of support organisation plays a different role and has its own history. Organisations in the ecosystem covered in this report include incubators, accelerators, co-working spaces, mentoring organisations, pre-accelerators (aka. skill development programmes) and angel organisations.

Australian incubators have a longer history, dating back to the 1980's. Many early incubators were focused on regional economic development and assistance to SMEs. This was followed by the introduction of BITS incubators, and the demise of most of them after the dot crash. Simultaneously to the rise and fall of BITS, the national incubator association, Business Innovation & Incubation Australia (BIIA)¹¹ eventually became dormant, until very recently.

Accelerators, as distinct from incubators have emerged more recently, largely as a result of individual entrepreneurs or corporations seeking to become better angels or generate more deal flow (i.e., they emerged in absence of a government intervention for them). Across Australia, there are 22 or more accelerators,¹² with some accelerators offering their services in multiple locations or for multiple corporate partners. International reports of accelerators in Australia continue to underrepresent the scale of this industry (f6s.com only lists 14, and the CrunchBase Venture Program¹³ only lists 7). While there is not (yet) a formal national association of

³ <u>http://spacecubed.com/2013/09/25/perth-startup-ecosystem-2013-infograph/</u>

⁴ <u>http://www.adelaidenow.com.au/business/mapping-south-australias-entrepreneurialecosystem/story-fni6uma6-1227197205989</u>

⁵ <u>https://www.bluechilli.com/blog/heres-your-august-startrail-maps-for-melbourne-and-sydney-startup-</u> <u>communities/</u>

⁶ http://tsj.io/startupmap/

⁷ http://startupaus.blogspot.com.au (data warehouse accessed 19 Mar, 2013)

⁸ https://www.f6s.com/programs

⁹ http://www.seed-db.com/accelerators lists 20 'Dead' accelerators

¹⁰ http://www.smh.com.au/it-pro/business-it/pushstart-decelerates-seed-funding-20130716-hv0xu.html

http://businessincubation.com.au/

¹² http://sydneyyoursay.com.au/tech-startups-action-plan

¹³ https://info.crunchbase.com/about/crunchbase-venture-program/

accelerators, their operators meetup on a regular basis at each other's events and for communal dinners.¹⁴

Co-working spaces are becoming increasingly popular places for technology entrepreneurs to work, learn from their peers and form communities. In 2014, 55 coworking spaces across Australia were invited to meetup at the SydStart conference,¹⁵ including many accelerators and incubators. In June 2015, Sydney also hosted the Global Coworking Unconference Conference, which attracted over 130 participants,¹⁶ inclusive of incubators, accelerators, venture capitalists and others, indicating further interest and growth in this sector.

Mentoring is one of multiple core features of most accelerators. However, there are organisations for which mentoring is the primary focus. One of the oldest (related to entrepreneurship) is likely TiE Sydney,¹⁷ founded in 2002, which has supported 120 startups via ~25 local mentors. TiE Sydney is part of TiE's global networks of 4,000 mentors. This sector also has some transition, with PushStart initially focussing on mentoring, temporarily becoming a full accelerator, and then also moving its mentoring platform to a startup, thereby fulfilling its mission to fill a gap.¹⁸ Meanwhile, other networking organisations are launching mentoring programmes (e.g, Advance.org¹⁹) and the process of running mentoring programmes is becoming more systematic.²⁰

Another emerging type of player in the startup ecosystem focusses almost exclusively on skill development. While Monash University and UNSW have been making inroads into the startup ecosystem²¹, they are also facing competition for 'entrepreneurship students' from university-based MOOCs, as well as the private sector (e.g., Founder Institute, General Assembly, 99toLaunch [by BlueChilli], Bschool.com.au, The Entourage, Pollenizer Academy and Startup-australia.com.au), each of which employ similar 'lean startup' methods (Ries, 2011).

Angel organisations are another key player in the startup ecosystem. Even if most startups do not pursue or receive external investment capital, the emerging popularity of pitching to investors is helping hone the skills and aspirations of many entrepreneurs. A 2006 review of angel investing in Australia identified 12 angel organisations (Vitale et al., 2006). Since then, other prominent angel organisations have emerged, including Innovation Bay²² and Sydney Angels.²³ Interestingly, seed capital in Australia significantly helps create and grow startups, but is not necessarily a primary driver of job growth. Seed capital in Australian technology firms leads to

²³ http://sydneyangels.net.au/about

¹⁴ <u>https://groups.google.com/forum/#!msg/silicon-beach-australia/KKf35sR2_xw/aElbFY7PxLkJ</u> (see "ps")

¹⁵ <u>http://sydstart.wordpress.com/2014/09/01/coworking-meetup/</u> (accessed 2 Sep, 2014, now archived)

¹⁶ <u>http://au.gcuc.co/whos-coming/</u>

¹⁷ http://sydney.tie.org/mentoring/

¹⁸ <u>http://pushstart.com.au/</u> Similarly, accelerators overseas have simplified their business model to focus on investing and avoid an increasingly competitive market for startups: <u>http://www.tennessean.com/story/money/2016/01/14/jumpstart-foundry-drops-accelerator-role-becomes-fund/78768356/</u>

¹⁹ <u>http://advance.org/awards-mentoring/</u>

²⁰ <u>http://artofmentoring.net/clients/</u>

²¹ <u>http://www.startupsmart.com.au/leadership/how-two-australian-universities-are-fostering-the-next-generation-of-entrepreneurs/2015120216058.html</u>

http://www.smh.com.au/action/printArticle?id=1002784802

more (follow-on) venture capital, which leads to more research and development (R&D) and higher valuations of the startup (Cumming & Johan, 2014). However, these startups did not significantly outgrow their peers when measured in terms of employment (ibid.).

1.1.5 How many startups are there?

Accurate counts of startups are difficult to attain. Arguably, any new business can become a startup, and debate remains about what exactly the label 'startup' refers to.²⁴ The general consensus is that startups are high growth potential firms that are scalable because of a foundation of (disruptive) innovation. Various sources identify that there are several hundred to a couple thousand startups across Australia. Reports attempting to quantify the size of the startup industry include:

- 2012 "Silicon Beach: Building Momentum"²⁵: "Today, over 50,000 startups from around the world are being tracked in the Startup Genome database, with over 1,000 from Australia."
- 2013 "The Startup Economy"²⁶: "Approximately 1,500 tech startups with hubs in Sydney and Melbourne"
- 2014 "Crossroads"²⁷: "In 2013 PwC conducted a preliminary survey of Australian startups as part of the Startup Economy report. That survey has since been refined by StartupAUS and the best estimate now available is that there are 1,000 tech startups in Australia, or 0.047% of all Australian Businesses."
- 2015 "Crossroads": "Various surveys and analyses have resulted in estimates of Australian startups ranging from 1,000 to 1,500. StartupAUS believes the best estimate available is that there are 1,200 tech startups in Australia, or 0.06% of all Australian businesses."
- 2015 Startup Muster: "1,333 responses were captured; post validation and data cleaning 602 startups were confirmed. The response rate for the 2015 intake nearly doubled that of 2014 (385 validated startups)."

Startup Muster's 2014 figure is close to the 365 recorded in CrunchBase. However, CrunchBase may significantly underrepresent the industry because of its emphasis on startups that are active in the US or funded by US investors. Meanwhile, f6s.com reports 3,113 in Australia and New Zealand, and globally tracks nearly 10 times more startups than CrunchBase (402,000 versus 53,000 respectively).

The very recent Startup Muster provides an interesting overview of the anatomy of the Australian technology entrepreneur that is similar to their US counterpart²⁸, in that they often form multiple startups, and place a high emphasis on their professional network. A university degree is considered useful but not essential. At least in the US, university is when most entrepreneurs gained an interest in entrepreneurship. In comparison to the US average, Australian entrepreneurs were twice as likely to be born overseas. A note of caution, the startups in the Startup Muster report may not fully capture all high-growth potential startups. Considering the high proportion of startups in the digital economy and the relatively high

²⁴ <u>http://www.startupsmart.com.au/growth/business-advice-and-education/start-up-australia-launches-not-be-confused-with-startupaus/2014073012872.html</u>

²⁵ <u>http://www2.deloitte.com/au/en/pages/technology-media-and-telecommunications/articles/silicon-</u> <u>beach-study-australian-startup-ecosystem.html</u>

²⁶ https://www.digitalpulse.pwc.com.au/australian-tech-startup-ecosystem/

²⁷ https://startupaus.org/resources/crossroads-report/

²⁸ <u>http://www.kauffman.org/what-we-do/research/2010/05/the-anatomy-of-an-entrepreneur</u>

proportion of startups that have accessed accelerators or incubators (which themselves are often focussed on the digital economy), the report is likely to be missing startups that are more intensive in terms of development of intellectual property (IP) and thus more likely to apply for government support for related R&D.

2 Background literature

The focus of this project is on accelerators. However, the scope includes the other types of organisations in the ecosystem mentioned above (i.e., incubators, co-working spaces, etc.). This section sets out to provide some clarity about what accelerators are, and what their distinguishing features are. In particular, we contrast and compare them to incubators.

2.1 Incubator vs accelerator confusion

Accelerators are a relatively new type of organisation. Most of the nascent academic literature on accelerators tends to conceptually link them to incubators (von Zedtwitz 2003; Carayannis & von Zedtwitz, 2005; Grimaldi & Grandi, 2005; Pauwels et al., 2015). This linkage is largely because "there is little formal academic literature on the subject and no universally accepted definition of what an accelerator is" (Barrehag et al., 2012). As a result, some researchers seem to even use the accelerator label while actually describing incubators (e.g., Malek et al., 2014). While accelerators have some elements that might resemble incubators, they also have defining characteristics that differentiate them from incubators.

Historically, business incubators started off as physical facilities that shelter new firms until they can become self-sustainable and survive outside the incubator. These organisations operated using a landlord-tenant model, with rent being subsidised by the owner, the local economic development corporation, or another government agency. Average residence time still varies considerably: from one to five years, with an average of 33 months (BADIR, 2013). More recently, incubation has shifted from providing low-cost offices, to a model where the landlords offer more (access to) value-added services. As defined by Hackett and Dilts (2004). incubators recently became "a shared office space facility provid[ing] its incubatees [..] with a strategic, value-adding intervention system of monitoring and business assistance" (p.57). Value-adding interventions usually included referrals to professional service firms (accounting, law, etc.) who offered discounted rates, essentially extending the low-cost model to the incubator's business network. The basic operating model for incubators has remained largely the same: maximizing occupancy of the shared office by offering discounted rent and professional services. Their own survival is thus contingent on prolonging the survival of their tenants.

Third generation or networked incubators not only assist with decreasing expenses, but also with increasing revenues and access to capital by providing referrals to potential investors, lead customers and strategic partners (Bruneel et al., 2012). Some also provide coaching and mentoring (Grimaldi & Grandi, 2005). However, providing access to such a value added network has been challenging to incubator operators (Grimaldi & Grandi, 2005; Bruneel et al., 2012). Building on this emphasis on value creation, these incubators also tried to capture some of the upside of the value created by their incubatees by making ad hoc investments (von Zedtwitz, 2003; Carayannis & von Zedtwitz, 2005; Leblebici & Shah, 2004). While the subsidised rent helps keep the incubator alive and remains the primary operating

model of these incubators, the exit-based profits from investing in tenants provides greater economic freedom and enables business development of the incubator.

This significant potential for exit-based profit has resulted in some scholars arguing that these new generation 'incubators' perhaps no longer fit the defining features of 'true' incubators (Hannon, 2004; van Huijgevoort, 2012). We believe that an overemphasis on this latest characteristic (i.e., the exit-based profits) is the main reason for the conceptual confusion between incubators and accelerators (as reflected in Lumpkin & Ireland, 1988; Bøllingtoft, 2012, Malek et al., 2014).

In industry too, there remains a lively debate about what an accelerator is. Interestingly, while many point to Y Combinator as the archetypical accelerator, Paul Graham (Y Combinator's founder) did not self-identify the organisation as an accelerator. Instead, Paul Graham called it a "seed-stage investment firm" (Livingston, 2007, p. 205), later describing it almost purely in terms of angel investing. By his own accounts, Y Combinator was deemed "inconsequential" for several years because the operating model seemed to support businesses resembling "toys" and not fully formed or viable businesses.²⁹

Meanwhile, some organisations have deliberately used the accelerator label in order to avoid the incubator label. As one participant in our prior research project commented: "There was a lot of baggage with the word 'incubator". So, for a long time, we didn't call ourselves an incubator because it was very negative. We called ourselves a commercialization hub. We called ourselves an accelerator (before any of the current accelerators started using that label), a precinct, an ecosystem ... lots of words [...] but not the I-word" (Bliemel & Flores, 2015). The amalgamation of incubators and accelerators also occurs at the level of national associations, such as CABI's recent rebranding from the Canadian Association of Business Incubation to the Canadian Acceleration and Business Incubation (Association).³⁰

2.2 Incubator vs accelerator differentiation

Just as much as some people conflate incubators and accelerators, others seek to differentiate them as much as possible and are very critical of their own counterparts. For example, one accelerator operator commented: "Incubator means life support. I hate the term incubator. It has absolute connotations. It's got a higher education connotation attached to it. Basically, we're going to keep you alive until you potentially fall across the line and succeed, while hopefully ensuring that you don't quite fail. We're an accelerator. Our goal is to find teams with highly advanced prototypes [..] because you can't go fast to market with anything else because of the realities of the technology. So we're about fast-to-market with enlightened teams with highly advanced prototypes coming to us saying 'We need six months of work to finish this off. Will you help us out? Will you pay for us for six months?' It's for profit. [..] We're talking about maximizing the chances of success, as opposed to just barely not failing, which is what I see a typical incubator thing is: 'We just don't want you to fail. If you're still alive in 10 years, that's a good thing.' [..] In my opinion, if you're not a billion dollar company in 10 years, you've actually stuffed up" (Bliemel & Flores, 2015).

This quote emphasises conventional incubation, based on self-sufficiency of the startup, its survival and maintaining high incubator occupancy rates (see also

²⁹ <u>http://old.ycombinator.com/start.html</u>

³⁰ http://betakit.com/cabi-gets-new-name-and-focus-with-leadership-change/

Dowling, 1997 regarding recommendations to maintain 90% or higher occupancy rates for the incubator to be self-sufficient, too). This survival focus overlooks or downplays the value-add services that more recent generations of incubators have added to their business model.

Vice-versa, incubator operators are sceptic of accelerators (Richards, 2002, p. 151): ""I think the concept of accelerators is kind of naive. It takes longer to build a business that's going to sustain; you can't just dress up the entrepreneurs and send them out and IPO them. Although we are getting faster at what we do-it took us about 11 months to graduate KickFire. [..] We did have a company in and out in two months, but I don't think we helped them that much and they basically left as soon as they got funding."

2.3 The five defining features of accelerators

Defining what accelerators are and what they do is becoming more agreed upon in the literature. One of the most widely accepted 'strict' definitions is by Miller & Bound (2011), repeated by BADIR (2013), and extended by NESTA (2014) and Heinemann (2015). Accelerators are defined by five business model features that are partially interdependent: (1) Seed funding, (2) cohort-based entry and exit, (3) co-location, (4) a structured programme, and (5) mentoring.

- 1. Seed funding: Accelerators typically offer startups seed funding in exchange for a small proportion of equity. This feature, and the general absence of charging startups for services or rent makes accelerators more like angels than incubators (Cohen & Hochberg, 2014; Bliemel et al., 2014). However, their term sheets and investment process are more standardised and more scalable than angel investing. Angels average 20 hours per deal on due diligence (Wiltbank & Boeker, 2007). According to Aspen Institute (2014), angels spend 38% of their time on due diligence and 25% on deal sourcing; the rest is spent on portfolio management. The due diligence cycle also usually takes between 1-3 months (Vitale et al., 2006) and angels invest ad hoc on a deal-by-deal basis. Even some of the largest angel networks collectively invest in only 1 deal per month (Wilson/OECD, 2011). In comparison, accelerators actively solicit hundreds of applications, from which to simultaneously focus on ~10, and they offer each startup the exact same terms and conditions.
- 2. Cohort: Each accelerator simultaneously invests in a cohort (or 'batch') of startups. As with the due diligence process and negotiations process, cohorts also offer operational efficiency for portfolio management and peer learning. However there are limits to these economies of scale (Kim & Wagman, 2012) as also witnessed by Y Combinator.³¹ As with cohort-based entry, there is also cohort-based 'graduation' from the accelerator, which culminates in a 'DemoDay' (a feature also emphasised by Dempwolf et al., 2014). Each DemoDay involves all startups pitching their latest business model to the community, ideally including several investors from whom they are seeking follow-on investment.
- 3. **Co-location**: As a by-product of cohort-based investing, accelerators usually require startups to be co-located full-time in the same space. To save on capital costs, they often rent space within an incubator or co-working space. These spaces can usually handle many more startups than are being accelerated and

³¹ <u>http://venturebeat.com/2012/12/03/yc-startup-class-size-cut/</u>

can accommodate for possible growth of the startups. Many accelerators also permit or even encourage the startups to remain co-located so they can continue learning from each other.

