



Project prepared on behalf of the Tomaree Business Chamber Inc.
by
University of Newcastle student Lachlan Stronach — BUSN3001
(Project in Business)
June 2018



Tertiary Education Proposal for the Tomaree Peninsula



1.0 EXECUTIVE SUMMARY

This report proposes that an innovation hub called Bay Space could be the answer to addressing the needs of aged care, education and revitalisation of the Nelson Bay CBD. Three levers were identified that can be pulled by leaders in the community with the use of Bay Space. The levers are marine, tourism and aged care.

The University of Newcastle and NSW Tafe were key stakeholders identified to provide the tertiary education component of the hub as well as ensure the success of the accelerator and incubator components, so levers are pulled in the most effective manner. Bay Space can be added to the University's Integrated Innovation Network.

Accommodation was recommended as an option for further injection of people into the CBD and greater utilisation of the building.

Funding can come from the Federal government from the Department of Education and Training and their regional education hub funding package or the NSW government's \$4.15 billion commitment to spend the proceeds of the snowy hydro sell off in regional areas. It would require the Port Stephens Council to donate the land which could be proven to be in the community interest.

Theories explored are the role of innovation champions and open innovation regarding knowledge management to deliver the hub and how the innovation is diffused.

This report is not intended as a business case, but more a report on the current situation and possibilities that can be explored. This report can be used in consultation with key stakeholders to create a business plan to present to stakeholders.

Bay Space would include parking, a bike hub, education hub, café, training rooms, coop space, acceleration and incubation areas, commercial spaces and accommodation.



TABLE OF CONTENTS

1.0 Executive Summary.....	1
2.0 Introduction	4
3.0 Problem Framing.....	5
4.0 Background Analysis	7
4.1 Barriers to Innovation.....	7
5.0 Conclusion of SWOT.....	8
6.0 Development of Innovative Solutions	9
6.1 Knowledge Management	9
6.2 Innovation Diffusion	9
6.3 Open Innovation	9
6.4 Innovation Champions.....	10
6.5 Branding - Creating Bay Space.....	10
6.5.1 Pitching Competition.....	11
6.5.2 Hackathon	11
6.5.3 Thursday Start-Up Stories	12
6.6 Innovation Ecosystem.....	13
7.0 Resources Required to build Bay Space.....	14
7.1 Key Stakeholders	14
7.2 Interview Summary	14
8.0 Implementation	16
8.1 Business Acceleration	16
8.2 Business Incubation	16
8.3 Spatial Design	17
8.4 Accomodation.....	17
8.5 Training Rooms	17
8.6 Car Parking.....	18
8.7 Commercial Tenancy	18
9.0 Implementation Plan & Schedule	19
9.1 July 2018	19
9.2 August 2018.....	19
9.3 September 2018	19



9.4 October 2018	19
9.5 November 2018	19
9.6 Post Construction	20
10.0 Financial Sustainability.....	21
11.0 Conclusion.....	22
12.0 Recommendations	23
13.0 References	24
14.0 Appendices.....	26
14.1 Appendix A – SWOT Analysis.....	26
14.2 Appendix B – Interview with High School Representatives	27
14.3 Appendix C – Interview at the Tomaree Community College	28
14.4 Appendix D – Interview at Harbourside Haven Retirement Village Representatives..	29
14.5 Appendix E – Interview with Regis Aged Care.....	30
14.6 Appendix F – Interview with Council representative	31
14.7 Appendix G – Interview with Jean Ross from Tafe NSW	32
14.8 Appendix H – Interview with Alloggio Accomodation.....	33
14.9 Appendix I – Interview with Moonshadow Cruises.....	34
14.10 Appendix J - Talk at Real Futures.....	35
14.11 Appendix K – Qualifications.....	36
14.12 Appendix L – Institution Attendance.....	40

2.0 INTRODUCTION

Working with the Tomaree Business Chamber was a great opportunity to use and apply knowledge collected over many years while giving and capturing value for all parties involved. There were three distinguishably different areas of interest to the Chamber's brief and on first inspection a solution would only solve one problem. The three questions to solve in their raw form were; address future tertiary education needs, investigate what can be done to support aged care growth and revitalise the Nelson Bay CBD which was seen to be losing its "shine" predominantly due to the growth of the Salamander Bay shopping precinct.

Using knowledge of innovation ecosystems, it quickly became clear that an innovation hub located within the Nelson Bay CBD solves the entire brief. An innovation hub can house education facilitators, accelerators, incubators, training rooms, co-working spaces, accommodation, commercial tenants and more.