- 4. Programme: As another by-product of standardizing the intake of startups, accelerators can offer the same structured guidance to the entire cohort for the first few weeks of their programme. After this, the programme offered becomes increasingly unstructured and customised to the concurrent needs of the startups. The programme typically runs between 3 to 6 months, allowing for some transition and recruiting time before the next cohort is invited. As with most university courses, a cohort-based program enables economies of scale by delivering advice once. The open plan office environment, and programme structure also facilitate peer learning. So, if one startup has a particular problem, it might be faster for them to reach out to another team who recently faced the same problem than to get advice from the accelerator operators.
- 5. **Mentoring**: Some accelerators are well resourced enough to employ full time business development advisors. The vast majority of accelerators employ very few people. Instead, they tap into the enthusiasm of other successful entrepreneurs who want to give back and help out the next generation. In some cases, the mentors are investors in the seed fund and have a (shared) vested interest in the success of every startup in the cohort. Usually, though, mentors help out as volunteers with the possibility of angel investing within their preferred startup(s) in the cohort. Other variations include mentors being local and generally available, versus being flown in and only available for 2-3 days. Therein is a tradeoff whether the mentoring support is immediately accessible versus whether they can facility access to overseas markets or partners.

Of these 5 features, the lynchpin is arguably the cohort model (see also van Huijgevoort 2012; Dempwolf et al. 2014; Bliemel et al., 2014; Bliemel & Flores, 2015, Shane, 2015). The competitive intake process forces a shorter due diligence process per startup and simplification of the selection (or rejection) criteria. Due to time constrains and for reasons of fairness and transparency, the investment terms need to be clear, simple and standardised. The cohort model also enables more learning as a group from guest and mentors and more learning between peers (vs conventional angel investing which keeps portfolio companies separate). Peers simultaneously provide peer pressure to perform and collaboratively help each other solve problems. Overall, learning is a coordinated effort from mentors, accelerator operators, startup team members, and peers (Cohen, 2013).

With these defining features in mind, it is important to recognise variations across accelerators. They can vary in terms of the stage of firm or sector they target (e.g., CleanTech, Malek et al., 2014). The sectoral focus may be the single most important feature to consider by startups applying for programs; an internet startup would be rejected or seriously misplaced at a CleanTech accelerator. They are also increasingly popular for corporations as a method for innovation management and commercialization that is de-coupled from their corporate venture capital divisions and involves more external people (Lehmann, 2013, Heinemann, 2015). They can also be run as pre-accelerators without the requirement to be incorporated and immediately issue equity. Such pre-accelerators focus more on the entrepreneurial skill development than on the business development and are increasingly popular

with universities (Voisey, Jones & Thomas, 2013).³² If the cohort feature is relaxed and the accelerator is more involved in the co-founding of the startup, then we arrive at what is called a 'germinator' model (Hannon, 2004; Bliemel et al., 2014; Bliemel & Flores, 2015). One of the best known germinators is IdeaLab, which was founded in 2006 in Pasadena, California "to test many ideas at once and turn the best of them into companies, while also attracting the human and financial capital necessary to bring them to market".³³ Germinators also exist in the physical sciences, such as PureTech,³⁴ where the directors and employees systematically test and validate ideas related to healthcare and then spin them out as new startups. In the media, they are sometimes called Labs or Startup Factories.³⁵ Lastly, acceleration can be operated as an accelerator-as-a-service model to help clients identify and accelerate ideas, while upskilling employees about the lean startup methodology.³⁶

2.4 Founding motivations

A recent review of accelerators in relation to their aims revealed three different founding motivations for accelerator operators (Pauwels et al., 2015). Unfortunately, the labels chosen by them are somewhat confusing in relation to the frame of reference. In no particular order, the first type of founding motivation is typical of corporate sponsors who want to engage with and learn from the startup community; labelled 'ecosystem builders' by Pauwels et al. (2015). This is a bit misleading since they are primarily building only the corporate-startup bridges to themselves, and not quite building out the ecosystem as a whole. The next type is the deal flow generator. These are typically privately funded by angel investors or fund managers who are looking for return on equity (ROE). The third type are the actual startup ecosystem builders (see also Hoffman & Radojevich-Kelley 2012; Price, 2004), labelled 'welfare stimulators' (ibid.), who are typically publicly supported and primarily interested in increasing the entrepreneurial capabilities and professional networks within the ecosystem. These three types are not necessarily exclusive. Accelerator operators and other support organisations in our sample indicated that their shortterm goals of developing their own bridges or the ecosystem are complementary to seeking longer-term ROE.

An additional founding motivation leading to the deal flow generator is easily overlooked: the desire of the accelerator operator to become a better angel investor. This was one of the reasons Y Combinator started: "The reason we began by funding a bunch of start-ups at once was not that we thought it would be a better way to fund start-ups, but simply because we wanted to learn how to be angel investors, and a summer program for undergrads seemed the fastest way to do it."³⁷ It was subsequently reflected in interviews with Australian accelerators (Bliemel & Flores, 2015): "Y Combinator had just done a few of their batches. It was an interesting mechanism, particularly to learn how to be a good investor: invest a small amount of money in a large amount of companies and try to be helpful to them. It gives you a lot of data points as to who's a good team, who's a bad team. It felt right in terms of where Australia was." Recent research indicates that the lessons on being a better

³² <u>http://www.startupdaily.net/2015/01/university-students-must-leave-classroom-work-startups-gain-entrepreneurial-experience/</u>

³³ <u>http://www.idealab.com/about_idealab/timeline.html</u>

³⁴ <u>http://puretechhealth.com/approach.php</u>

³⁵ http://www.wired.com/2014/11/startup-factories/

³⁶ <u>http://pwc.to/1M12RR0</u> or <u>http://bit.ly/1IToOZy</u> or <u>http://datastart.com.au/</u> or <u>http://bit.ly/1IZ7V52</u>

³⁷ http://old.ycombinator.com/start.html

angel start with learning how to screen deals before doing due diligence (Harrison, Mason & Smith, 2015), including knowing which deals to turn down. By launching an accelerator, the founders learn this process by necessity, but also by involving the accelerator's mentors in the screening and subsequent operational processes.

Launching an accelerator and becoming a better angel investor is not for everyone. Anyone can read about accelerators (and other support organisations) and be motivated to start one. However, our interviews and prior research clearly show that anyone's ability to create one is highly contingent on being able to leverage prior relationships they have in the ecosystem. Richards (2002, p.74) guips that incubation or acceleration without relationships leads to incineration (of the accelerator): "Two of the most critical issues that incubators and accelerators face are that they cannot tie their startups into money, and they can't connect them to people who are key in their industry who wish to take on mentoring roles. These will eventually be the two things that will kill your program if you can't come through." The depth and breadth of the relationships matter, as does the ability to (re)activate them on short notice (Richards, 2002, p. 171): "That ecosystem is important because if you're going to provide rapid acceleration and growth to these companies you need to have instant access to PR firms, design and engineering firms." Similarly, Hochberg (2015) emphasises that "success of these programs relies on a complex combination of human capital, networks and experience, which must be built over time" (p. 15).

These prior relationships matter to find mentors, find follow-on investors, find corporate sponsors for their own organisation, negotiate preferred service provider rates, or help the startups find their first corporate customers; all within the very short time they are participating in the programme. It simply takes a long time to develop these relationships, and new accelerator operators who have them (along with their rapport as a successful entrepreneur) are at an advantage.

2.5 What factors entrepreneurs think are important

Accelerators are not the panacea for all entrepreneurs' woes. For example, if entrepreneurs believe that all they need is a mentor, then the accelerator programme is overkill. Applicants usually apply because they have a simultaneous need for multiple things that the accelerator is offering (Isabelle, 2013): they are seeking seed stage funding, need the nature and extent of services provided, and can take advantage of the accelerator's network of partners.

An interesting aspect in exploring why startups apply to accelerators is comparing what they expected upon entry to what they found most valuable upon programme completion. This was done by Li et al. (2012) who asked 13 startups to rate the importance (out of 5, highest) of factors they thought were important while applying and upon programme completion, summarised in Table 1.

Overall	Before	After	St.dev Before	St.dev After
Funding Opportunities	3.46	4.77	1.5	0.42
Brand/Alumni Connection	2.92	3.77	1.07	0.97
Business/Product Development Support	2.77	3.31	1.19	1.38
Mentorship	2.85	4.69	1.29	0.46
Entrepreneurial Culture	2.69	3.92	1.32	1.33
Synergistic Environment	1.62	3.23	0.84	1.67

 Table 1: The importance of six factors while applying to accelerators and after being in the programme (Li et al., 2012)

Interestingly, two things stand out. First, in terms of the change in ranking, the importance of mentorship skyrocketed by almost two full points to the second highest ranked factor. Similarly, the importance of an entrepreneurial culture and synergistic environment were previously significantly under-rated. Secondly, the standard deviation scores reveal that the new importance scores of funding opportunities and mentorship are consistently high (low variance), and that there was increasing variance about the importance of business/product development support. A more recent report with a sample of 54 startups and 27 factors showed similar results (Aspen Institute, 2014), albeit for incubators.

2.6 Impact Metrics

There are several studies that propose comprehensive sets of metrics for incubators, accelerators and angel investments (e.g., Mian, 1994; Mian, 1997; Bearse, 1998; Sherman & Chappell, 1998; Lewis, 2001; Feeser & Willard, 1989; Colombo & Delmastro, 2002; Voisey et al., 2006; Wang et al., 2008; Bruneel et al., 2010; Ganamotse, 2011; Cukier & Middleton, 2012; Garibay et al., 2013; Dempwolf et al., 2014).³⁸ Some of the more interesting studies or reports that cover metrics indicate their relevance or ranking. For instance Caley & Kula (2013) indicates that the cohort's survival & growth metrics (i.e., jobs, follow-on funding, new customers) are ultimately more important than the incubator's own operational metrics (i.e., via exit-interviews, counts of applications, mentors, or Net Promoter Score™). They also caution that measuring the cohort performance is subject to significant measurement challenges involving time, longitudinal contact, and agreement on definitions/metrics.

More specific to angel investing, research on returns to angels shows that the average multiple is 2.5x, achieved after 3.5 years (Wiltbank & Boeker, 2007). This is at least as good as VC returns within a similar time frame,³⁹ and relatively consistent with the 3-5x multiple reported for Australian angels (Vitale et al., 2006). However, returns to angel investments have a scale-free distribution. Significantly higher average multiples are achieved for more patient investors, who presumably exit the same time as the follow-on VC's do, and do not exit earlier by acquisition.

2.7 Practical impact metrics

In response to the paucity of reliable data, and near futility of trying to measure 40 or more performance criteria, others have provided more practical guidelines for

³⁸ http://ubi-global.com/wp-content/uploads/2015/03/UBI-Index-Benchmark-Methodology.pdf

³⁹ http://techcrunch.com/2012/10/13/angel-investors-make-2-5x-returns-overall/

assessing the impact of startup support organisations. For instance, Barrehag et al. (2012) note: "A startup is not made of a thousand metrics" and that the only one that matters is follow-on funding. Analysing detailed operational metrics of accelerators may miss the point, that accelerators (like angel investments) are usually not designed to gain marginal returns or squeeze out marginal operational efficiencies; they're designed to aim for home-runs & ignore the misfires. This home-run vs mediocre returns distribution is clearly evidenced in Y Combinator's results, too.⁴⁰

On the note of the design or purpose of the support organisation, Kempner (2013 p.4) notes: "Many scholars suggest the use of goal-oriented performance metrics, meaning that success can be defined by the extent to which an organisation meets its goals. While this approach offers obvious benefits over financial metrics, it is subject to a deluge of semantic disagreements: What is the goal of an incubator? Do all incubators have the same goal? How do you compare a variety of incubation programs that have incongruent missions, models, and funding mechanisms? Even the most common performance statistic—survival of the incubated firms—can be problematic." The same applies to accelerators (terms used interchangeably by Kempner), who might be setting goals that take 5-10 years to realise.⁴¹

A recent industry report series (DEEP BABI 3)⁴² advocates for four simple startup metrics, in lieu of the lack of data: (i) survival, (ii) follow-on funding, (iii) jobs, and (iv) revenues. The first is effectively a prerequisite for the rest. A challenge with survival is that it may be better to fail early, avoid throwing good money after bad, and start another startup. The second metric shows growth intentions and ambition, but is ultimately unsustainable; startups eventually need to have a profitable revenue model. The jobs metric remains a challenge to justify. The lean budgets that startups have would drive them to automate further to save on salaries (West, 2015; WEF, 2016). The fourth metric, revenues may ultimately be the most telling, noting that many high-growth firms plough them back into the startup without showing profits. For IP intensive startups, the revenues may occur in more 'lumpy' amounts due to licensing or strategic alliancing deals.

2.8 Direct impact

Beyond proposing performance metrics, a handful of studies take a matched sample approach to asking whether accelerators or incubators are effective. One of the most notable studies is by Hallen, Bingham and Cohen (2014), who compare 180 accelerated startups versus 164 independent matches. In terms of follow-on financing, they find no statistically significant accelerator effect. In other words, the winners that accelerators are picking and supporting are equal to the best independent comparable startups. Despite the lack of a quantitative difference, they do note that qualitatively, "several substantive learning and network development benefits from participating in accelerators" and that "accelerators are complements to (and not substitutes for) more experienced and connected founders."

Similar non-significant differences were also found for incubator studies (Colombo & Delmastro, 2002; Amezcua, 2010). One simple explanation for this non-finding is the considerable heterogeneity of incubators. In other words, the impact of Y Combinator

⁴⁰ <u>http://www.economist.com/news/business/21677636-tech-talent-spotter-has-come-dominate-</u> silicon-valleys-startup-scene-y-combinator-x

⁴¹ https://www.bluechilli.com/blog/four-years-eternity-long-enough/

 ⁴² <u>http://deepcentre.com/wordpress/wp-content/uploads/2015/10/DEEP-Centre-BABI-3-Accelerating-Canadas-Startup-Ecosystem-September-20151.pdf</u>

and TechStars gets washed out by all the 'average' accelerators in the sample. Focussing only on these two accelerators, Smith and Hannigan (2015) compare 389 accelerated versus 230 independent startups to find accelerated startups are more likely to be acquired and acquired faster. They also find they are more likely to get follow-on funding faster in the few months after the programme, but that this DemoDay effect diminishes over time.

Interestingly, they also find that accelerated startups fail faster. They speculate that this might be a cohort effect, wherein if one startup fails, others in the cohort see that closing down and moving on might be the right thing to do, and is not associated with a significant negative stigma. This faster failure finding raises the question whether accelerated startups are being pushed into 'premature scaling.' Premature scaling occurs when the startup's processes, product and supply chain have not adequately been stress tested and is possibly the dominant reason why startups fail,⁴³ including those in Australia.⁴⁴ The counter argument to accelerated failure (aimed at incubators) is that non-acceleration "at best [..] only delay the firm's inevitable failure" (Ratinho, 2011, p.5) and reduce the time and money wasted on unviable opportunities.

Financial or survival metrics aside, is seems that the most indisputable impact that accelerators have is that the entrepreneurs learn a lot (to the point of overload) and expand their professional networks (e.g., Hallen, Bingham and Cohen, 2014). Whether they learn faster or retain more knowledge versus independent startups remains to be determined. For corporate sponsored accelerators, there is also supporting evidence that the accelerator is an effective way for startups and the accelerator sponsor to learn from each other (Slaats, 2015).

2.9 Indirect impact

Accelerators (and other support organisations) may also have an indirect impact on the broader ecosystem. Notably, Fehder and Hochberg (2014) indicate that these organisations are beacons to unite a community, and found that their presence significantly increases the number of early stage deals in the region (as theorised by Garibay et al., 2013). Also, noteworthy about spillover effects is an article by the Kauffman Foundation (Strangler & Bell-Masterson, 2015), arguing that one of the most important metrics for an ecosystem is the diversity and density of interconnections of the people in the system. Most accelerators cultivate new relationships through open houses, mentors, DemoDays, and generally getting their startups to contact many more as part of their primary market research.

3 Accelerators and ecosystem fit

Building on the indirect impact of accelerators on their ecosystem, one needs to take a closer look at the ecosystem and its evolution. Not only are startups new organisations, but so are many of the incubators, accelerators, co-working spaces, and other support organisations. As a result, they are also figuring out their fit with the ecosystem as they co-evolve. By co-evolving and frequently changing business model, the support organisations and ecosystem feed into each other and overlap,

⁴³ <u>http://www.forbes.com/sites/nathanfurr/2011/09/02/1-cause-of-startup-death-premature-scaling/</u>

⁴⁴ http://fromlittlethings.co/2012/11/20/silicon-beach-report-less-than-5-of-australian-startups-manageto-scale/

making them hard to tease apart. This makes it difficult for governments to provide support for specific types organisations within the community.

The best point of leverage to support such complex and dynamic startup communities or ecosystems is likely to be via the entrepreneurs leading the community, particularly those who sit across multiple organisations (Feld, 2012). The US Small Business Association (Porat, 2014) noted that accelerators tend to crop up in (regional) areas that were previously lacking in early stage funding, so direct sponsorship of accelerators by the government may seed the process of additional angel investing in the region (e.g., Fehder & Hochberg, 2014; Garibay et al., 2013). The SBA also found that this increase in seed funding did not necessarily lead to more VC. A lack of VC is lamented by some as the 'valley of death'. However the gap may also drive more entrepreneurs to aim to grow by bootstrapping off revenues and exit via acquisition (if at all).

3.1 Context and trends

This section considers the broader historic or economic context of support organisations and their ecosystems.