The following report will outline the composition of this space which for the purposes of this report has been called "Bay Space". It will also delve into the stakeholders and theoretical frameworks that have contributed to the success of other hubs and will put forward a case for how this proposed hub can fit into the existing Integrated Innovation Network that is operated by the University of Newcastle. The dilapidated carpark on Magnus street is recommended as a site location.

It is expected that this report can be used to assist the chamber to create a Business Plan that can be presented to outlined stakeholders to take the project to the next stage. The chamber also wrote in the brief that Nelson Bay has been identified as a strategic centre in the recently completed Hunter regional plan which could help attract funding for Bay Space.

3.0 PROBLEM FRAMING

Port Stephens has a population of 70,447 people and 20.1% have a tertiary level certificate in some form (Port Stephens Council, 2017). The education component of the hub is designed to solve two education issues which were verified by primary data sourcing via interviews with identified relevant stakeholders. The first identified issue is that a low number of students seek tertiary education when they finish school. Another issue is students that travel to Newcastle to study eventually end up moving there because the travelling is too much of a hassle, this contributes to what is known as a brain drain.

Bay Space will address these issues with twenty-four-hour access to shared workstations, computer stations and couch clusters like the spaces throughout NeW Space. This will be an educationally focussed area for people to work on assignments or study. Another component would be to allow remote access to live classes. This will make learning more engaging than attempting to learn material in an online only format. A collaboration will also be created between NSW Tafe and local aged care providers such as the Harbourside Haven Retirement Village to offer practical training on site and theoretical training at Bay Space.

Regions such as Port Stephens are comparable to enterprises and generally have strengths which can be promoted through Regional Innovation Management (RIM) to gain a constructed advantage (Kriz, Kriz & Molloy, 2015). Three key identified strengths of the Port Stephens area are; Aged Care, Marine and Tourism (including hospitality). To best utilise these strengths, it will take leaders in the region to pull levers by advancing decision making and leadership to drive Bay Space (Kriz, Kriz & Molloy, 2015). One way of pulling these levers is by creating acceleration and incubation opportunities. This will ensure the best minds are working in the area.

Other smaller yet still valid problems in the area are the need for training rooms that are a decent size. Providing training rooms that can be used by commercial parties and the university as required would ensure a greater utilisation of the space.

The existence of the hub in a strategic location will ensure that there is an injection of students and entrepreneurs in the area that will go to the shops and restaurants around Bay Space. In



general businesses that see improvements to shopfronts in their vicinity will improve their own shopfronts which will add to the appeal and amenity of the area.

Another issue is a lack of affordable travel accommodation. Providing accommodation to students and entrepreneurs in a dormitory format could help Bay Space be utilised more effectively and ensure that there is further economic benefit to the area.

4.0 BACKGROUND ANALYSIS

4.1 BARRIERS TO INNOVATION

An issue that is apparent in Port Stephens is the prevalence of Not Invented Here (NIH) syndrome which is a mindset that external ideas and knowledge transfers are invalid as a group believe they possess a monopoly of knowledge in their area of specialisation which in this case would be the identified levers which are evidently not being pulled given the need for change (Katz & Allen, 1982). NIH is a barrier because it prevents the community from progressing with the current tourism opportunities available with international tourism. The product offerings aren't packaged together effectively by relevant stakeholders in the area to attract tourism from tourists from key areas such as Asia which were identified in Appendices H and I.

Another barrier to innovation currently is the location of existing tertiary education facilities. The current education precinct which houses the Port Stephens Tafe is located within Tomaree High School. This is not an ideal location as it is in a predominantly bushy area and there is a large age disparity. Education hubs are generally located in key strategic areas that allow maximum interaction with likeminded peers which is more likely to happen in a CBD.. Thus, the key barriers to the success of Bay Space is the willingness of the regional community to change their mindset to allow levers to be pulled and choosing an ideal location.



5.0 CONCLUSION OF SWOT

The key strengths identified are the levers of marine, tourism and aged care as well as utilising the network that the chamber has access to. The success of Bay Space relies on utilising the contacts and supporters of the concept to gain access to the funding bodies and relevant stakeholders. Government funding is very competitive which is why a threat is other councils putting forward a proposal for their area. An economic downturn was identified as a threat because it could cause a tightening of government spending. In some ways this could be perceived as an opportunity because the aim of Bay Space is to promote regional economic development which attracts funding in recessions to stimulate the economy.