3.1.1 Globalization: specialization and interconnection

Globalization is steadily increasing, expressed as a net increase in the global trade of goods and especially in intermediate goods (Cattaneo et al., 2010), and as more complex structural patterns of trade (e.g., IBM, 2011; Dolphin & Nash, 2012). In tandem, the global internet keeps improving as a means to coordinate the global flow of (intermediate) goods and services. This means that the rate and reach of the diffusion of innovation is increasing year after year.⁴⁵ This trend presents the ever greater potential of reaching global markets, while also increasing vulnerability to global competition.

For many startups, it may come down to a globalise-or-die decision, for which they then need to ask whether they can grow organically, fuelled by revenues (e.g., Mullins, 2014), or whether they require angel or venture capital to out-grow their competitors. This global competition also plays out at the level of ecosystems and regional specialization (e.g., Isenberg, 2010). How many Silicon Valleys can there be? Biotechnology clusters? FinTech centres? If a startup wants to compete in an industry that is not concentrated in the nearby ecosystem, what role do accelerators play in giving that startup access to that industry? To this extent, some network organisations and accelerators have been set up within international industry epicentres, instead of being located locally. For instance, the Canadian Trade Commissioner Service established 12 'Canadian Technology Accelerators' (CTAs) in 8 cities in 4 countries to "provide support for Canadian technology SMEs to access global market opportunities with unique business acceleration programs that are tailored to the opportunities in [each] local market."46 While these CTAs are recognised as accelerators (Caley & Kula, 2013), they do not involve funding or equity, and may be role models for the proposed Australian Landing Pads.⁴

⁴⁵ http://andrewgelman.com/2012/04/08/technology-speedup-graph/

⁴⁶ http://international.gc.ca/tcs-sdc/cta.aspx?lang=eng

⁴⁷ http://www.innovationaus.com/2015/12/Labor-Tax-breaks-and-landing-pads

3.1.2 Australian context

Australia has had the misfortune of launching VC funding schemes late and coincident with the dotcom crash. So, the concept of risk capital and VC started off with a relatively negative public impression. In recent times, the Australian economy has been supported by a high demand in commodities and weathered the global financial crisis better than many other economies. The challenge today is how to accept the end of a mining boom, and cultivate an 'ideas boom'.⁴⁸

Some recent reports and trends are worth considering for the 'ideas boom'. Firstly, the 2015 Compass report⁴⁹ flagged Sydney as talented, but *lacking in startup experience* and (to a lesser extent) funds to get experience. Many of those who seek startup experience end up heading overseas. Only in some cases, are the entrepreneurs compelled to return (often for personal or family reasons).

Financial capital is also internationally mobile. Australian high net worth individuals can more readily invest overseas. Vice-versa, foreign institutional investors are increasingly investing in Australian startups.⁵⁰ Meanwhile, foreign individual investors who may previously have been interested in immigrating to Australia have been deterred by the recent changes to the Significant Investor Visa program.⁵¹ Crowdfunding is on the horizon (Los Kamp, 2013), but was recently poorly implemented in Australia⁵² and quickly reversed.

3.1.3 Global context

Globally, there has been an explosion of accelerators and co-working spaces. Many credit the genesis to Y Combinator (launched 2005). However, Richards (2002) notes other lesser known 'accelerators' that were launched decades earlier, with the same angel investing premise, but without a cohort model or co-location (Grey Heron, launched in 1993, still operating), or without a cohort or structured program (Launchpower, launched 2000, closed recently; and Scient, launched 1999, closed 2001).

Various lists of accelerator programs show that there are hundreds of accelerators world-wide, and that they are not yet showing signs of slowing down. Globally, f6s.com currently lists 786 accelerators. CrunchBase Venture Program listed 592 earlier this year, of which 60% were outside the US. Seed-db, once the definitive list of (mainly US-based) accelerators lists 'only' 215 today, up from 15 n 2009 (Christiansen, 2009). The SBA noted 400 applications for their \$44m funding for 80 accelerator program is also becoming a common theme. Founder Institute alone claims they have chapters in 100+ cities,⁵⁴ as does the Global Accelerator Network,⁵⁵ an offshoot of TechStars, which lists 22 locations.⁵⁶ Overseas, Israeli

⁴⁸ <u>http://innovation.gov.au/page/national-innovation-and-science-agenda-report</u>

⁴⁹ https://startup-ecosystem.compass.co/

⁵⁰ <u>http://www.forbes.com/sites/rebeccafannin/2013/10/11/accel-looks-to-up-its-deals-in-australia-in-search-for-more-new-heroes/</u>

⁵¹ <u>http://www.businessinsider.com.au/australias-plan-to-fund-its-startup-sector-has-turned-out-to-be-a-flop-so-far-2015-11</u>

⁵² <u>http://www.startupsmart.com.au/growth/innovation/labor-withdraws-support-for-crowdfunding-bill-as-startup-community-leaders-label-it-a-dead-duck/2015120316066.html</u>

⁵³ https://www.sba.gov/content/sba-boosts-economic-impact-accelerators-44-million-prizes

⁵⁴ https://fi.co/

⁵⁵ http://gan.co/the-network

media reports 70 new accelerators within 3 years.⁵⁷ In Canada, there were 30 new accelerators in 3 years (Caley & Kula, 2013), including the Canadian operated but international CTAs. In the EU, Startupfactories.eu (funded by NESTA) lists a surprisingly low 55 accelerators.⁵⁸ Then there are also the corporate accelerators. As at 2014 it was estimated that 69 of these exist (Future Asia Ventures, 2014), to which another 31 joined in 2015,⁵⁹ not including accelerator-as-a-service programs run for corporations by independent accelerators.

The systematization and professionalization of launching a startup has been credited with the introduction of the Lean Method (Ries, 2011), which traces its origins back to 2008. Since then, there has been an emergence of professional service providers specializing in aspects related to acceleration, including LaunchPad Central,⁶⁰ Nexudus,⁶¹ AngelList,⁶² or ArtofMentoring.⁶³ On the program delivery side, entrepreneurs (and to some degree accelerators) also have increasing options to choose from, including MOOCs, <u>http://startupclass.samaltman.com/</u> (by Y Combinator), online accelerators (e.g., 99toLaunch, Pollenizer Academy), and an almost unlimited selection of interviews and videos.⁶⁴

3.1.4 Trends

While there have been some valuation corrections at the \$1B startup level,⁶⁵ industry analysts argue that this is still part of a boom, not a bubble.⁶⁶ Overall, the business model seems here to stay.⁶⁷ It remains important to note that accelerators are startups, too. By definition, they are older than the startups they support. But, their collective average age is still younger than the average startups' age. They will also frequently adapt their business model and use of the 'accelerator label'. Australian examples of highly amorphous or fluid business models include those by PushStart, Accelerate Global (now Decisionship), VentureTec, and Pollenizer.

4 Startup supporters

The field research for this project was conducted part-time over approximately 2 months, and builds on 2-3 years of prior research focussed on the Australian context. We invested significant time to identify and validate a comprehensive interview guide and survey design, only to find that collecting that data was intractable and impractical, as echoed by Caley and Kula (2013). Only one startup

⁵⁶ <u>http://www.techstars.com/programs/</u>

⁵⁷ <u>http://www.haaretz.com/israel-news/business/.premium-1.686663</u> with some reporting as many as 207 accelerators: <u>http://www.geektime.com/2015/12/24/israeli-sigmalabs-</u> accelerator-pays-it-forward-to-build-a-stronger-ecosystem/

⁵⁸ http://www.startupfactories.eu/

⁵⁹ <u>http://www.forbes.com/sites/falgunidesai/2015/12/06/need-to-innovate-drives-unprecedented-level-of-corporate-accelerator-launches/</u>

⁶⁰ https://www.launchpadcentral.com/

⁶¹ http://coworking.nexudus.com/en

⁶² https://en.wikipedia.org/wiki/AngelList

⁶³ http://artofmentoring.net/

⁶⁴ http://tydanco.com/2016/01/25/every-imaginable-damn-startup-podcast-reviewed/

⁶⁵ <u>http://www.zerohedge.com/news/2015-11-10/unicorns-dropping-flies-first-dropbox-then-square-now-fidelity-cuts-snapchat-valuati</u>

⁶⁶ <u>https://www.cbinsights.com/blog/tech-bubble-boom/</u> or <u>https://www.cbinsights.com/blog/tech-bubble-charts/</u>

⁶⁷ http://techcrunch.com/2015/07/11/accelerators-are-the-new-business-school/

completed the long version of our survey. From there were pivoted to a much shorter, but more open-answer style survey, which we base our analysis on.

4.1 Methodology & sample

The first (field data) phase of this project consisted of semi-structured interviews with accelerator operators to validate the design of the surveys (one for support organisations and one for startups), and to collect some initial data of those accelerators. The second and third phase then occurred in parallel: inviting other accelerators and other support organisations to complete the 'accelerator' survey (usually in person or by phone to ensure clarity of the questions), and inviting startups to complete the startup survey.

The initial sample was created by listing organizations already known to us who used the 'accelerator' label, and by searching online for organizations in each major Australian city using an 'accelerator' keyword. Through interactions with support organisations other than accelerators, it became apparent that the scope of the project should be kept broad, to get a more comprehensive and holistic view of the respective roles of different types of support organisations within the ecosystem. Instead of being exhaustive of all support organizations, we sought to include at least one of each type that we believed was representative of that type.

Invitations were sent to 46 support organisations, of which 18 generously gave their time to participate. The 18 participating support organisations were categorised as:

- 10 accelerators: AngelCube, ANZ Innovyz Start, Griffin, H2 Ventures, IgnitionLabs, Melbourne Accelerator Program (MAP), RightPedal, Slingshot, StartMate, Venture Catalyst
- 2 incubators: ATP Innovations (ATPi), iAccelerate
- 1 germinator: Pollenizer
- 1 angel group: Innovation Bay
- 1 mentoring: TiE Sydney
- 2 co-working spaces: SpaceCubed, The Start Society's iCentral

We note that there may be some disagreement about this categorization. The point here is to approximate each organisation's profile in order to characterise them. In surveying them, it is clear that many organisations (especially university-based organisations, which rarely took equity) had a hybrid model, or were co-located with another model. Also, some organisations use multiple labels (incubator, accelerator, co-working space, venture fund, etc) and leverage common resources (people, space, networks, tech) to experiment with multiple business models simultaneously. For example, under the title of "What is BlueChilli?" their July 2014 homepage listed Digital Agency, Incubator, Accelerator and Venture Capital.

The entire ecosystem is relatively young. The oldest organisations in our list of 46 are ATPi (2000), Innovation Centre Sunshine Coast (2002) and TiE Sydney (2002). Globally, the phenomenon is quite new, as noted in the 'Global context' section above. Based on available data from various sources, we could plot the age of the accelerator, as at the year of the data source (generally 2015), as visualised in Figure 1. The distributions are relatively similar across all samples, except the corporate and Canadian accelerators, which are a slightly younger phenomenon. The bulk of the newer organisations in our sample are the accelerators, with the older organisations including the incubators and mentoring organisation.



Figure 1: Age profiles of accelerators and support organisations

Despite their young age, Australian incubators, accelerators and startups are internationally competitive and well regarded. For example, ATPi was recently named the incubator of the year by the NBIA, and ATPi and MAP were both ranked in the top 25 programs by NBIA and UBI Index.⁶⁸ Meanwhile, StartMate was ranked globally in the top 3 (with direct benchmarking against Y-Combinator and TechStars) at an international technology conference⁶⁹ and top 10 in a special report on technology startups in the Economist (2014). Collectively, in 2014, the Australian accelerators have invested in more startups than any other country in the Asian and Ocianian region.⁷⁰

4.2 Business models and metrics of archetypical accelerators

Here, we focus on accelerators, and their five defining features: (1) Seed funding, (2) cohorts, (3) co-location, (4) a programme, and (5) mentoring.

1. In terms of **seed funding**, all accelerators offered each of their startups the same standardised terms. This was generally 7.5-10% for \$20-50k in cash, plus \$20-500k in in-kind value through things like vouchers or credits with partners (e.g., Microsoft BizSpark, Amazon Web Services), legal services, or time in a co-working space. The percent of equity and the cash involved is comparable with most accelerators, internationally (e.g., Clarysse, Wright & Van Hove, 2015). A few international high profile accelerators offer more cash (up to ~\$150k), but emphasise that the cash is only ~10% of the value received, and only meant to cover the living expenses of the founders for a couple months.⁷¹ To illustrate the

⁶⁸ <u>http://www.startupsmart.com.au/planning/two-australian-university-accelerators-named-in-global-</u> top-25-list/2014062512587.html

⁶⁹ http://www.youtube.com/watch?v=4m_220E3j7g#t=1260

⁷⁰ http://www.fundacity.com/asian-accelerator-report-2014

⁷¹ See also:

https://www.f6s.com/programs

https://www.quora.com/lf-Techstars-takes-a-6-equity-stake-for-18-000-is-it-fair-to-say-a-Techstarsguality-idea-prototype-is-worth-300-000-when-raising-seed-money

https://www.quora.com/How-does-500-Startups-structure-its-investments https://blog.ycombinator.com/the-new-deal

standardisation and efficiency of the terms of investment we asked for the length of the term sheets. These were 2-6 pages in length, with the exception of one that was 72 pages.

2. In terms of **cohorts**, accelerators followed processes similar to universities or other cohort-based educational programs in order to offer entry to typically 10 or fewer startups per cohort (as do most accelerators internationally). The process was an open process, available to anyone, and usually entailed submitting a short online form and video. Participants were often groomed from within the community (e.g., they left a positive impression at industry events and were encouraged to apply) and attracted through community engagement and recruiting events run by the accelerator.

The accelerator operators, and in many cases also the mentors, usually did a first round of voting on which applicants should be interviewed, from which to select the ones to offer admission to the accelerator. Further inquiry across multiple incubators, accelerators and angel groups, indicated that of 100-200 applications per year, only 2-5% were high quality and ready to be offered entry. The vast majority of the applications were deemed 'marginal'.⁷² All support organisations expressed a strong preference, but not a strict requirement, for (i) teams, (ii) advanced prototypes, (iii) some proof of market (not necessarily sales), and (iv) global ambitions. Incorporation was not required on application, but usually required on entry in order for the startup to be able to issue equity.

- 3. In terms of co-location and office space, accelerators generally expected a full-time commitment from the startups. Having them co-located in the same space served several purposes. Co-location gives economies of scale when sharing resources or specialists (e.g. physical resources, legal support or guest speakers) and makes it easier for the operators (aka angels) to move from startup to startup. Co-location also means cultivation of a community of peers; something particularly evident with the co-working space providers in our study. To facilitate peer interaction and learning, the office spaces were all open plan (unlike serviced offices). In many cases, desk space was made available by the accelerator even after the end of the programme; usually for up to a total of one year, including the programme. Many accelerators kept their own operating budget lean by renting desks for the cohort at a co-working space, where the startups benefited from being part of a larger community of peers.
- 4. **Programmes** were generally 3-6 months in duration, and almost always 1 cohort per year. Overall, services in the programme included: "Advice/ guidance with respect to technology, growth hacking, regulatory, etc" as well as "Lean, IP, Governance, Sales, Pitching, HR, Technology, regulatory, grant application, MVP designs, R&D tax." The accelerator operators maintained a work hard play hard relationship with the cohort. Operators were usually directly in contact with the cohort between 2 and 10 hours per week (one reported 60+ hours), in addition to regular social events. Contact time was roughly 50% with the whole cohort, and 50% one-on-one with separate startups. The programmes varied in terms of the details of their structure, but generally began with a common structure and

⁷² See Appendix A for an approximation of the distribution of quality of applications. These distributions of quality or potential are common across all of entrepreneurship (Crawford et al., 2015; Andriani & McKelvey, 2007) and make it next to impossible to directly compare admitted to rejected applications when attempting to create a matched sample.

content for the whole cohort, followed by more unstructured (on-demand) support tailored to the needs of individual startups. Programmes always included weekly accountability meetings, and almost always included weekly goal setting meetings and weekly pitches.

The external oriented activities of the programme usually involved bringing in specialised legal and accounting service providers, as well as introductions to investors. The programme culminated in one or more <u>DemoDays</u>, where startups present their latest business pitch to investors and other interested parties. Four accelerators had additional DemoDays or road shows overseas, including Silicon Valley, New York City, London and China. While many DemoDays are open to the startup ecosystem (and thus serve as direct inspiration for other entrepreneurs), there is a potential trend for these 'graduation' events to become exclusive to investors and operated as investor-only dinners.⁷³

5. **Mentoring** is an important feature for accelerators. The effort to establish a high quality network of mentors is not to be underestimated by those considering starting their accelerator. With such a network in place, the value they add to the startups is likewise easy to underestimate by startups applying to the accelerator. Accelerators reported having 10-60 active mentors, and up to 150 in total. Mentors are typically vetted through existing relationships, LinkedIn, or other forms of referrals. Each mentor is typically interviewed to assure quality. As one operator commented: "either they get referred and have a strong history of startups, or we sit down with them 1:1 and hear about what they offer and how they can support." Most mentors were successful entrepreneurs or alumni of the accelerator, and were motivated to pay-it-forward to next cohort of startups.

In the case of StartMate mentors were also investors in the fund backing the accelerator, and thus had a vested interest in the performance of all members of the cohort. Usually, there was no obligation or formal expectation for mentors to become investors, although that scenario was certainly an option (like with TechStars). There was high variance in terms of how startups accessed mentors, varying from a centrally coordinated introduction, to self-introductions anytime, to only at specific dinners. The range of accessible mentors also varied significantly, from all teams meeting all mentors to "A mentor is married to each project, acting like a case manager."