6.0 DEVELOPMENT OF INNOVATIVE SOLUTIONS

6.1 KNOWLEDGE MANAGEMENT

Nonaka, Toyama & Konno, (2000) propose that there are three distinct elements of knowledge creation; the SECI process which is the creation of knowledge through converting tacit (doing things that come as second nature) to explicit (codified and teachable) knowledge, creating a “Ba” which is a shared space for knowledge creation and creation of knowledge assets. The idea of Bay Space is to encourage students to learn and mingle with other students within the space and potentially attend distance classes together in custom built rooms that allow students at Bay Space to interact with classes held at NeW Space. The accelerator, incubator and coop spaces are also designed with knowledge sharing in mind, so knowledge assets can be shared to support the knowledge sharing environment.

6.2 INNOVATION DIFFUSION

Bay Space is an innovation hub so the most important thing for it to be successful is adequate diffusion of innovation. Put simply, diffusion of innovation is a four-part theory where it looks at a new innovation and the channels through which it spreads over time to reach the target market (Rogers, 2004). Using key stakeholders such as the ones interviewed and getting their endorsement will be key to ensuring acceptance of Bay Space. Using the channels of key stakeholders such as principals at schools will help create awareness with students who can utilise Bay Space upon completion and their decision to explore tertiary education may be realised through the knowledge of Bay Space.

6.3 OPEN INNOVATION

Strategic alliances can be encouraged where necessary between relevant local businesses and start-ups to help companies share knowledge assets that aren't going to jeopardise the fabric and competitive advantage of the players (Kale, Singh & Perlmutter, 2000). Open innovation is the idea of sharing knowledge assets that aren't valuable to the business and can be traded or shared to create more innovative solutions and benefit multiple parties in a way greater than a firm could accomplish on their own with external knowledge inflows (Chesbrough, 2006). This is the idea behind open plan spaces within Bay Space that encourage off chance encounters and collaboration. Hopefully start-ups will see other start-ups or professionals



that have encountered similar issues or problems that they can approach to learn ways of more effectively dealing with issues.

As explored above, open innovation revolves around transfers of knowledge between parties and its diffusion through channels can appear in many forms. The forms of open innovation that will exist at Bay Space are shared facilities, networks, student placements, collaborative research and joint ventures (Alexander, Pearson, Fielding & Bessant, 2012). The collaborations between tertiary education institutions and private enterprises in the Port Stephens area will increase the likelihood of radical innovation because allowing outside-in-flows of knowledge from universities has been seen to supply potential sources of new ideas and technologies (Inauen & Schenker-Wicki, 2012). Students partaking in placement, access to academics, new research methodologies and the new facilities at Bay Space will help firms innovate more than they currently do operating in a closed innovation state.

6.4 INNOVATION CHAMPIONS

Grouping the levers that represent identified strengths would be best labelled as communities of practice (COPs) as the individuals identified to start recruiting start-ups for the incubation and accelerator programs share a common passion or work together to solve a common cause (Wenger, 1998). The idea of an innovation champion is to identify people that can interact effectively with others to use their channels to sell the innovation to the target market in a sufficient time, so it is adopted (Chesbrough & Crowther, 2006). Bay Space is an innovation and will require acceptance. Stakeholders that were interviewed all endorsed the idea and stated that they would offer any assistance possible. This is the opportunity where they can be used to champion Bay Space within their networks to aid adoption.

6.5 BRANDING - CREATING BAY SPACE

Bay Space has many factors which make it unique. The logo has the exact colours of the University of Newcastle and Hunter Tafe logos and the name Bay Space pays tribute to the modern NeW Space building which is the flagship building of the University of Newcastle and a place of great educational opportunities. The name also reflects the geographical location of the hub. Associated branding would use the same colour scheme to emphasise the



relationships that exist with the two education providers as seen below with a potential marketing slogan.

EDUCATE
ACCELERATE
INCUBATE
ACCOMODATE

6.5.1 PITCHING COMPETITION

An exciting way of attracting talented start-ups to Bay Space whilst also raising awareness is to allow people from all over to pitch to a panel of experts a business idea with the hope of gaining funding and support in an accelerator program to accelerate the growth of the idea. Pitching competitions are popular and allow the panel of experts to see a vast array of ideas that can be chosen and get a feel for what innovations exist to pull the levers identified. The winning start-up would probably get seed capital around \$20,000 in exchange for 5% equity in their company. The prize would be seed capital, expert guidance and coaching, access to other sources of capital to grow the business and the use of a desk within Bay Space.