In addition to the above observed practices, a recent 'best practices' guide was produced by Unitus Seed Fund (2015), that was based on survey responses from 78 incubators and accelerators around the world. The survey revealed that top programmes:

- Recruit heavily and globally
- Focus on a sector
- Facilitate more peer interactions (including peers, mentors, alumni and investors)
- Focus on fewer (1-4 or 4-6) highly qualified mentors per startup (not 7 or more) and facilitate more engagement with those mentors.

⁷³ Like Innovation Bay dinners: <u>http://www.smh.com.au/action/printArticle?id=1002784802</u>

⁷⁴ One accelerator operator clarified the difference between mentors and advisors (incl. professional service providers): "Advisors are very well screened and known in advance and paid professionals. Mentors provide advice free of charge - we interview them, look at their CV, and reference check them."

The above descriptions of the five defining accelerator features serve as a benchmark for describing all organisations in this study. Each organisation's business model was rated against each of the 5 features,⁷⁵ enabling us to visualise them as a spider plot. The archetypical accelerator ranks 100% on all 5 features, and its business model is visualised as shown in Figure 2.



Figure 2: The business model of an archetypical accelerator

It should be noted that operating a 'full service' accelerator may involve significant capital and operating expenses. In terms of capital costs, at one extreme, a university-based program invested \$16.5M into creating an entire new building. Another accelerator reported that retrofitting an existing space cost \$2.5M. Operating expenses can vary significantly depending on whether the accelerator pays rent and salaries to employees, or whether it owns its space (or receives access as in-kind support) and has no employees on the payroll. In this study, the operating costs varied from a few thousand dollars to over \$1M per year; more than the seed funding for each cohort.⁷⁶ Some have forecasted that the number of full featured accelerators will decline if case operating costs cannot be kept low.⁷⁷

4.2.1 Acceleration with incubation

As mentioned above, the point here is to approximate each organisation's profile in order to characterise them. In reality, many organisations had a hybrid model or described themselves with a different label to ours. Some accelerators operated out of an incubator space which they owned or which had preferential access to (versus renting desks at a co-working space). This type of accelerator still had a standardised competitive intake process, but has less pressure to graduate startups after a short program, thus allowing them to maintain residency and receive support in the incubator space. One could argue that this was one way to avoid forcing them out too quickly and avoid risking premature scaling. The business model for an accelerator with incubation is visualised in Figure 3.

 ⁷⁵ See Appendix B for how each organisation's business model was rated across the five features.
 ⁷⁶ In comparison, 500 Startups in the US reports \$4-5M per year in operating costs:

https://www.quora.com/How-does-500-Startups-structure-its-investments

⁷⁷ http://www.finextra.com/news/fullstory.aspx?newsitemid=28323



Figure 3: The business model of an accelerator with incubation

4.2.2 Accelerator metrics

The relevant accelerator metrics, as per the participating accelerators echoed the sentiment of the studies and reports mentioned in the 'Practical impact metrics' section above. Each participating organisation was asked to rate the relevance of 12 performance metrics, and then (if data was available) comment on their own performance on those metrics. Participants were also given the option to mention other metrics they felt were important to them. Based on the distribution of the relevance scores, the metrics can be grouped as primary metrics, secondary metrics, additional metrics worth considering, or irrelevant (or at best marginally relevant) metrics.

The primary metrics for accelerators (also with incubation) were:

- Follow-on funding
- Exits (& multiples)
- Reputation
- Global (niche) impact

The secondary metrics for accelerators (also with incubation) were:

- Ecosystem development
- Growing and sustainable startups (startups' revenues, positive cashflow and jobs)

Additional considerations:

Number of interactions within & beyond ecosystem

Many of the accelerators did not systematically measure their own performance on these metrics, but could easily recall significant rounds of follow-on funding and exits and provide an approximation of other metrics. Also, since some accelerators were startups themselves, their business models and relevant metrics were evolving.

Qualitative comments highlighted the different time scales involved in being able to measure and evaluate performance according to different metrics: "The key metric for us to successful funding rounds post the program - this is our immediate goal. Obviously we would like to see successful growing businesses, and ultimately exits,

over time... But this will take time (the average period to exit for a startup is circa 8 years)."

4.2.3 Accelerator performance

The performance of the 10 accelerators in this study according to the above primary metrics is as follows:

- Follow-on funding within one year of graduating:
 - 7 out of 10 were able to provide data. 3 others were simply too new to have data or declined. On average, 47% of startups received follow-on funding. This varied from 27% to 75% across the 7 accelerators.
 - This is somewhat comparable to the average of 41% (varying from 5% to 79%) of US-based accelerated startups that receive \$350k or more within one year of graduation (Cohen & Hochberg, 2014).
- Exits:
 - Only 1 accelerator reported any notable exits; two. The combined return was approximately 30x. One additional exit was reported by another accelerator, with the caveat that they considered it to be more of a restructuring and transfer of assets into a new company (at-cost), as opposed to a conventional acquisition by a company run by someone else.
 - This is comparable to the average of 4% (range 0-13%) in the US (Cohen & Hochberg, 2014), with the additional comment that "it's far too soon to tell."⁷⁸
- Reputation:
 - While reputation was reported as being "extremely important", this was either too early to tell, or the data was unavailable. Some accelerators performed exit interviews with startups to assess their NPS[™], but this data was unavailable at the time of this report.

Secondary metrics:

- Impact on ecosystem:
 - This is perhaps the most qualitative metric. One prominent accelerator noted that in the short-term it might be contributing to brain drain if the startups move overseas to seek follow-on funding. However, their success (at an international level) is seen as positive validation that Australian entrepreneurs are world class and that the accelerator's funders made wise investment decisions. In the medium-term, alumni from their program continue to hone their CEO skills, and mentor the next cohort. This medium-term goal was raised by multiple accelerators. Longer-term, they hope for 'boomerang entrepreneurs' (Dana, 1996) who return and re-invest in Australia's ecosystem.
 - Another accelerator commented that their aim is to have: "more founders being better skilled, cultural change for corporations, more numbers of investors including new mentors and angels."
 - Others yet commented simply that it was too early to tell, but scored the relevance of this metric as 8/10.

- Growth:

– Annual revenues of startups were reported between \$40-100k, or \$0.

⁷⁸ <u>http://techcrunch.com/2014/03/10/these-are-the-15-best-accelerators-in-the-u-s/</u>

Precise data was unavailable or unknown by most accelerators

- Profitable: Answers ranged from (i) "too early to tell" to (ii) none (if including founder's salaries) to (iii) "most". Profitability (or lack thereof) can be a misleading metric if all revenues are ploughed back into R&D and growth.⁷⁹
- Jobs: As low as 6, but also as high as 30-50 per cohort. Ranked relatively low as a metric. While jobs groom the next generation of entrepreneurs, they are also a major expenditure.

4.2.4 University-based accelerators

It is not uncommon for universities to operate an accelerator. The general mission of accelerators fits with technology transfer offices (TTO), as well as with the overall educational or professional development mission of universities. Whereas startups created by the TTO to commercialise university-based IP are majority or wholly owned by the university, the startups in university-based accelerators rarely exchange equity for the cash (if any) and other value they receive from the university. As a result, the universities are still interested in follow-on funding and exits for the startups they support, but more from a reputational perspective than a financial perspective. They also place greater importance on startup growth metrics (survival, revenues and jobs) than archetypical accelerators; similarly, this emphasis is more for reputational reasons than for any direct financial gain. University-based accelerators still have a highly selective cohort-based model, including cash awards, co-location, a structured programme, and mentoring. In almost all cases, it was possible for startups to maintain an office space at the university; usually in a university-affiliated incubator space. A point of variance within the university-based accelerators was the DemoDay. This ranged from a DemoDay like the archetypical accelerator, to joining a DemoDay or investor roadshow of other startups being launched by the TTO, through to personal introductions to investors (without a DemoDay).

As a point of reference for the impact a university-based accelerator can have, Melbourne Accelerator Program (MAP) summarises their impact as: "[MAP] was launched in 2012 to raise the culture of entrepreneurship at the University and beyond. This year alone, MAP's pipeline-building activities have been attended by 5,000 budding entrepreneurs. In 2016, MAP will award 10 startups with \$20,000 funding, office space, mentoring and opportunities to pitch in Melbourne, Sydney and Silicon Valley. 16 Companies have graduated from the MAP Startup Accelerator and between them have raised \$10 million in funding, created over 120 jobs and generated over \$5 million in revenue. In 2015, MAP has been ranked as 2nd best university accelerator program in the Asia Pacific region (global rankings are yet to be released)."⁸⁰

UNSW's Student Entrepreneur Development team prefers the term preaccelerator⁸¹, and does not fit the conventional structure of an accelerator program by offering more on-demand resources to as many UNSW-based applicants as they

⁷⁹ http://ben-evans.com/benedictevans/2014/9/4/why-amazon-has-no-profits-and-why-it-works

⁸⁰ https://mapunimelb.wordpress.com/2015/10/30/melbourne-accelerator-program-and-australia-postlaunch-new-innovation-partnership/

⁸¹ <u>http://www.startupdaily.net/2015/01/university-students-must-leave-classroom-work-startups-gain-entrepreneurial-experience/</u>

can. UNSW's accomplishments were noted in the media⁸² and Chief Scientists reports,⁸³ along with Monash's accomplishments. Clearly, there are other models of support (beyond archetypical accelerators or incubators) that produce venture funded startups.

4.3 Business models and metrics of other support organisations

In this section, we review the (i) business models of the other forms of support organisations, and some of their variants, (ii) the metrics they rated as being most relevant, and (iii) their performance along those metrics.

4.3.1 Co-working spaces

As a baseline, co-working spaces focus more on peer learning than mentoring, and focus more on mentoring than in-house expertise. In this regards they are more like earlier generation incubators whose primary value proposition was low cost rent and preferred service providers with discounted rates. Co-working spaces are often inclusive of regional commuters and people transitioning part-time into entrepreneurship, and are located near central mass-transit hubs. The Start Society's iCentral is a relatively young co-working space (less than 9 months old), whose business model is visualised in **Figure 4**. As this business model matures, they are exploring how to improve their value-add, including other initiatives The Start Society offers.⁸⁴



Figure 4: The business model of an archetypical co-working space

Like modern ('third generation') incubators (Grimaldi & Grandi, 2005; Bruneel et al., 2012), co-working spaces are a platform upon which to provide more value-add, such as through more structured workshops, interactions, hosting of accelerator programs, etc., all while maintaining a lean operating budget⁸⁵. They often target low rent spaces (e.g., unused government properties) in order to pass on cost savings to

⁸² <u>http://www.startupsmart.com.au/leadership/how-two-australian-universities-are-fostering-the-next-generation-of-entrepreneurs/2015120216058.html#.VmS4AfPrsPw.twitter</u> (Disclaimer: I work for UNSW and was also interviewed by Colin Kinner as part of his report on behalf of the Chief Scientist)

⁸³ https://www.linkedin.com/pulse/2015-quite-year-joshua-flannery?forceNoSplash=true

⁸⁴ http://thestartsociety.com/

⁸⁵ See also Section 4.5. for further comments on hosting and other forms of interaction between support organisations

startups. For example, **Figure 5** illustrates the business model of a co-working space that includes mentoring and a semi-structured programme.



Figure 5: The business model of a co-working space including coordinated mentoring for its startups

Primary metrics and performance (if available):

- Number of interactions within and beyond ecosystem
 - SpaceCubed: 600 people through Hackathons (Unearthed, Startup Weekend, GovHack, Hack the Festival), Thousands through meetups
- Ecosystem development
 - iCentral: 65-70 startups (130 individuals)
 - SpaceCubed: 700 members

Secondary metrics:

- Growing and sustainable startups (startups' revenues, positive cashflow and jobs)
- Global (niche) impact
- Reputation
- Follow-on funding
 - iCentral: 8% of startups
 - SpaceCubed: 8 x 40k investments through Amcom Upstart (Accelerator), 100k invested through RAC SeedSpark (Accelerator)
- Exits (& multiples)

Other anecdotes:

 While not directly a beneficiary of the growth and exits (other than renting out more desks), co-working spaces celebrate the successes of their startups. They have an interesting tension between being happy for startups to outgrow their space, while also then having to look after occupancy rates and community cohesion.

4.3.2 Pre-Accelerators

Pre-accelerators are cohort-based organisations that accelerate nascent entrepreneurs before a prototype or startup exists (Bliemel & Flores, 2015). This label riffs off the pre-incubator label (e.g, Voisey et al., 2013). The pre-accelerator label emphasises that the supporting organisation's focus is directly on the development of the entrepreneur and their skills, and only indirectly on a resultant startup. The philosophy behind this focus is that ideas may change and startups often fail, but founders accumulate experience often move on to launch more startups.

An increasingly common and highly scalable form of this organisation is in the online education space, which may be complemented by face-to-face meetings with the cohort. Examples include organisations or initiatives that are like MOOCs or vocational training that can be done part- or full-time, such as:

- General Assembly
- 99toLaunch (by BlueChilli)
- Bschool.com.au
- The Entourage
- Pollenizer Academy
- Startup-australia.com.au

Figure 6 visualises the business model of an archetypical pre-accelerator. Many of the online ones are shifting away from a cohort model to an on-demand model. That shift suits the schedule of budding entrepreneurs, but decreases the sense of community and peer support.



Figure 6: The business model of an archetypical pre-accelerator

More complex versions of this model involve options on equity. For instance, Founder Institute (FI) only takes a small amount of equity, but it *only* does so if the founder is able to raise significant capital. If such an event occurs, then the founder is obligated to share 3.5% of their company with FI, who then reallocates 30% of that 3.5% evenly across the local cohort, 30% to the mentors of their cohort, 25% to the local chapter's directors of FI, and 15% to the central office of FI. The founder is then also obliged to top-up their tuition fees. Such a design, visualised in Figure 7, creates lower barriers to participating and keeps legal costs low for startup-ideas that never get funded or legally incorporated, while still enabling the accelerator to share in the eventual successes of the entrepreneurs. The prospect of benefiting financially from the success of others in the same cohort is intended to increase peer learning in the cohort.



Figure 7: The business model of a pre-accelerator with equity option

Primary metrics and performance (if available):

- Just get started (& create jobs). If not with your current idea, then with your next one.
 - One of the key performance metrics for Founder Institute is the number of founders still in startup scene, including having launched a 2nd or 3rd startup. To further facilitate getting founders to follow through with launching and growing their startup, each graduating cohort has to elect a president and holds regular meetings. This process is initiated during the program, and continues indefinitely after. While this is primarily for peer learning purposes, it also aids in tracking what the graduates are doing.
 - Founders who 'fail' the program may get a full refund (some conditions apply) and are encouraged to return when they have more time to focus on the program or have a more viable idea to pursue.
- Learning (from program's materials and interactions)
- Number of interactions within & beyond ecosystem
- Reputation

Secondary metrics:

- Follow-on	funding
-------------	---------

- While the Australian chapters of Founder Institute are too young to have recorded follow-on funding or exits, the global franchise reports that ~45% (globally) have received \$100k or more funding from external investors (not friends/family).
- Exits (& multiples)

4.3.3 Incubators

The incubator phenomenon is decades old and has evolved through multiple generations (Leblebici & Shah, 2004; von Zedtwitz, 2003; Carayannis & von Zedtwitz, 2005; Grimaldi & Grandi, 2005; Bruneel et al 2012; Pauwels et al., 2015). The modern (third generation) model is like a co-working space, with a semistructured on-demand acceleration programme and in-house mentoring, as visualised in Figure 8.



Figure 8: The business model of an incubator with an on-demand programme

As the emphasis on value-add for entrepreneurs increases, this often results in shifting the relationship from a land-lord tenant relationship to an angel-startup relationship with acceleration being on-demand instead of cohort-based (as with an accelerator). Figure 9 visualises such a shift towards seed capital, which is important "to introduce some mutual obligation to our clients. [...] We know that if we have a small piece of equity in the business, we are on level playing field with the founders. We're aligned with them. They'll listen to us because they don't see us as a landlord sitting in the room, we're a shareholder" (incubator operator, interviewed in Bliemel & Flores, 2015). The share of equity taken is also deliberately small. "The problem is that if you're taking 20-30% you're going to find a lot of unhappy people that don't think they've got the value. That's the trap when you are taking significant equity stakes. You become a co-founder. And we have 55 companies in our portfolio. We can't be co-founders to 55 people. It's not possible. I have a team of 5 executives and we struggle with a portfolio of 55 companies. So if you're overpromising and under-delivering, you'll have very unhappy customers. We underpromise and way over-deliver because we're aligned with the founders" (ibid.).



Figure 9: The business model of an incubator with an on-demand programme and seed capital

In another variant, the support programmes are structured as a cohort-based programme with intensified mentoring, but without the angel investing feature, as visualised in Figure 10. This version is often operated by a university. During the

(usually extra-curricular) programme, entrepreneurs learn the process of validating their business idea to attain product-market fit.



Figure 10: The business model of an incubator with a pre-accelerator programme

Primary metrics and performance (if available):⁸⁶

- Growing and sustainable startups (startups' revenues, positive cashflow and jobs)
 - For university-based incubators (with emphasis on pre-acceleration), the startups are too early stage to expect significant revenues.⁸⁷
 - For ATP Innovations, a large university-affiliated, but for-profit incubator, the estimate the revenues of their portfolio firms at \$45m.
- Exits (& multiples)
 - ATP Innovations (since 2009, when they introduced an early stage equity model): 8 exits (7 acquisitions, 1 IPO)

Secondary metrics:

- Global (niche) impact
 - ATP Innovations further specifies (i) percent of firms with foreign investment and (ii) percent of export revenues by firms as important metrics
- Follow-on funding
 - ATP Innovations: \$121M raised since 2006⁸⁸
 - iAccelerate: 10 startups
- Successful grants
 - ATP Innovations: \$28M^{ibid.}
- Ecosystem development
 - ATP Innovations: 70 startups currently on premises
 - iAccelerate: 35 startups supported

⁸⁶ Note: these are similar metrics to accelerators but slightly different prioritization

⁸⁷ In this regards, it remains challenging to differentiate (a) university-based accelerators that feed into university-based incubators from (b) the university-based incubators that offer pre-acceleration. Arguably, iAccelerate is an accelerator without equity conditions, like MAP or Venture Catalyst. We classified them as an incubator with acceleration because they did not 'invest' cash in the startups, and because of their more relaxed criteria for incorporation, full-time commitment and their interest in supporting startups beyond the acceleration programme: "Yes [we offer office space after the programme]. We are an incubator as well. We expect up to three years location with us. Our best companies are staying this long."

⁸⁸ http://atp-innovations.com.au/

- Reputation
 - ATP Innovations: 9/10 NPS[™] according to their exit survey
- Survival:
 - ATP Innovations: All 100% of their graduates survive at least one year by virtue of how they leave the incubator. They are 'released' only if they are confident about survival; otherwise they are 'killed' before further resources are wasted on an unviable opportunity.
 - iAccelerate: 10 have survived at least two years
- Number of jobs created
 - ATP Innovations: 350+ employed by their startups^{ibid.}
- Number of products launched
 - ATP Innovations: 100+ every year^{ibid.}

Other key metrics:

- iAccelerate:
 - Number of female cofounders: "Reaching out to female entrepreneurs we have many leading edge programs in this area - 47% of our tech companies now have female cofounders as a result - the whole iAccelerate community is proud of this"
 - Pitch wins

4.3.4 Germinators

Germinators play the role of technical co-founder role to the startup, while also offering co-working space, and other features of accelerators. Their business model is visualised in Figure 11.

Like incubators, they do not have a cohort-based model. Like angels (or cofounders), their equity terms are also more flexible (often between 10-30% typically in exchange for \$100k; more capital than most accelerators), depending on what the co-founding entrepreneur brings to the table. In Australia, Pollenizer was one of the pioneers of this business model, as visualised in Figure 9, including an on-demand structured programme, full-time co-location and mentoring.

Pollenizer's current business model also includes acceleration-as-a-service, such as for Coca-Cola⁸⁹ or the DataStart initiative.⁹⁰ They still provide technical co-founder level support for startups emerging from the corporate programmes. The degree to which there is a cohort and DemoDay also varies with the corporate partner's needs. Their programme is a "Set framework but by progress not timeline" which typically takes 9 months to complete.

⁸⁹ <u>http://www.pollenizer.com/category/big-company-innovation/enterprise-case-studies/startup-coca-</u> <u>cola/</u>

⁹⁰ <u>http://www.theaustralian.com.au/business/technology/turnbull-teams-up-with-pollenizer-on-datastart/news-story/798ccaac39474a2813d1dec2281c224c</u>



Figure 11: The business model of a germinator

Primary metrics and performance (if available):⁹¹
– Exits (& multiples): 8 (out of 15 co-founded startups)

Secondary metrics:

- Follow-on funding: not available

4.3.5 Mentoring

Mentoring organisations focus on facilitating a less structured learning experience than pre-accelerators by matching entrepreneurs with mentors depending on their respective interests and needs. Like the mentors in many accelerators, they are usually current or former entrepreneurs who are playing this role in order to support an ecosystem, and not primarily mentoring for financial gain (e.g., service fees or exits). Figure 12 characterises TiE Sydney's business model, which includes 25 active local mentors (4,000 worldwide), 3-month long group mentoring sessions and monthly networking events.



Figure 12: The business model of a mentoring organisation

⁹¹ The germinator business model is essentially a more intensive version of incubator with acceleration. Due to the higher equity stakes in each startup, the metrics become more aligned with angel investing.

Primary metrics and performance (if available):

- Learning (from interactions with mentors and program's materials)
- Number of interactions within and beyond ecosystem

4.3.6 Angel organisations

Angel organisations facilitate matching investors and entrepreneurs and do not invest, per se; their members do. Nonetheless, they measure their impact via the performance of the startups they support. As a coordinating organisation, they may offer some workshops or themed guest talks to aid in the development and dissemination of best practices for angels and entrepreneurs. While these organisations have a standardised process by which entrepreneurs apply, each investment is made on different terms. Innovation Bay describes their business model as follows:

"Innovation Bay provides a networking platform for innovation and investment in the high-tech space. Our members are innovators, business leaders and investors with an eye for new technology. We hold regular networking events and invite industry experts along to inspire new ways of thinking. At our Angel Dinners, we facilitate business opportunities between Entrepreneurs and Angels. Entrepreneurs submit their business idea to our angel community to vote on. Those with the highest votes will be invited to pitch at dinner. Our angel dinners are our signature event, highlighting the power of networking and showcasing the most exciting new business ideas on the market."

When rated against the five accelerator features, the visualisation of their business model looks like Figure 13. One could argue that their angel dinner is effectively a DemoDay. However, DemoDays are usually mark the end of an acceleration process (including see capital), whereas the angel dinners are usually only the beginning of the angel investing process.



Figure 13: The business model of angel associations

Primary metrics and performance (if available):

- Follow-on funding
 - "We follow all our entrepreneurs who pitch up to 3, 6 and 12 months post dinner. Generally speaking, we find around 40-50% get some kind of funding either from someone they met at a dinner or via introduction within

12 months."

Secondary metrics:

- Exits (& multiples)
- Growing and sustainable startups (startups' revenues, positive cashflow and jobs)

4.4 Review of performance metrics

Because of the overlapping business models and relevant metrics, there is no clear delineation between types of organisations. No single type of organisation provides the de facto path to attain any one metric. For example, while accelerators are getting a lot of media attention about the follow-on funding of their startups, it is entirely possible for startups to get follow-on funding through other support organisations, or independently.

Anecdotally, it has happened that a startup has declined an offer to join a renowned accelerator because they had recently agreed secured angel investment, and that the startup promptly failed. The accelerator's argument was that the failure occurred because the startup only received limited advice from one investor, and missed out on having multiple mentors and peers. Vice-versa, it is also not uncommon for angel-funded startups to do well despite not participating in an accelerator.

In comparing support organisations' metrics and performance some observations stand out:

- Accelerators have high proportions of follow-on funding (even in comparison with the 40-50% post angel group investment). This could be an issue of sequence of funding rounds (accelerator → angel → VC), with decreasing likelihood of each round.
- Incubators have higher survival rates. This could be because they have greater emphasis on bootstrapping than investment capital based growth.
- Co-working spaces and mentoring organisations are the most dedicated to scaling the breadth and depth of the ecosystem by not limiting their support to a small number of startups for a short period of time.
- Angel groups spend more time on due diligence and customizing each deal, but remain inclusive of more angels with whom to syndicate deals and diversify risks.
- Pre-accelerated graduates of Founder Institute have an impressively high proportion (45%) of eventually getting \$100k+ in angel capital. This might be because they actively encourage ('challenge', in a developmental way) entrepreneurs with non-viable ideas to leave the program, while also welcoming them back later without prejudice.
- Germinators have expanded into the accelerator-as-a-service space (e.g., Pollenizer⁹² & BlueChilli⁹³), which provides more immediate income to cover operating expenses. Doing well as a germinator (i.e., exits) lends credibility to helping corporations with an accelerator-as-a-service model.

⁹² <u>http://www.pollenizer.com/category/big-company-innovation/enterprise-case-studies/startup-coca-</u> <u>cola/</u>

⁹³ https://www.bluechilli.com/corporates/disrupt/

4.5 Interactions between support organisations

In order to offer office space to startups, it is not uncommon for accelerators to operate within co-working spaces (e.g., StartMate within ATPi, H2 within Stone & Chalk). This enables more peer interaction among startups, beyond the cohort, and gives visiting guest or mentors a larger audience. By accessing a co-working space, accelerator operators can maintain lower overhead costs, and offer startups to keep their desks after completing the programme.

Some accelerators and germinators are directly associated with venture capital funding, such as BlueChilli with its own Early Stage Venture Capital Limited Partnership (ESVCLP). Such an affiliation can be an advantage in accelerating the due diligence for the ESCVLP, and the fund raising process for the startup. However, it may also create the perception that there is something wrong with other startups that are not funded by the affiliated fund. This signal or perception is untrue for startups that are self-funded (from revenues) and do not want to limit their growth options; by taking on more funding, there is a greater expectation of an exit via acquisition or IPO.⁹⁴

Another variation of an affiliated seed fund is the combination of the fund and a coworking space, without the accelerator program, as seen by Tank Stream Ventures and Tank Stream Labs.⁹⁵ Such a combination may benefit the fund by giving them preferential insights into potential dealflow. Likewise, it may give startups preferential access to the fund.

For corporate sponsored accelerators, there is no requirement for the startup to fit with the sponsor's core business.⁹⁶ However, there is a general expectation that the startup can leverage some aspect of the sponsor's capabilities or supplier network. In addition to benefiting from the equity, the sponsor benefits by learning from the startup and possibly infecting involved employees with a startup attitude.

4.6 A note on mentors

Along with inter-organizational interactions, there are also interactions across support organizations via the individual people involved, particularly the mentors. A case in point is Alan Jones, who notes: "I'm a member of the leadership team at BlueChilli, founding mentor and investor in Startmate, investor and mentor in Pollenizer's original incubator program, volunteer mentor at Muru-D, BlackbirdVC investor and seed round investor in Bugherd, Scriptrock, Bugcrowd, OtherLevels, That Startup Show, and others."⁹⁷

⁹⁴ See also <u>http://techcrunch.com/2006/09/02/an-interview-with-vc-paul-graham-of-ycombinator/</u> Paul Graham and Jessica Livingston also mention avoiding being a follow-on investor in YC graduates to avoid signalling that other graduates are not investible: <u>http://www.bloomberg.com/news/videos/2014-10-10/paul-graham-jessica-livingston-studio-10-</u> <u>1009</u> (~12:42)

⁹⁵ <u>http://tankstreamlabs.com/</u>

⁹⁶ For example, Telstra's Muru-D's mission is primarily to foster technology innovation and learn from the startup community: <u>http://www.smh.com.au/it-pro/business-it/telstra-hits-the-startup-road-20131022-hv26l.html</u> In comparison, Telstra Ventures, their corporate venture capital arm is designed to support ventures that are 'strategically important': <u>http://telstra2015ar.interactiveinvestorreports.com/strategy-and-performance/build-new-growthbusinesses/</u>

⁹⁷ https://groups.google.com/forum/#!msg/silicon-beach-australia/SCdsCCWxeQQ/ybVnOifKFNQJ

With a relatively small pool of (local) mentors, there is a risk of mentor fatigue or burn-out. This was visible in research we conducted in 2013, for which one support organization noted: "But it does get harder and harder in Australia and I think, as we get more and more accelerators, mentorship's a big problem to solve because we have run out of mentors, I think, so – I mean, for example, I could go out every night of the week and mentor people, and it just – I feel like I'm disappointing people all the time so I really want to support people, but I have to see my family at some stage."

Similarly, in 2013, another founder of two accelerators mentioned: "The mentoring model itself has changed completely, and the mentoring environment. Where your mentors are now being pulled every which way by so many different events that they can't do it and it's unrealistic. I just see the level of engagement drop. I see my own level of engagement drop. And especially as you start working on your own stuff, well then you have less time."

However there are mitigation strategies against mentor fatigue. The same 2013 interviews broadened the definition of who a mentor could be (not just other technology entrepreneurs) and added more structure to the mentoring process. For example, one accelerator operator mentioned: "We're not going with the same type of mentors. And it's because we've made that rational decision that this is not a tech company; it's an agricultural company; it's a logistics company; it's a whatever company; life insurance company. Therefore, the mentors come from those industries. [..] There are not enough tech mentors. So that's why we're not looking for them. We're looking outside; going to the individual industries. We've got enough tech mentors in here to cover that."

Changing the definition of who the mentors are could also become a point of differentiation for the business model: "If you have a look at the mentors within the accelerator program here, you see the same names everywhere, right? So, there's mentor fatigue. There's no point of differentiation. You've got to question, especially with some of the most high profile names, how much they are actually going to contribute to the program. And also, does that mentor network fit with what we are trying to do. Kind of yes and no. So, the mentor network that we put together is very much corporate heavy. So, we are trying to teach startups how to build a product for enterprise customers, and are then going to sell to the enterprise. So the skillset that we need, the mentorship that we need is very different. Also, part of our mentor network is, we are kind of blurring the lines between mentors and potential customers, right. So, our mentor network is basically market access for the startups."

Lastly, adding structure to the mentoring process and drawing on overseas mentors was not uncommon: "I think there is always the potential for mentor fatigue and the way we get around that is – our program is very structured. The minimum commitment for a mentor is to come in for one night and to talk to us for maybe 20 minutes and then take some Q&A but they're with us for three-ish hours. And that's a commitment. Some of them give a lot more than that but that's the minimum and there's quite a few mentors that we've had come and they don't do much more than the minimum. And we're still able to achieve, I believe, high outcomes. [..] So, we don't burn them out and I also have a limit of mentors only coming to two nights per semester. So, it's not like – I know there are some programs who have the same mentors there the whole time and we think that having a variety of mentor opinions is

helpful. [..] And we also bring in mentors from overseas. I guess that's the other thing."

4.7 A note on failure

Asking accelerators to define failure of a startup from their program provoked immensely interesting discussion. Several support organisations reported incidences, wherein one team's idea failed, but the team continued with the programme by merging with another team. The 'fail fast' ethos is alive and well in this ecosystem: E.g., "We consider failure is a success if we have helped them fail faster" (interview with TiE Sydney).

4.8 Summary of support business models and metrics

Overall, most organisations confirm observations from the literature and industry reports, in that good data is scarce. Few (if any) organisations systematically track their own performance across multiple metrics. Some metrics are prerequisites to more important metrics. For example, survival is a requirement for most other goals, so it is not necessarily a useful performance goal per se. Also, because the entire Australian ecosystem is relatively young, some of the most important metrics (e.g., exits, multiples, global impact, ecosystem development) simply remain unavailable. For example, only support organisations founded 2010 or earlier reported any exits. At best, organisations can track follow-on funding, which is a leading indicator, but not an end goal. In the short-term, every support organisation is helping increase the startup experience of entrepreneurs, one startup at a time.

5 Startups

In this section, we analyse the survey results from the startups. The performance of the support organisations as told by themselves is one half of the story. The other must be told by the startups they supported and those they did not support.

5.1 Methodology & sample

While we hoped that support organisations would help broadcast our startup survey directly to their startups (e.g., by email), most were reluctant to do so, resisted (for confidentiality or internal policy reasons, or simply lacked the time). One accelerator mentioned that they already ask their startups to complete a lot of internal surveys, and that even these received a low response rate.

For the revised (1-page) startup survey, we launched a twitter campaign, by mentioning known startups and support organisations in the tweet with the request to participate and re-tweet. Twitter handles were extracted from the portfolio pages of accelerators and snowballed from lists of 'Following' and 'Followers' within the community. This campaign included accelerated and non-accelerated startups. While creating a precise matched sample was beyond the scope and duration of this project, the responses indicate a relatively comparable sample of supported and independent startups. From 368 tweets, we received 105 submissions, of which 76 were useable: 44 supported startups and 32 independent. In terms of the age profiles, the distributions were almost identical for the supported and independent startups (by definition) are young, this doesn't mean the founders are naïve though. About half of the respondents started at least one startup before:

47% were on their first startup, and 53% on their second startup (same for either group, within 1%).

Building on the 'Global context' section above, we compare the age distributions in our sample to other Australian and international data sources and visualise their cumulative distributions in Figure 14. The left-shift in our Participating Startups curve indicates that the startups in our sample are younger than national or international averages. We suspect this is an artefact of the focus of the study and sampling technique that favours very young startups that have only recently been launched and accelerated.



Figure 14: Age profiles of startups across data sources

Out of curiosity, we included the statistical distribution of new firms created over a 25 year window using the average annual survival data from the Australian Bureau of Statistics (ABS).⁹⁸ More specifically, if the annual survival rate is 87% for <u>all</u> new businesses (tech or not), then the decay curve is almost identical to the age distribution curves for the technology startups in the other databases. This suggests that being a technology based business does not substantively affect survival rates.

5.2 Supported startups

Of the 44 supported startups, comparing the founding year against the year that the startups received support tells an interesting story. Most who received support, did so within the same year they launched (9 within the same month), as visualised in Figure 15. This co-incidence may be because incorporation is a requirement to issue equity in order to start receiving support, or as a consequence of having received the support. The 5 startups who received support prior to launch were either supported by university initiatives (educational, no equity) or networking organisations (social capital development), neither of which require incorporation.