6.5.2 HACKATHON

A hackathon is generally computer programming focussed, allowing entrants to pitch, program and present an innovation that collaboratively solves identified innovation challenges such as aged care, transport or government (Briscoe, 2014). The idea is for teams to solve a problem in a short period of time (generally contestants are held in a room for less than 24-hours) and the winner is rewarded with a cheque to pursue their idea. The winner could be invited to have a desk space for free for a certain period. The hackathon could be held in a large training room.

6.5.3 THURSDAY START-UP STORIES

Start-up stories is a concept used at the Three-76 hub on Hunter Street that revolves around getting a founder of a company to talk each Thursday about founding their company in a relaxed setting. Offering something like this in Bay Space with light food and drinks provided during a lunch period which would allow local business people and students to have a break and interact and engage which supports an innovation culture. The Three-76 hub can be seen below, the start-up stories are held on the ground floor near the front entrance.



Three-76 Hunter Street Innovation Hub (Oztrekk, 2016)

6.6 INNOVATION ECOSYSTEM

Currently the University of Newcastle's Integrated Innovation Network (I2N) has four locations; Charlestown, Newcastle CBD, Muswellbrook and Williamtown that focus on regional economic development, acceleration and incubation, agriculture and defence (University of Newcastle, 2018). Like the biological ecosystem that includes all living organisms and their setting functioning harmoniously together, an innovation ecosystem comprises of the relationships between actors or entities within an ecosystem whose goal is to enable the development of technology and innovation in a particular field (Jackson, 2011). The innovation ecosystem would be comprised of actors such as Tafe NSW, the University of Newcastle, local businesses, students, business leaders, venture capitalists, other hubs, Tomaree Business Chamber, government bodies and non-government organisations.

7.0 RESOURCES REQUIRED TO BUILD BAY SPACE

7.1 KEY STAKEHOLDERS

Stakeholder	Role
Local High-Schools	Educating high school students about the option to go onto tertiary education and stay in Port Stephens
State or Federal government	Grant for Bay Space to be built
Port Stephens Council	Providing the Magnus Street Carpark site
NSW Fisheries, d’Albora and Moonshadow Cruises	Provide Expert knowledge in marine advancements
University of Newcastle	Funding and systems to provide the education, acceleration and incubation components of Bay Space
NSW Tafe	Funding to provide local nursing training with the capacity to expand to hospitality in the future
Harbourside Haven and Regis	Expert knowledge in Aged Care
Alloggio and Moonshadow	Expert knowledge in Tourism

7.2 INTERVIEW SUMMARY

Many interviews were conducted which are seen in Appendices B-J. Interviews attempted to engage with identified key players in the region who can endorse Bay Space which was the outcome. One of the main points that was a common denominator was isolation from the university because of the distance and lack of viable public transport. Debbi Rodden generously provided Remplan data on institutional attendance and the number is alarming with only 2.25% of the population currently attending university compared to the state average of 5.03% (see Appendix L). Putting this into context, 6.65% have a bachelor’s degree compared to the 13.06% state average yet 22.1% compared to the 14.72% state average have certificates from a registered training organisation (see Appendix K). This data shows that tourism and hospitality is a major focus in the area and the jobs are not there for people with university education which contributes to a brain drain for those that do gain tertiary education or a lack of a need if they choose to stay. This data and the interviews demonstrated the need to create a more innovative economy which can be created through the introduction



of an innovation hub like Bay Space that can retool the community to improve the business scene and local economy.

8.0 IMPLEMENTATION

8.1 BUSINESS ACCELERATION

A key driver for making Bay Space an innovation hub is the need for a support network for start-ups in the identified strengths. This can be achieved through accelerator programs focussed on start-ups that solve issues in marine, aged care or tourism. This is a way of pulling the levers that need to be pulled to create value for the community and gain an economic benefit for the area and effective use of Bay Space. Business accelerators are generally fixed term programs that offer seed capital, working space, entrepreneurial education and resources (Gonzalez-Uribe & Leatherbee, 2017).