⁹⁸ http://www.abs.gov.au/ausstats/abs@.nsf/mf/8165.0



Figure 15: Comparison of year of launch versus year of support commenced

5.3 Supporting organisations

Organisations from which these 44 startups received support include universitybased organisations (10), BlueChilli (10), government programs (4), overseas organisations (4) and a list of 16 other answers.⁹⁹

5.4 Why join?

Collectively, these 44 startups gave 73 responses why they applied to the support organisation, spread across 12 different reasons, summarised in Table 2. The two most frequent (and similar) reasons for applying were to gain access to the organisation's contacts (14) and mentors (13). The third most frequently mentioned reason was to gain access to technical resources (12), including a mix of specialised tangible resources (labs) and areas of expertise (legal, IP, software/web development). The fourth most frequently mentioned reason to join was to receive training (12), including entrepreneurship, sales, growth, business advice, and workshops. The next reasons were both financial: to attain seed funding (5), and gain access to follow-on investors (5). As indicated earlier, the seed investment is a means, not an ends to creating a high-growth business, and therefore of lower priority. The other reasons included the operators of the organisation (4), office space (3), access to peers (2), accreditation (1), and communication and PR skills (1). One participant who joined an overseas accelerator noted that they went overseas because they had no other option in Australia (1).

Rank	Reason to join	Responses
1	contacts	14
2	mentors	13
3	technical	12
4	training	12
5	cash	5
6	investors	5
7	operators	4

⁹⁹ We can only speculate as to why responses regarding StartMate were low, considering it is one of the longest running accelerators in Australia. Reasons may include the startup having folded, a lack of time, or they are overseas and therefore currently less inclined to participate in Australian issues.

8	office	3
9	peers	2
10	accreditation	1
11	(no-other-options)	1
12	communication	1

Table 2: Frequencies of reasons why participants joined a supporting organisation

5.5 Best aspect of the support received

When asked to comment on which aspect of the organisation's support they (retrospectively) found most useful, the distributions changed significantly. As summarised in Table 3, out of 96 responses, training (20) came out on top, indicating it was under-rated upon entry. As one participant commented: "What to do next - it can be overwhelming with so much to do, so knowing what next really helped us to focus!" Mentors (19) and contacts (12) still ranked highly, with mentors being marked as a significantly more important aspect by 3 startups. Peers (9) also moved up the rankings, lending further credit to other studies' findings that the most immediate impact of accelerators is growing one's network and learning from that network. Access to technical resources dropped in ranking, as did access to investors.

Rank	Best aspects	Responses	Change in Rank
1	training	20	3
2	mentors	19	0
3	contacts	12	-2
4	peers	9	5
5	cash	8	0
6	space	8	2
7	technical	7	-4
8	investors	6	-2
9	communication	5	3
10	reputation	1	-
11	government	1	-

Table 3: Frequencies of aspects of support that were most useful

5.6 Major milestones achieved

Participants were asked what major milestones their startup had achieved during or since leaving the organisation, giving 88 mentions of 14 different types of milestones, summarised in Table 4. The 88 milestones mentioned can be grouped by stage of development:

- start (launch, prototype)
- traction (product-market fit, revenues, profits, investment, award, hires, communication, design, partnerships, patents, publications)
- follow-on investment (investment, grant).

71% of startups mentioned milestones related to only one stage; 24% had milestones across two stages, and 2 startups mentioned milestones related from starting through to follow-on funding. Of the 41 supported startups that provided

useable responses,	79% mentioned a	traction milestone,	26% of startups	s got
started, and 26% m	entioned follow-on	investment.		

Rank	Milestone	Responses
1	product-market fit	24
2	revenues	16
3	investment	12
4	prototype	9
5	profits	5
6	launch	4
7	award	4
8	hires	4
9	grants	3
10	design	2
11	communication	2
12	partnerships	1
13	patents	1
14	publications	1

 Table 4: Frequencies of milestones achieved since joining

Product-market fit dominated the list of milestones, followed by revenues and followon funding. Only 2 startups specified their revenues (\$30k and \$300k). Productmarket fit was expressed using keywords like: market validation, subscriptions, 000's of users or downloads, and business model design.

Interestingly, hires were only mentioned as a significant milestone by 4 out of the 41 startups. Hiring may be seen as a necessary part of the process and not recognised for its significance, thus under-reporting the number of startups that hired. The four mentions of hires included 1 mention of creating 10 jobs, and three ambiguous "job creation(s)" mentions.

5.7 Major milestones achieved by independent startups

Only 6 usable responses were received from independent startups about major milestones they achieved. Of the 9 keywords they triggered, revenues and hires both rated highest, followed by investment, profit, and launch. There was no mention of milestones related to product-market fit.

In comparison to the \$330k revenues mentioned by the supported startups, the specific revenues mentioned by the independents totalled \$3.4m. Obviously these are very small sample to draw conclusions from, but a 10x difference is noteworthy for further investigation. Likewise, compared to the ~10 jobs created by the supported startups, the 3 independent startups that mentioned hires specified 4, 4 and 30 jobs created; a 4x difference. The same caveat about small sample sizes applies.

5.8 Attribution of milestone achievement to support organisations

Of the 44 responses to the question whether the support received (section 5.5) directly impacted attainment of major milestones (section 5.6), the response was overwhelmingly positive:

- 6% No impact (neutral)
- 40% Somewhat positive impact
- 47% Significantly positive impact

However, one might expect support to have an impact. So, we also asked startups to provide an overall rating of the organisation in comparison to their expectations (of support received and impact it had). The degree to which expectations were met are:

- 2% Did not meet any expectations
- 7% Fell somewhat below my expectations
- 12% Fell slightly below my expectations
- 16% Met my expectations
- 7% Slightly exceeded my expectations
- 28% Somewhat exceeded my expectations
- 28% Significantly exceeded expectations

So, 35% of startups' experiences were at or close to what they expected (including 'slightly below' to 'slightly above'). 56% of startups had their expectations exceeded. To some degree, these scores might reflect having low initial expectations due to a lack of understanding of how accelerators work and how comprehensive their support is, especially with regard to facilitating contacts and mentors. Lastly, we also asked for NPS[™] scores. Given the above scores regarding expectations, unsurprisingly, the NPS[™] was only 0 in one case, otherwise always 5 or higher, and 7 or higher in 84% of the responses.

6 Policy suggestions

To explore policy implications, we review recent related literature and industry reports, and inductively draw on the survey results.

6.1 Framing of entrepreneurship policy

Two recent articles frame the analysis of policy implications related to this project. The first helps identify three different types of entrepreneurship policy. The second helps examine the scope of entrepreneurship policy development. Other policy related articles and reports are drawn on as needed, e.g., to provide international comparisons.

Autio and Rannikko (2015) outline a fundamental tension in policy development: whether to help and shelter all entrepreneurs equally or whether to pick and support winners. The first type is referred to as a buffering policy, which provides a safety net to troubled entrepreneurs, such as tax breaks, subsidies, and bankruptcy policies. In their words, "with buffering, governments provide resources to shelter fledgling firms against adverse effects of internal resource scarcity and external resource dependencies. In addition to financial subsidies, such resources can include, for example, low-cost office space [incl. incubators, *sic*], training and consulting services, tax breaks, and privileged access to government contracts" (ibid., p. 43). The latter are called bridging policies to help further the chances of chosen winners. In their words: "Bridging facilitates the connectivity of new firms with important

external stakeholders. Bridging may include, e.g., networking activities, field building, branding, referral, and tie facilitation with business angels and venture capitalists" (ibid., p. 43).

The article also proposes a third type of policy, called (capability) boosting policy. Boosting policies focus less on the financial constraints of the startups, and focus on the development of innovative capabilities of the entrepreneurs. The advantage of the boosting policies are that they (i) focus on preparation for growth, which may lead to national competitiveness, and (ii) development of capabilities (aka. the effectiveness of the policy) can be tracked and more continuously than waiting for long-term survival or exit statistics. Boosting policies are particularly relevant for this project, in that they target the organisations that provide intangible support and learning experiences to the entrepreneurs, including most types of support organisation profiled here.

Acs, Autio and Szerb (2014) make a convincing case that "[national] entrepreneurship policy cannot be 'siloed', but rather, requires coordination across policy domains because of interdependencies that exist among policy actions" (p. 484). In addition to evaluating each individual policy, they argue that it is important to adopt a holistic view to explore their interactions, particularly if one or more weak pillars of policy undermines the impact of other policies. In their analysis they also identify 15 separate pillars of entrepreneurship policy (more than we have had time to consider for this project): Opportunity perception, Startup skills, Risk acceptance, Networking, Cultural support, Opportunity startup, Technology sector, Gender, Quality of human resources, Competition, Product innovation, Process innovation, High growth, Internationalization, Risk capital.

Another notable article is Stam's (2015) critique on entrepreneurial ecosystems and regional policy, which highlights the importance of considering who the founders are, and how they learn to become entrepreneurs in the first place (i.e., 'boosting' policy). This is in contrast to conventional innovation policy which takes the entrepreneur for granted to focus on the firms and their outputs.

6.2 Industry reports

Several industry reports have been written in recent years with the aims of representing Australian startups and advocating for policy change,¹⁰⁰ plus the government's own National Innovation and Science Agenda Report (aka Innovation Statement).¹⁰¹ Perhaps the most developed one (including detailed international comparisons) is the 2015 Crossroads report, which builds off other reports and research conducted by StartupAus. While each of these reports and their policy recommendations hold great merit, we aim not to repeat their conclusions in their entirety here. Our reservation stems from the shift in focus from startups (emphasised by the vast majority of those report) to focussing on the support organisations.

At the level of policies for startup support organisations, there is a tension between government intervention, such as the National Innovation Council, to lead the startup ecosystem versus the logic that community and ecosystem leadership should be by entrepreneurs (Feld 2012; Strangler & Bell-Masterson, 2015). Government leadership makes sense if the entrepreneurial ecosystem significantly lags behind

¹⁰⁰ <u>https://groups.google.com/forum/#!topic/silicon-beach-australia/uB78zzLFZzI</u>

¹⁰¹ http://innovation.gov.au/page/national-innovation-and-science-agenda-report

international benchmarks (see for example Leatherbee and Eesley, 2014 regarding Startup Chile). Else, government support might be better placed to support the grassroots leadership exhibited by entrepreneurs within the community. International examples include Canada's \$100m Canadian Accelerator and Incubator Program (CAIP)¹⁰² and the SBA's \$44m Growth Accelerator Fund Competition.¹⁰³

6.3 Inductive analysis

As part of our field research, we asked participants to comment on (i) policies they had made use of, (ii) policies they recommend revising, and (iii) new policies they wish to see. By and large, the respective lists of policies reinforce the recommendations in the aforementioned industry reports. The predominant useful policies identified by support organisations included R&D Tax credits and recent changes to Employee Share Options Plan (ESOP), even though the support organisations were not the direct beneficiaries of these programs. Somewhat surprisingly, policies related to tax offsets for angel investments and capital gains tax (CGT) on exits were not mentioned, both of which would return more capital to the accelerators, for them to consider increasing the level of funding per startup or number of startups they support.

Rank	Policy	Count	% of startups
1	none	22	50%
2	r&d-tax	7	16%
3	not-aware	3	7%
4	emdg	3	7%
5	comet	2	5%
6	state(icon)	2	5%
7	overseas(erdf)	1	2%
8	priv-pub-partnership	1	2%
9	overseas(multiple)	1	2%
10	(ato)	1	2%
11	state(innovact)	1	2%
12	state(nswinnovate)	1	2%
13	Neis	1	2%
14	Commaus	1	2%
15	Accelcomm	1	2%
16	arc	1	2%
17	nhmrc grants	1	2%
18	state(dsrd)	1	2%

From the perspective of the startups, Table 5 and Table 6 summarise how often different policies had been used by supported and independent startups.

Table 5: Frequencies of policies used by supported startups

¹⁰² <u>http://news.gc.ca/web/article-en.do?nid=906989</u>

¹⁰³ https://www.sba.gov/content/sba-boosts-economic-impact-accelerators-44-million-prizes

Rank	Policy	Count	% of startups
1	none	21	66%
2	r&d-tax	10	31%
3	emdg	3	9%
4	other	3	9%
5	export-credit	1	3%
6	cleantech-ip	1	3%

Table 6: Frequencies of policies used by independent startups

The high proportion of startups who did not apply for or receive government support is strikingly similar to the same observation in the 2012 Silicon Beach report. The most popular policies to access were the R&D tax incentive and the EMDG scheme.

It must be noted that not all startups are internet startups with comparable levels of R&D. Some health sciences startups take years to break even, while some internet startups are profitable within days. For example, one biotechnology startup in our sample accessed 6 different programs over 10 years (COMET, Commercialisation Australia, Accelerating Commercialisation, ARC and NHMRC Grants, R&D Tax Rebate) and was still pre-revenue. In comparison, an internet startup in our sample that was launched mid-2015 and supported by Blue Chilli states "Cash flow positive week 1" as a significant milestone without having accessed any government policies.

In terms of policies that the startups recommended making modifications to, the top 10 (out of 35) are reflected in Table 7, including a vague request for 'more' at rank 4.

Rank	Policy	Count
1	find-matching-seed	11
2	esop	9
3	cgt	6
4	more	5
5	seis(uk)	4
6	r&d-tax(quarterly)	4
7	accel	4
8	tax	3
9	visa-tech	3
10	stem	3

Table 7: Frequencies of policy recommendations by independent startups

6.3.1 Co-investment and direct funding of accelerators

One of the most frequently requested policy changes was around the process of finding seed funding, preferably in the form of (i) co-investment by the government (#1 in Table 7) or (ii) by offsetting the operational costs of the accelerator. This policy change was suggested in accelerator interviews as well as the startup survey.

With regards to **co-investing seed funding**, there is a classic challenge to determine whether the lingering technology startup scene is primarily a deal flow or capital challenge. The combination of these challenges was noted in prior

government funded research projects in 2006¹⁰⁴ and 2012,¹⁰⁵ and co-investment could make a significant difference. Co-investment strategies are also recommended by OECD research (Wilson/OECD, 2011; OECD, 2105) as a bridging policy (Autio & Rannikko, 2015).

An interesting operational detail to note is from the Israeli Yozma co-investment model (Isenberg, 2010), wherein "the Israeli government gave the private sector partners an option to buy out its interest in the funds at attractive terms—a fact often overlooked by other governments that copy the Yozma model." With the emergence of accelerators, the co-investment could occur alongside accelerators' investments; analogous to side-car funds operated via angel organisations. The catch is that overfunding seed stage deals can cause high valuations that make it difficult to find for follow-on investors. So, if co-investing is considered, then it should avoid altering the valuation through something more like a grant or convertible note (as with the Yozma model) or through co-investing at the same terms as the accelerator (while reducing the accelerator's share of the equity for the combined deal).

One challenge to increasing the available seed funding, is to make sure it is invested in a smart way by knowledgeable accelerator operators and angels. Therein resides a problem if there is only limited experience in early stage investing, as seen in in a 2006 research project into Australian angel investors.¹⁰⁴ One way to combat a lack of local early stage investing expertise it to get new investors (i.e., accelerators and angels) to participate in educational programs, such as Angel Labs.¹⁰⁶ Another way is analogous to the Israeli Yozma way where "Each new VC fund had to be represented by three parties: i) Israeli VCs "in training"; ii) foreign VCs; and iii) an Israeli investment company or bank" (Wilson/OECD, 2011, p. 99). Such a method would require more experienced accelerator operators to take an active role in new accelerators in order for the government to provide a co-investment fund.

As a note of caution, co-investments may not pay-off for the government until some level of experience has been attained by the accelerator operators. However, it would enable more operators to become more capable at early stage investing, who then perform better with their next fund (see also Hsu & Kennedy, 2005 for a summary of the learning curve the US VC industry experienced).

With regards to **co-funding the operational costs** of an accelerator (or other support organisation), some state governments are already providing \$150k per year for accelerators of their choice as another bridging policy (Autio & Rannikko, 2015). Depending on the design of the accelerator, the operational costs can exceed \$1M per year. To contrast, such high operating costs are more than the annual amount of seed funding of most accelerators (i.e., 10x \$50,000 is still less than \$1M). Indeed, the high financial and personal commitments required to run an accelerator mean that there is always a risk that the operators step away from the full-service model to focus on angel investing.¹⁰⁷ To mitigate the risk that the operators cease providing mentoring, programmes and space (thus leaving many entrepreneurs to struggle through with less guidance), and to foster more comprehensive support for startups,

¹⁰⁴ <u>http://www.industry.gov.au/innovation/reportsandstudies/Documents/BusinessAngelReport.pdf</u>

¹⁰⁵ <u>http://www.industry.gov.au/industry/IndustrySectors/VentureCapital/Pages/</u> <u>ResourcesAndPublications.aspx</u>

¹⁰⁶ http://nyti.ms/1OH7IdW

¹⁰⁷ See for example: <u>http://www.tennessean.com/story/money/2016/01/14/jumpstart-foundry-drops-accelerator-role-becomes-fund/78768356/</u>

the OECD (2105) report recommends co-funding the operations of accelerators, especially if the accelerator is run by growth-oriented entrepreneurs.

International comparisons include the CAIP in Canada, which redistributed \$100m in matched funding to 15 accelerators to help them expand their programs. As with the \$44m SBA accelerator grant program, receipt of funding could require extra performance measurement and reporting efforts to help with assessing the efficacy of accelerators.