Accelerators distinguish themselves from other start-up support mechanisms with their focus on succeeding in the earlier stages of start-up development and education, but the success relies on a rigorous selection process, well-established business support services and networks (Clarysse & Yusubova, 2014). For the accelerator program to work it will rely on strong marketing to attract suitable start-ups, fit for purpose resources such as fast internet and computers, appropriate desks as well as a suitable mentor network. At the helm of the selection process will need to be a panel of business experts.

8.2 BUSINESS INCUBATION

Business incubators are like cooperative work spaces in that they provide work space for users, but the key value proposition is the addition of monitoring of businesses, assistance from mentors and operators of the incubator as well as access to a network of contacts (Bruneel, Ratinho, Clarysse & Groen, 2012). The guidance of an incubator can help reduce risk and encourage growth. Like accelerators, there would be a selection process to ensure only appropriate companies are incubated.

8.3 SPATIAL DESIGN

An education hub is the idea of building a critical mass of students who have access to education institutions, companies, science and technology mixed with the resources required to engage in education through training, knowledge production and initiatives that support innovation (Knight, 2011). The space will be designed with centres of gravity in mind which are key areas that people are naturally attracted towards which encourage off chance encounters and interactions (Allen & Henn, 2007). An open plan design would facilitate an easier flow of people through the space and a coffee shop located in the centre of the room would be a centre of gravity as informal conversations can take place there which could help foster relationships.

8.4 ACCOMODATION

In Sydney for as little as \$50, tourists can stay in a capsule or pod room which is essentially an enclosed single bed with all the necessary amenities such as a safe, reading lights and a phone charger (Harris, 2017). This concept could address an identified issue of a lack of low cost accommodation in Nelson Bay. This would inject a younger crowd into the area who are likely to spend money in the area given their proximity to local shops. Offering accommodation in the form of dormitory rooms could attract local students that want a university dormitory experience without leaving their home town. It could also be appealing to entrepreneurs that are residents in the accelerator and incubator programs. Staying on site would allow them to work for as long as they want on their start-ups.

8.5 TRAINING ROOMS

It has been identified by the chamber that there is a lack of large training rooms with adequate facilities that can be used at an affordable price in Port Stephens. Offering rooms that can be rented and used for professional development and company information sessions could be a lucrative investment to contribute to the financial sustainability of Bay Space.



8.6 CAR PARKING

It is imperative that because the proposed site is an existing carpark that the new structure will house carparking that is equal to the existing structure as well as meeting the needs for future growth. Currently the original carpark was meant to hold two hundred and fifty cars, but it holds far less because it has been partially condemned. A report will need to be conducted to calculate the necessary parking that is greater than two hundred and fifty, to accommodate growth, expansion and future needs. It would also be wise to include a bike hub which can give locals an alternative to driving.

8.7 COMMERCIAL TENANCY

It is important that Bay Space has a strong element of self-sufficiency. Having a commercial element where rent is collected will aid in this goal. A few floors dedicated to high quality cooperative spaces for individuals and teams to use desk spaces with fast internet and shared amenities such as a kitchen and bathrooms will ensure a consistent rent is collected from users of the space.



9.0 IMPLEMENTATION PLAN & SCHEDULE

9.1 JULY 2018

A meeting has been organised between the chamber and the Vice Chancellor of the University of Newcastle for mid-July. This shows an awareness exists. Organising a meeting to initiate talks between Harbourside Haven, Regis and Tafe NSW before this meeting would help support the pitch because it shows another major tertiary education provider sees merit in the project.

9.2 AUGUST 2018

If the meeting with the Vice Chancellor was successful, then a business plan should be formed using the support of university representatives who were instrumental in setting up existing hubs to then present to the NSW or Federal government for funding. Forming a memorandum of understanding with the Port Stephens Council that conditionally agrees to supply the carpark land if funding is secured would be a desirable achievement in this month.

9.3 SEPTEMBER 2018

If funding is provided then the Tomaree Business Chamber, Port Stephens Council, Tafe NSW and Newcastle University would have to begin collaborating with architectural firms to map out the requirements for the building, so it can be put together. During this time the public can be invited to provide their input.

9.4 OCTOBER 2018

A design concept should be put on public display and a DA can be submitted to seek approval for Bay Space's construction.

9.5 NOVEMBER 2018

Assuming the DA was successful a tender process should begin so Bay Space can be constructed.

9.6 POST CONSTRUCTION

After the building has been constructed it should be launched by hosting a pitching competition which the local high schools and the community invited to attend. During the build the co-op spaces, accelerator and incubator programs should have been marketed to attract users. Information sessions can be run for students to familiarise themselves with the building and advertising can be targeted toward relevant users.

With consultation with the chamber it was evaluated that a steering committee should be appointed to choose the operators and support Bay Space in its initial year, so it grows in a suitable way. The potential committee is below.

- Leah Anderson - Chamber President
- Peter Clough - Chamber Business Development Officer
- Debbi Rodden - Port Stephens Council Economic Development Officer
- Sheree Gemmell - Harbourside Haven CEO
- Jean Ross – Head Aged Care teacher at NSW Tafe, Tighes Hill
- Garry Haworth or Courtney Molloy – University of Newcastle Management and Open Innovation expert academics
- Siobhan Curran – Head of I2N Network
- Will Creedon – Chairman of Tourism Hunter and MD of Alloggio

10.0 FINANCIAL SUSTAINABILITY

Providing a financial forecast would be inaccurate because of the many variables at. Potential identified revenue streams are incubation and co-working revenue, training room rental, commercial rent from the coffee shop and other businesses, a section of private parking which could net \$50-\$60 per week if 10-20 parks were set aside for private use and the option of accommodation.

A speculative income stream that is hard to predict or measure is the equity from investing in start-ups. It has the potential to be lucrative. Therefore, a strong selection criterion is important when choosing start-ups. Another potential option for commercial leases is a rooftop bar and doctor surgeries using a level of Bay Space.

A state government source of funding is the \$4.15 billion allocation to regional areas from the sale of NSW's share of the snowy hydro scheme (Chambers, 2018). Another source is to apply to the Federal government Department of Education and Training for a regional education study hub grant (see Appendix F).

11.0 CONCLUSION

Bay Space is designed to be a multipurpose centre of excellence for innovation to pull the identified levers of marine, tourism and aged care in an innovative and educationally nurturing setting. Practising outside-in open innovation with accelerators and incubators inside Bay Space is enabled because of the connections to other start-ups, business mentors and academics.

The proposed site is the Magnus street dilapidated carpark because of its prime location in the Nelson Bay CBD and the need for the council asset to be knocked down and replaced with more carparks which can be addressed while also housing the needs of Bay Space in a rebuilt structure.

Primary data collection through interviews showed that the business community is strongly in favour of Bay Space and Remplan data showed that tertiary education was lower than the rest of the state except for certificates of accreditation which highlights the tourism economy and the need for revitalisation of the CBD to introduce new thinking and higher numbers of tertiary education.

To meet all the identified needs which were gauged through primary research it is thought that Bay Space should include parking, a bike hub, education hub, café, training rooms, coop space, acceleration and incubation areas, commercial spaces and accommodation.

Stakeholders were identified to help put together a case to either the state or federal governments for funding and then advocate for Bay Space once funding is secured. The stakeholders are innovation champions whose job is to diffuse the innovation through their channels and generate increased awareness and knowledge assets within the community.

12.0 RECOMMENDATIONS

1. That the University of Newcastle add Bay Space to their integrated Innovation Network as a strategic expansion.
2. That the Tafe NSW offers their currently offered EN and AIN courses in Nelson Bay and removing the need to travel to Newcastle.
3. That either the State or Federal governments provide funding.
4. That Harbourside Haven and Regis work with Tafe NSW in a strategic partnership to provide the resources required to offer nursing in Port Stephens.
5. That the Port Stephens Council donate the Magnus street carpark as a site for Bay Space as their contribution on a local government level.
6. That the identified steering committee is approached and officially endorsed so they can begin to work together.
7. That the design is innovative and edgy, so it is a landmark building that encourages people to interact with it like NeW Space.
8. That identified stakeholders endorse Bay Space and advocate for its delivery.
9. That all parties consult with the chamber who should drive the project.