Another benchmark is provided by Startup Brasil, wherein 20 publicly funded accelerators help train the private sector ones.¹⁰⁸ This is done by having two tiers of applicants to the government's accelerators: startups and private-sector accelerators.¹⁰⁹ Private-sector accelerators who receive the government funding to help their operational costs also receive operational advice.

Quantity vs quality: In addition to deciding whether to provide direct support for accelerators, there is a decision to increase the quantity of startups that can be supported, or to foster higher quality support for the startups that can currently be supported. Provided, that a sufficient level of quality is being provided by the support organizations, and provided that there are sufficient startups in need of support, then there is a strong argument for increasing the quantity of startups receiving support at the seed level. Increasing the quantity is appropriate for the simple reason that early stage investing is too unpredictable to pick winners and double-down on individual startups until they have had more time to demonstrate more progress.

In this sense government support would be better placed to increase the number of support organizations or at least the capacity of the current ones, instead of increasing the depth or quality of support for a more limited number of startups. This level of thought is reflected in how Y Combinator (YC) operates: "Because YC understands this well, they've structured their whole program to search for these companies, and explicitly pick companies based NOT on who is highly likely to be successful on a low level, but on who has a SHOT at being one of the mega winners. This means they are reducing their "win" rate so they can increase their "home run win" rate."110

Increasing quantity is also in-line with the perceived need to generate (and educate or up-skill) 2,000 more technology entrepreneurs for the Australian startup sector to "achieve its potential" such that "Australian success stories like Seek, Carsales and Atlassian become the rule, rather than the exception."¹¹¹

If accelerator operators are not interested in increasing their cohort sizes (e.g., to maintain quality of service and focus on a niche), then the direct funding may be allocated to creation of new accelerators. This option might require some vetting and intangible support process, like the Startup Brasil or Yozma programs, to ensure that new accelerators have the capabilities and network to maintain a sufficient level of quality.

Similarly, the capacity of co-working spaces could be increased, or more co-working spaces be supported. Co-working spaces are also typically more scalable than

¹⁰⁸ http://www.geektime.com/2015/12/07/start-up-brasil-goes-turbo-on-accelerators-to-get-ecosystemmovina/ 109

http://startupbrasil.org.br/sobre programa/?lang=en

¹¹⁰ https://www.techinasia.com/talk/stopped-angel-investing-start

¹¹¹ https://pwc.docalvtics.com/v/innovation-statement

accelerators. However, they are usually also constrained by expensive leases in urban environments.

Increasing the capacity of the ecosystem can be risky if there is not a commensurate increase in the supply of startups. Support organizations could run the risk of competing too intensely for a limited pool of startups, leading to some support organizations becoming unsustainable¹¹² or gaining a poor reputation if their financial model requires them to accept lower quality applicants who under-perform.

If an increased supply of startups does not materialise, then direct support for support organizations may be better done with the intention of increasing the quality of service. The OECD (2015) report echoes avoiding offering the same opportunity for all (i.e., a buffering policy)¹¹³, and focusing on higher impact for fewer startups (i.e., a bridging policy): "Do not scatter resources too thinly across many firms. Rather, prioritise working with firms that have the ambition and potential to grow. Avoid extending public support for too long and without milestones" (p. 137).

Several suggestions emerged from the field interviews and surveys regarding increasing the quality of support. Funding could go towards increasing the number or quality of mentors by flying them in from overseas (blurring the distinction between a bridging and boosting policy). This is already supported by governments in other countries,¹¹⁴ and it seems plausible for similar programs to be funded here; possibly in collaboration with Advance.org or ANZA Tech.

6.3.2 R&D tax inventive

Participating support organisations were generally happy with the R&D tax incentive program. As noted in the 2015 Tax Discussion Paper,¹¹⁵ "The R&D tax incentive is the primary mechanism by which the Government seeks to encourage companies to undertake R&D activities in Australia." In comparison to direct support for support organizations, the R&D tax incentive is more egalitarian to all startups (supported or unsupported) (i.e., a buffering policy).

One of the most verbose comments from this project illustrates the importance: "The only policy that matters is the R&D tax grant and it is the life blood of the Australian startup industry (both StartMate and at Blackbird). Every other policy is just noise compared to the universal positive impact of the R&D Tax grant. Don't touch it or make it more generous for 'startups', according to the ESOP definition."

Nonetheless, there are two notable areas where the R&D tax incentive program can be changed in order to cultivate greater levels of entrepreneurship. The first modification may include being more inclusive of technology development activities. The low application rates by startups may be an artefact of the scope of what activities can be claimed. It may be worthwhile being more inclusive of less IP-based startups to fund the development of their digital resources. For example, BC, Canada's criteria for an Eligible Business Corporation come to mind, which include

¹¹² As seen mid-2015: <u>http://www.startupsmart.com.au/business/startnest-one-of-sydneys-first-co-working-spaces-closes-its-doors/2015070315044.html</u>

¹¹³ Cf. <u>http://apo.org.au/research/stronger-fairer-australia</u>

¹¹⁴ In Singapore: IDA <u>https://www.ida.gov.sg/Startups</u>

In Columbia: Ruta N http://rutanmedellin.org/

In Chile: Corfo http://www.english.corfo.cl/

¹¹⁵ http://bettertax.gov.au/files/2015/03/TWP_combined-online.pdf

activities other than conventional R&D.¹¹⁶ This is not to dismiss conventional R&D as the basis for globally scalable businesses, but to acknowledge that it is not the sole basis for such scalability.¹¹⁷

The second modification to the R&D tax incentive plan is to change the refund period to quarterly payments and simplify the reporting process. As one entrepreneur commented: "R&D Grant paid in quarterly instalments - cash flow is the hardest thing to come by for a startup and this will help dramatically." Meanwhile, an accelerator operator commented: "Please don't mess with the R&D Tax Credit. It does an immensely good job of helping young startups spin out their funding while avoiding the issue of 'picking winners'. The money automatically goes to entities that a) have been able to raise funds from some other source and b) have invested those funds in the high risk activity of making something new."

Despite their merits, R&D tax incentives also have a drawback. Despite the importance of R&D incentives for startups, providing more R&D tax incentives can also decrease the formation rates of research-based startups (OECD, 2015). This decrease is because the incumbent firms have routinised the capability to apply for these incentives and can continue to employ more researchers in their labs, thus inhibiting the flow of researchers into the startup phenomenon. The OECD report suggests that such tax incentives should be balanced with direct support measures, and concludes that "direct support measures – e.g. contracts, grants, awards for mission-oriented R&D or support for networks – may be more effective in stimulating R&D than previously thought, particularly for young firms that lack the upfront funds to start an innovative project" (p. 128).

Thus, this study finds that the existing R&D tax incentive scheme can be streamlined to help with cash flow problems for startups. However, the 'universal' (buffering) funding made available to startups should also be balanced with direct (bridging or boosting) forms of support. Such direct forms of support may be directly into a more selective set of startups. Or, as indicated in the previous section, it may be via the selection processes inherent in support organizations.

6.3.3 ESOP

Change requests to the ESOP were received from several startups, while noting that supposedly "Options are solved for 99% of companies. There are late stage companies and those that go public on the ASX that are loud and vocal but are not important" (accelerator operator). ¹¹⁸

6.3.4 Other Suggestions

The following additional suggestions are based on the field data, literature, Australian industry reports and international comparisons.

<u>Regional specialization</u>: We recognise that there is a tension between nationally egalitarian buffering policies (like the R&D tax incentive), versus bridging policies

¹¹⁶ http://www.mit.gov.bc.ca/ICP/VCP/QandA.htm#4_new_media

¹¹⁷ See also <u>http://www.startupsmart.com.au/growth/innovation/adrian-di-marco-laments-innovation-statements-mean-spirited-defining-moment/2015121016117.html</u> for comments on what forms of development should be supported, as conducted by which stage of venture. Likewise, the BRW Fast 100 lists are not exclusive to technology-based ventures: <u>http://www.brw.com.au/lists/fast-100/2015/</u>

¹¹⁸ See also <u>https://groups.google.com/forum/#!topic/silicon-beach-australia/NS5AYtIUXcQ</u>

that 'pick winners' by reinforcing regional strengths (like ESVCLP support). Prior research on the top accelerators versus the average accelerators (Smith & Hannigan, 2015) suggests that resources may be better allocated to the top organisations or regions, in order to maximise the likelihood of creating a globally competitive industry.¹¹⁹ In such a globally competitive world, regional cluster policy would suggest to leverage (or even try and create) a localised concentration of an industry instead of trying to treat all regions equally (Salazar, Bliemel & Holbrook, 2008; Maine et al., 2010; Wennberg, & Lindqvist, 2010).

Interestingly, despite the OECD's (2015) recommendation to 'not scatter resources too thinly,' they also recommend ensuring that "business accelerators do not focus only on technology-based sectors and that growth-oriented companies from less wealthy regions are given special consideration owing to their potential impact on job creation" (p. 137). Whether accelerators create significant numbers of jobs remains debatable though (Cumming & Johan, 2014; West, 2015). More remote regions also save several disadvantages, such as (i) a lack of a critical mass of entrepreneurs among which to facilitate peer learning, (ii) distance to investors (who often invest only within a 1 hour drive of their urban home), and (iii) greater time and costs involved in bringing in other stakeholders (e.g., mentors, professional service providers or potential corporate customers). These disadvantages often drive rural entrepreneurs to re-locate to urban centres, even if only part-time (e.g., a part-time desk in a co-working space in the CBD).

Entrepreneurship education: While recent reports¹²⁰ and the Innovation Statement¹²¹ emphasise the importance of STEM education for technology startups (a boosting policy), an easily overlooked aspect is the need for technical skills to be complemented with entrepreneurial skills.¹²² For example, the Aspen Institute (2014) report reveals that all four VC stage bottlenecks are related to business, not technology. Thus, if STEM skills are being promoted at younger ages as a means to stimulate more tech startups, then it may be wise to also offer early entrepreneurship education.

Focussing on (nascent) entrepreneurs and their intentions prior to starting startups is also known as entrepreneurial ecosystem policy (Isenberg, 2010; Stam, 2015), which seeds the startup creation process and feeds into cluster policy. Due to the presented evidence that accelerators have an immediate impact on increasing entrepreneurial experience, skills and networks, government supporting for them may be better labelled entrepreneurial ecosystem policy than innovation policy.

<u>University research commercialization</u>: A suggestion on how to increase university research commercialization was suggested by a colleague from Sweden, who recalled that approximately 10 years ago at UK universities, there was a funding scheme to pay PhD students in the natural sciences a stipend to write an extra chapter in their thesis about commercializing their research. To complete the chapter, they essentially had to do first-hand market research, thus familiarizing themselves with the commercial environment of their career.

See also http://www.brookings.edu/about/programs/metro/innovation-districts

¹²⁰ E.g., <u>http://www.industry.gov.au/industry/Pages/Industry-Innovation-and-Competitiveness-</u> Agenda.aspx#header

http://innovation.gov.au/page/national-innovation-and-science-agenda-report

¹²² <u>http://www.chiefscientist.gov.au/2015/10/new-report-boosting-high-impact-entrepreneurship-in-australia/</u>

<u>Startup Internships</u>: Another suggestion was made to fund (paid) internships in startups, as a mechanism to upskill workforce. The funding for the internships could be applied for by the students, who then have the freedom to approach startups they would like to join. This would be like a startup coop program, as celebrated by the Waterloo ecosystem.¹²³

Labour mobility / talent flows: Several comments and similar suggestions were received regarding a shortage of highly qualified people in Australia. This applies to entrepreneurs, technical developers and angel investors. In order to increase the supply of entrepreneurs in Australia, they may be 'home-grown' or 'imported'. Encouraging immigration would be significantly enabled by some form of entrepreneur's visa (as indicated in comments about visas in our survey). In addition to facilitating the legal process of immigrating, it may be worthwhile operating 'Welcoming Pads' (like an in-patriot 'Landing Pad'; mirroring the Israel-based landing pad for Australians¹²⁴) or a program like LAFHA for entrepreneurs who are aspiring to access the newly 'abundant' venture capital.¹²⁵

As a point of comparison, Startup Chile launched an "unorthodox policy" by importing entrepreneurs from US on a short-term basis (Leatherbee & Eesley, 2014). This was done for local peers be pressured into increasing their entrepreneurial self-efficacy. Several startups in our sample lamented the difficulties in sponsoring a 457 visa, and suggested this process could be streamlined for startups, whose recruiting needs may be more urgent than larger corporations.

In order to 'import' more knowledgeable early-stage investors, a Startup Investor Visa was proposed via our survey, to attract immigrants familiar with early stage investing and willing to invest a much greater proportion of their capital into startups than with the current SIV program.

7 Closing thoughts

For Australia, and virtually any other national ecosystem, the forces of globalization are putting pressure on finding some international point of distinction, other than natural resources. Failure to innovate is perhaps the biggest risk, followed by the risk of poorly executing entrepreneurship policy. As aptly put by Charles Nightingale, CEO of the AICC: "We're either the steamroller, or we'll be part of the road."¹²⁶

8 Thanks and Acknowledgements

Special thanks to Will Hartigan and Arthur Lau at the Department of Industry, Innovation & Science for their feedback throughout the project. This project would also not be possible without the generosity of participating support organisations and startups (incl their RTs and ♥'s), and the superb research assistance I have had via CNPq.br. Thanks also to the supporting faculty and staff at UNSW's School of Management and Research Strategy & Partnerships Office. Data from CrunchBase and MaRS was made available by Mark Lennon and Alec Miller, to whom we owe great thanks. Thanks also to Cheryl & Pallavi at Freelancer/SydStart and to

¹²³ http://blog.startupcompass.co/waterloo-the-david-vs-goliath-of-startup-ecosystems

¹²⁴ http://minister.industry.gov.au/ministers/pyne/media-releases/landing-pads-help-australianinnovators-learn-best

¹²⁵ <u>http://www.startupsmart.com.au/planning/business-planning/six-reasons-why-australia-is-a-great-place-for-tech-entrepreneurship/2015120316067.html</u>

¹²⁶ https://www.linkedin.com/pulse/what-could-australia-learn-from-israel-startup-nation-murray-hurps

Charnelle Mondy at City of Sydney for their assistance with the social media campaigns. Critical insights were also provided by Dr Lawrence Lau, Dr Brian Wixted and Professor Per Davidsson. All errors and omissions may be attributed to Dr Martin Bliemel, the Chief Investigator of this project.

9 References

- Ács, Z. J., Autio, E., & Szerb, L. (2014) National systems of entrepreneurship: Measurement issues and policy implications. Research Policy, 43(3), 476-494.
- Andriani, P., & McKelvey, B. (2007) Beyond Gaussian averages: Redirecting international business and management research toward extreme events and power laws. Journal of International Business Studies, 38(7), 1212-1230.
- Amezcua, A. S. (2010) Boon or Boondoggle? Business Incubation as Entrepreneurship Policy. (Post-doctoral white paper via gradworks.umi.com) Syracuse University.
- Aspen Institute (2014) Measuring value created by impact incubators & accelerators. Retrieved 4 August 2015 from <u>http://www.aspeninstitute.org</u>.
- Autio, E. & Rannikko, H. (2015) Retaining winners: Can policy boost high-growth entrepreneurship? Research Policy, 45(1), 42-55.
- BADIR (2013) Business Accelerators and Business Incubators BADIR White Paper Series. Retrieved from the National Business Incubator Association online bookstore
- Barrehag, L, Fornell, A., Larsson, G., Mårdström, V., Westergård, V. & Wrackefeldt,
 S. (2012) Accelerating success: A study of seed accelerators and their defining characteristics. Bachelor Thesis TEKX04-12-10 Chalmers University, Sweden
- Bearse, P. (1998) A question of evaluation: NBIA's impact assessment of business incubators. Economic Development Quarterly, 12(4), 322-333.
- Bliemel, M., Flores, R., Hamilius, J. & Gomes, H. (2014) Accelerate Australia Far: Exploring the Emergence of Seed Accelerators within the Innovation Ecosystem Down-Under. Presented at the Australian Centre for Entrepreneurship Research Exchange, February 4-7, 2013, Sydney, NSW
- Bliemel, M. & Flores, R. (2015) "Defining and Differentiating Accelerators: Insights from the Australian Context" Academy of Management, Vancouver, BC
- Bøllingtoft, A. (2012) The bottom-up business incubator: Leverage to networking and cooperation practices in a self-generated, entrepreneurial-enabled environment. Technovation, 32(5): 304-315.
- Bruneel, J., Ratinho, T., Clarysse, B. & Groen, A. (2010) Are they really helping? An assessment of evolving business incubators' value proposition, Frontiers of Entrepreneurship Research: 30(15), Article 9.
- Bruneel, J., Ratinho, T., Clarysse, B. & Groen, A. (2012) The Evolution of Business Incubators: Comparing demand and supply of business incubation services across different incubator generations. Technovation, 32(2): 110-121.
- Caley, E., & Kula, H. (2013) Seeding Success: Canadian Startup Accelerators-MaRS Data Catalyst. June. <u>http://datacatalyst.marsdd.com/startupaccelerators</u>.
- Carayannis, E. G. & von Zedtwitz, M. (2005) Architecting gloCal (global–local), realvirtual incubator networks (G-RVINs) as catalysts and accelerators of entrepreneurship in transitioning and developing economies: lessons learned and best practices from current development and business incubation practices. Technovation, 25(2): 95-110.
- Cattaneo, O., Gereffi, G., and Staritz, C. (2010) Global Value Chains in a Postcrisis World: A Development Perspective. The World Bank, Washington, D.C.