13.0 REFERENCES

- Alexander, A. T., Pearson, S. J., Fielding, S. N., & Bessant, J. R. (2012). The Open Innovation Era: Are University Services up to the challenge?. In *ISPIM Conference Proceedings* (p. 1). The International Society for Professional Innovation Management (ISPIM).
- Allen, T., & Henn, G. (2007). *The organization and architecture of innovation*. Routledge.
- Briscoe, G. (2014). Digital innovation: The hackathon phenomenon.
- 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.
- Chambers, G. (2018). *Subscribe to The Australian | Newspaper home delivery, website, iPad, iPhone & Android apps*. *Theaustralian.com.au*. Retrieved 21 March 2018, from <https://www.theaustralian.com.au/national-affairs/nsw-victoria-to-reap-6bn-in-snowy-hydro-buyout/news-story/8c59cd541c2fa8a4545099bfe46c4a75>
- Chesbrough, H. W. (2006). The era of open innovation. *Managing innovation and change*, 127(3), 34-41.
- Chesbrough, H., & Crowther, A. K. (2006). Beyond high tech: early adopters of open innovation in other industries. *R&d Management*, 36(3), 229-236.
- Clarysse, B., & Yusubova, A. (2014). Success factors of business accelerators. In *Technology Business Incubation Mechanisms and Sustainable Regional Development*.
- Gonzalez-Uribe, J., & Leatherbee, M. (2017). The effects of business accelerators on venture performance: Evidence from start-up chile. *The Review of Financial Studies*, 31(4), 1566-1603.
- Harris, A. (2017). 'Pods' the new cheap place to stay. Retrieved from <https://www.dailytelegraph.com.au/news/nsw/budget-accommodation-spaceage-pods-available-for-rent-in-sydney-for-as-little-as-50-per-night/news-story/e3a1d8e9d0f6754decaa43e69652ecbf>
- Jackson, D. J. (2011). What is an innovation ecosystem. *National Science Foundation*, 1.



Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic management journal*, 217-237.

Katz, R., & Allen, T. J. (1982). Investigating the Not Invented Here (NIH) syndrome: A look at the performance, tenure, and communication patterns of 50 R & D Project Groups. *R&D Management*, 12(1), 7-20.

Knight, J. (2011). Education hubs: A fad, a brand, an innovation?. *Journal of Studies in International Education*, 15(3), 221-240.

Kriz, A., Kriz, A., & Molloy, C. (2015). Ambidextrous regional leadership: Lessons in place-based business model innovation. In *ISPIM Innovation Symposium* (p. 1). The International Society for Professional Innovation Management (ISPIM).

Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, Ba and leadership: a unified model of dynamic knowledge creation. *Long range planning*, 33(1), 5-34.

Oztrekk. (2016). *UON receives million-dollar investment for regional incubator spaces OzTREKK – Study in Australia*. *Oztrekk.com*. Retrieved 13 March 2018, from <http://www.oztrekk.com/blog/2016/07/uon-receives-million-dollar-investment-for-regional-incubator-spaces/>.

Port Stephens Council. (2017). *Port Stephens Economic Profile* (pp. 6-55). Port Stephens: Port Stephens Council Economic Development Unit.

Rogers, E. M. (2004). A prospective and retrospective look at the diffusion model. *Journal of health communication*, 9(S1), 13-19.

University of Newcastle. (2018). *Local Innovation Ecosystem*. *Newcastle.edu.au*. Retrieved 13 March 2018, from <https://www.newcastle.edu.au/research-and-innovation/innovation/three76hub/local-ecosystem>

14.0 APPENDICES

14.1 APPENDIX A – SWOT ANALYSIS

Strengths (Internal)	Weaknesses (Internal)
<ul style="list-style-type: none"> • Identified as a key growth area • Aged Care • Marine • Lower costs of living compared to competitive main cities • Tourism location • Bay Space is driven by the Tomaree Business Chamber • Real Futures endorsed Bay Space and they have strong community advocates who are members 	<ul style="list-style-type: none"> • Seasonality mindset • NIH syndrome • Geographically Nelson Bay is still three hours away from Sydney which could prevent start-ups from joining
Opportunities (External)	Threats (External)
<ul style="list-style-type: none"> • NSW Government grants • Department of Education and Training regional study hub grant • University of Newcastle adoption of Bay Space • Tafe NSW adoption of Bay Space • Port Stephens Council support of Bay Space and offering of land • Join I2N • Regis and Harbourside Haven joint venture with Bay Space and Tafe NSW • Utilising the site of the underutilised car park on Magnus street 	<ul style="list-style-type: none"> • Economic downturn • Another council competing for funding with a similar concept • Change in government

14.2 APPENDIX B – INTERVIEW WITH HIGH SCHOOL REPRESENTATIVES

Meetings were conducted with representatives from the two high schools in the Port Stephens area. Steve Jennings, the Business Operations Manager at Tomaree High School was interviewed first, and he was a strong believer in giving students the option to study beyond school in a tertiary capacity and noted that out of the 200-300 or so students that finish year twelve each year only around fifty go onto further education which includes Tafe.