- Christiansen, J. (2009) Copying Y Combinator, A framework for developing Seed Accelerator Programmes. (Doctoral dissertation) Judge Business School and Jesus College, Cambridge.
- Clarysse, B., Wright, M., & Van Hove, J. (2015) A look inside accelerators. London: Nesta. Retrieved from <u>http://www.nesta.org.uk</u>.
- Cohen, S. (2013) How to accelerate learning: Entrepreneurial ventures participating in accelerator programs. (Doctoral dissertation, University of North Carolina, Chapel Hill).
- Cohen, S. & Hochberg, Y. (2014) Accelerating Startups: The Seed Accelerator Phenomenon. Retrieved from: <u>http://ssrn.com/abstract=2418000</u>.
- Colombo, M. G., & Delmastro, M. (2002) How effective are technology incubators?: Evidence from Italy. Research policy, 31(7), 1103-1122.
- Crawford, G. C., Aguinis, H., Lichtenstein, B., Davidsson, P., & McKelvey, B. (2015) Power law distributions in entrepreneurship: Implications for theory and research. Journal of Business Venturing.
- Cukier, W. & Middleton, C. (2012) Assessing the Impact of Universities in the Ecosystem: Incubators, Accelerators and the Culture of Innovation, Ryerson University
- Cumming, D., & Johan, S. (2014) Venture's economic impact in Australia. The Journal of Technology Transfer, 1-35.
- Dana, L. P. (1996) Boomerang entrepreneurs: Hong Kong to Canada and back. Journal of Small Business Management, 34(2), 79.
- Dempwolf, C. S., Auer, J., & D'Ippolito, M. (2014) Innovation Accelerators: Defining Characteristics Among Startup Assistance Organizations. Published online at www.sba.gov/advocacy: Small Business Administration.
- Dolphin, T., & Nash, D. (2012) Complex New World: Translating New Economic Thinking into Public Policy. Institute for Public Policy Research, London, UK.
- Dowling, P. (1997) Establishing and operating incubators in Australia: A guide. Wollongong, N.S.W.: Australia and New Zealand Association of Business Incubators Inc.
- Economist (2014) Tech Startups: A Cambrian moment. The Economist, January 18, 2014, 1-14.
- Feeser, H. R., & Willard, G. E. (1989) Incubators and performance: A comparison of high-and low-growth high-tech firms. Journal of Business Venturing, 4(6), 429-442.
- Fehder, D. C., & Hochberg, Y. V. (2014) Accelerators and the regional supply of venture capital investment. Retrieved from <u>http://ssrn.com/abstract=2518668</u>.
- Feld, B. (2012). Startup communities: Building an entrepreneurial ecosystem in your city. John Wiley & Sons.
- Future Asia Ventures (2015) Corporate Accelerators: A Growing Force http://www.futureasiaventures.com/.
- Ganamotse, G. (2011) A Conceptual Framework for examining selection practices of business incubators, 10th International Entrepreneurship Forum, Tamkeen, Bahrain, 9-11 January 2011.
- Garibay, I., Hollander, C. D., Khan, F., O'Neal, T., & Turgut, D. (2013) Towards studying the impact of business incubation on regional economic performance: A high-level overview and preliminary experiment. Retrieved 25 September, 2013 from <u>complexity.research.ucf.edu</u>.
- Garnsey, E., & McGlade, J. (Eds.). (2006) Complexity and co-evolution: continuity and change in socio-economic systems. Edward Elgar Publishing.

- Grimaldi, R. & Grandi, A. (2005) Business incubators and new venture creation: an assessment of incubating models. Technovation, 25(2): 111-121.
- Hackett, S. M. & Dilts, D. M. (2004) A real options-driven theory of business incubation. The Journal of Technology Transfer, 29(1): 41-54.
- Hallen, B. L., Bingham, C. B., & Cohen, S. (2014) Do Accelerators Accelerate? A Study of Venture Accelerators as a Path to Success?. Academy of Management Proceedings 2014, p. 12955.
- Hannon, P. D. (2004) A qualitative sense-making classification of business incubation environments. Qualitative Market Research: An International Journal, 7(4): 274-283.
- Harrison, R. T., Mason, C., & Smith, D. (2015) Heuristics, learning and the business angel investment decision-making process. Entrepreneurship & Regional Development, 1-28.
- Heinemann, F. (2015) Corporate Accelerators: A Study on Prevalence, Sponsorship, and Strategy (Doctoral dissertation, Massachusetts Institute Of Technology).
- Hochberg, Y. V. (2015) Accelerating Entrepreneurs and Ecosystems: The Seed Accelerator Model. In Innovation Policy and the Economy, Volume 16. University of Chicago Press.
- Hoffman, D. L. & Radojevich-Kelley, N. (2012) Analysis of accelerator companies: An exploratory case study of their programs, processes, and early results. Small Business Institute Journal, 8(2), 54-70.
- Hsu, D. H., & Kenney, M. (2005) Organizing venture capital: the rise and demise of American Research & Development Corporation, 1946–1973. Industrial and Corporate Change, 14(4), 579-616.
- IBM (2011) Capitalizing on Complexity Insights from the Global Chief Executive Officer Study, IBM Global Business Services, Somers, New York.
- Isenberg, D. J. (2010) How to start an entrepreneurial revolution. Harvard Business Review, 88(6), 40-50.
- Isabelle, D. A. (2013) Key Factors Affecting a Technology Entrepreneur's Choice of Incubator or Accelerator. Technology Innovation Management Review, 3(2).
- Kempner, R. (2013) Incubators Are Popping Up Like Wildflowers... But Do They Actually Work?. innovations, 8(3-4), 3-6.
- Kim, J. H., & Wagman, L. (2012) Early-Stage Financing and Information Gathering: An Analysis of Startup Accelerators. Retrieved from <u>http://ssrn.com/abstract=2142262</u> (The 2012 version has since been replaced with a 2014 publication with a different name).
- Leatherbee, M., & Eesley, C. E. (2014) Boulevard of Broken Behaviors: Socio-Psychological Mechanisms of Entrepreneurship Policies. Retrieved from <u>http://ssrn.com/abstract=2488712</u>.
- Leblebici, H. & Shah, N. (2004) The birth, transformation and regeneration of business incubators as new organisational forms: Understanding the interplay between organisational history and organisational theory. Business History, 46(3): 353-380.
- Lehmann, P. (2013) Corporate Accelerators: Characteristics and Motives. (Masters Dissertation, Copenhagen Business School)
- Lewis, D. A. (2001) Does technology incubation work?: A critical review. USA: Economic Development Administration, US Department of Commerce.
- Li, B., Kuberczyk, H. & Melanie Yen, A. (2012) The explosive growth of Business Accelerators in LA. (Coursework project. California Institute of Technology)

Livingston, J., (2007) Founders at Work: Stories of Startups' Early Days. Berkley, CA: APress.

Los Kamp, M. (2013) Betaspring: Entrepreneurship in Startup Accelerators. (Senior Capstone Project) Bryant University

Lumpkin, J. R. & Ireland, R. D., 1988. Screening practices of new business incubators: the evaluation of critical success factors. American Journal of Small Business, 12(4): 59-81.

Maine, E. M. A., Shapiro, D. M., & Vining, A. R. (2010) The role of clustering in the growth of new technology-based firms. Small Business Economics, 34(2), 127-146.

Malek, K., Maine, E.M.A. & McCarthy, I. P., (2014) A typology of clean technology commercialization accelerators. Journal of Engineering and Technology Management, 32: 26-39.

Mian, S. A. (1994) United-States University-Sponsored Technology Incubators - an Overview of Management, Policies and Performance. Technovation, 14(8), 515-528.

Mian, S. A. (1997) Assessing and managing the university technology business incubator: an integrative framework. Journal of business venturing, 12(4), 251-285.

Miller, P., & Bound, K. (2011) The Startup Factories: The rise of accelerator programmes to support new technology ventures: NESTA.

Mullins, J. (2014) The Customer-Funded Business: Start, Finance, Or Grow Your Company with Your Customers' Cash. John Wiley & Sons.

Nelson, R. R. (Ed.). (1993) National innovation systems: a comparative analysis. Oxford university press.

NESTA (2014) Startup accelerator programmes: a practice guide. Retrieved December 3, 2015, from <u>https://www.nesta.org.uk</u>

OECD (2015) The Innovation Imperative: Contributing to Productivity, Growth and Well-Being. Retrieved from <u>http://www.oecd.org</u>

Pauwels, C., Clarysse, B., Wright, M., & Van Hove, J. (2015). Understanding a new generation incubation model: The accelerator. Technovation.

Porat, J. (2014) Exploring the Policy Relevance of Startup Accelerators, Issue Brief 4, Small Business Association

Price, R. (2004) The role of service providers in establishing networked regional business accelerators in Utah. International Journal of Technology Management, 27(5), 465-474.

Ratinho, T. (2011) Are they helping? An examination of business incubators' impact on tenant firms. Doctoral dissertation) University of Twente.

Richards, S. (2002). Inside business incubators and corporate ventures. John Wiley & Sons Incorporated.

Ries, E. (2011) The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses. Random House LLC.

Salazar, M., Bliemel, M. J., & Holbrook, J. A. (2008) A comparison of R&D indicators for the Vancouver biotechnology cluster. Journal of commercial biotechnology, 14(3), 233-246.

Saxenian, A. (1996) Regional advantage. Harvard University Press.

Shane, S. (2015) Why the Number of Accelerators Is Accelerating. Entrepreneur Magazine <u>http://www.entrepreneur.com/article/252730</u>

Sherman, H., & Chappell, D. S. (1998) Methodological challenges in evaluating business incubator outcomes. Economic Development Quarterly, 12(4), 313-321.

- Slaats, L. (2015) Learning from Accelerator Programs: A framework to analyse the success of FinTech Accelerator Programs for traditional banks. (Masters dissertation) Universiteit Utrecht
- Smith, S. W., & Hannigan, T. J. (2015) Swinging for the fences: How do top accelerators impact the trajectories of new ventures? DRUID15, Rome, June 15-17, 2015
- Stam, E. (2015) Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique. European Planning Studies, 23(9), 1759-1769.
- Storper, M. (1997) The regional world: territorial development in a global economy. Guilford Press.
- Strangler, D., & Bell-Masterson, J. (2015) Measuring an Entrepreneurial Ecosystem. Kauffman Foundation. Retrieved from <u>www.kauffman.org</u>.
- Unitus Seed Fund (2015) 2015 Global Best Practices Report on Incubation and Acceleration: Key Trends and Analysis of the 2015 Incubation and Acceleration Ecosystem
- Vitale M, Everingham, B., & Butler, R. (2006), 'Study of Business Angel Market in Australia', study commissioned by the Department of Industry, Tourism and Resources, November.
- van Huijgevoort, T. (2012) The 'Business Accelerator': Just a Different Name for a Business Incubator?, Utrecht School of Economics. Retrieved from <u>http://www.dutchincubator.nl/uploads/Documents/49.pdf</u>
- Voisey, P., Jones, P., & Thomas, B. (2013) The pre-incubator: a longitudinal study of 10 years of university pre-incubation in Wales. Industry and Higher Education, 27(5), 349-363.
- Voisey, P., Gornall, L., Jones, P., & Thomas, B. (2006) The measurement of success in a business incubation project. Journal of Small Business and Enterprise Development, 13(3), 454-468.
- von Zedtwitz, M. 9(2003) Classification and management of incubators: aligning strategic objectives and competitive scope for new business facilitation.
 International Journal of Entrepreneurship and Innovation Management, 3(1): 176-196.
- Wang, H., Lin, D., Yin, H., Lu, Q., & Cheng, H. (2008) Linking incubator services to the performance of incubated firms: A review. ICMIT 2008. 4th IEEE International Conference on (pp. 894-899). IEEE.
- Wennberg, K., & Lindqvist, G. (2010) The effect of clusters on the survival and performance of new firms. Small Business Economics, 34(3), 221-241.
- WEF (2016) The Future of Jobs. World Economic Forum Global challenge Insight Report. Retrieved from <u>http://www.weforum.org/reports/the-future-of-jobs</u>
- West, D. M. (2015) What happens if robots take the jobs? The impact of emerging technologies on employment and public policy. Retrieved 9 Dec 2015 from http://www.brookings.edu/research/papers/2015/10/26-robots-emerging-technologies-public-policy-west
- Wilson, K. E./OECD (2011) Financing high-growth firms: the role of angel investors. Available at SSRN 1983115 and <u>www.oecd.org/sti/angelinvestors</u>
- Wiltbank, R., & Boeker, W. (2007) Returns to angel investors in groups. Retrieved from <u>http://ssrn.com/abstract=1028592</u>.

Appendices



Appendix A – Distributions of application quality to accelerators

Figure 16: Estimated distributions of quality across an accelerator's application pool vs a normal distribution



Figure 17: Estimated cumulative distributions of quality across an accelerator's application pool vs a normal distribution

Only the top 2% are of considerable quality. Almost 100% of rest are considered 'marginal'. In order to increase the number of higher quality applications, accelerator operators will often groom known startups into their program through recruiting events and their networks. This grooming process repeatedly encourages the entrepreneurs to develop their idea into something that has high-growth potential and would be a good fit with the accelerator.

Appendix B – Rules for marking intensity of business model features

After completing each semi-structured interview, each organisation was rated against the 5 archetypical accelerator criteria (0 to 100%):

1)	Standardised cash-equity deal:	
	if no equity is involved	0%
	if seed investing occurs, but each deal is different	50%
	if all startups are offered the same terms	100%
2)	Cohort model with DemoDay:	
	if there is no cohort model	0%
	if there is a cohort model, but no DemoDay	50%
	if there is a cohort model with DemoDay	100%
3)	Full-time co-location:	
	if entrepreneurs can remain wherever they currently operate	0%
	if participation involves part-time co-location (OR is a full-time commitment)	50%
	if participation involves full-time co-location	100%
4)	Structured programme:	
	if there is no program or workshops	0%
	if workshops are offered in an ad hoc manner	50%
	if multiple workshops are offered as a coherent structured programme	100%
5)	Mentoring:	
	if there is no (formal) mentoring involved	0%
	if mentoring is on-demand, in-house or informal	50%
	if mentoring is formally facilitated and coordinated	100%

Appendix C – Support organisations identified

Participating organizations

Location	Organisation Name
Adelaide	ANZ Innovyz Start
Adelaide	Venture Catalyst
Canberra	Griffin
Melbourne	AngelCube
Melbourne	Melbourne Accelerator Program
Multiple	Founder Institute
Multiple	Innovation Bay
Newcastle	Slingshot
Perth	SpaceCubed
Sydney	ATP-Innovations
Sydney	H2 Ventures
Sydney	IgnitionLabs
Sydney	Pollenizer
Sydney	RightPedal
Sydney	StartMate
Sydney	StartSoc
Sydney	TiE Sydney
Wollongong	iAccelerate

Identified and Invited

Location	Organisation Name
Adelaide	Hub Adelaide
Adelaide	New Ventures Institute: eNVIsion
Brisbane	iLab
Brisbane	QUT Creative Enterprise Australia
Canberra	CBRIN
Canberra	LightHouse
Gold Coast	Silicon Lakes
Hobart	Startup Tasmania
Melbourne	Small Technologies Cluster
Melbourne	Startup foundation
Melbourne	York Butter Factory
Perth	AmCom upstart
Perth	Atomic Sky
Perth	Unearthed Accelerator
Sunshine coast	Innovation Center Sunshine Coast
Sydney	25 fifteen
Sydney	BlueChilli

Sydney	Delta V
Sydney	Fishburners
Sydney	Incubate
Sydney	Muru-D
Sydney	PushStart
Sydney	Springboard
Sydney	Sydney Angels
Sydney	VentureTec

Other Organisations and Lists

These are to be considered as this project continues.

- Sydney: Tank Stream Ventures / Labs
- University-base d programmes:
 - UNSW Student Enterprise Development, Michael Crouch Innovation Centre, CSE Venture Space
 - UTS: Innovation and Creative Intelligence Unit
- Sydney Startup Action Plan: Startup Muster includes 22 accelerators¹²⁷
- Participants of the 2015 Global Coworking Unconference Conference¹²⁸
- Other members of Australian ecosystem maps
 - Adelaide: <u>http://www.adelaidenow.com.au/business/mapping-south-australias-entrepreneurial-ecosystem/story-fni6uma6-1227197205989</u>
 - Brisbane: http://tsj.io/startupmap/
 - Perth: <u>http://spacecubed.com/2013/09/25/perth-startup-ecosystem-2013-infograph/</u>
 - Sydney and Melbourne: <u>https://www.bluechilli.com/blog/heres-your-august-</u>startrail-maps-for-melbourne-and-sydney-startup-communities/
- Australian Co-working spaces listed in 2014 SydStart documents¹²⁹
- Early Stage Venture Capital Limited Partnerships (ESVCLP)¹³⁰

More suggestions are always welcome.

¹²⁷ http://sydneyyoursay.com.au/tech-startups-action-plan

¹²⁸ http://au.gcuc.co/whos-coming/

¹²⁹ <u>http://sydstart.wordpress.com/2014/09/01/coworking-meetup/</u> (accessed 2 Sep, 2014, now archived)

¹³⁰ http://www.business.gov.au/grants-and-assistance/venture-capital/esvclp/Pages/default.aspx