Playing devil's advocate, the question was posed asking "if a high number of students are not continuing onto tertiary education and are picking jobs that don't require further education should they then be leaving school earlier as the opportunity cost could be they are missing out on a few years of wages and could get closer to buying an asset such as a house at a younger age?". The answer given was that the social element can never be disregarded, and it is very important for the social development of youth. The point was disguised as a way of supporting the next discussion that an education hub that students could use to study for exams such as the HSC in a social context with others around them could contribute to both social growth but also familiarity and interest in further education. Steve agreed with this and was enthusiastic about the hub.

The second meeting was with the Deputy Principal of St Phillips Christian College, David McKinnon. David was passionate about education and noted that their school had a fairly high rate of students that went onto further education. David liked the idea of students studying at the hub as well and said that some students currently drive to the Newcastle University Libraries to study so something close and inviting could be beneficial. David also agreed that familiarity with such a place could help encourage more students to choose further education. David helpfully organised a presentation to a group called "Real Futures" who are concerned about education in the Port Stephens area and love hearing about projects in support of this cause.



14.3 APPENDIX C – INTERVIEW AT THE TOMAREE COMMUNITY COLLEGE

This meeting was with Linda Drake who is the CEO of the local Community College. Linda told us about some of her company's offerings and how they offer short courses for hospitality qualifications and computer courses for the elderly. We established that Bay Space would not be a competitor as it solely focusses on tertiary education. Linda was very passionate about the idea of Bay Space and stated that her son currently drives to Newcastle to study for university and on occasion has stayed in his car overnight as he has been too tired to drive back which highlights the distance between Newcastle and Nelson Bay. Stories such as this demonstrate the sacrifices that people make to try and obtain an education. This could be a hurdle for students leaving high school that affects their decision making when it comes to progressing to tertiary education if they are not prepared to leave the area.



14.4 APPENDIX D – INTERVIEW AT HARBOURSIDE HAVEN RETIREMENT VILLAGE REPRESENTATIVES

Sheree Gemmell and Trish Walker were the representatives that were interviewed on site at Harbourside Haven Retirement Village. Through conversations it was established that they employ three hundred and fifty employees across all their sites. They highlighted key growth areas as exercise physiology and enrolled nursing. Enrolled nurses are in high demand as they can perform many tasks such as administering drugs and this qualification can be obtained through Tafe. A desire to collaborate with tertiary education providers was noted and Bay Space was a positive if training could be provided in a form that teaches nursing in the area. It would also be a great place for their nurses in training to study.

14.5 APPENDIX E – INTERVIEW WITH REGIS AGED CARE

This meeting was with Jill dela Lande, the CEO and Louise Kerr the customer service coordinator of Regis. The two ladies gave us an insight into the needs of the area in the aged care industry as their sites are focussed on aged care as opposed to Harbourside Haven which is more of a village model where people can buy into the villages and get as much or as little care as they require. People would more than likely go to a Regis location if they needed care beyond a village. It was also discussed that there was a shortage of enrolled nurses in the area and that some staff members are on 457 visas and all had to be trained in Newcastle or even Queensland for certain qualifications. Interestingly, according to Jill the only place to study dementia is in Tasmania which is both concerning and surprising.



14.6 APPENDIX F – INTERVIEW WITH COUNCIL REPRESENTATIVE

Debbi Rodden is the economic development officer at Port Stephens Council and was an excellent resource for local statistics which can be gathered from her access to Remplan which is a data tool used by councils to learn more about the needs of their community based on data that has been collected by the Census. Debbi suggested that the business case be validated by recent studies showing the needs of the area, so it can easily be shown as addressing those needs rather than creating a need. Debbi noted that another issue that Bay Space would be addressing is first in family students (FIF). Some students would be the first in their family to go onto tertiary education so making it easier for them could be a strong purpose for the existence of Bay Space.

Debbi also has connections with another model called “Country University Sectors” or CUC’s. These are places where students can get education and assistance from tutors, so they can study online courses without the course being completely online. The programs are also referred to as “distance with assistance”. They are a successful model which could be emulated but not implemented as the link with the University of Newcastle and their Integrated Innovation Network seems key to the success of Bay Space.

Debbi provided a link for federal regional study hubs funding under the Department of Education and Training:

<https://docs.education.gov.au/node/50801>

14.7 APPENDIX G – INTERVIEW WITH JEAN ROSS FROM TAFE NSW

Jean Ross is the Head Teacher for Aged Care, Disabilities and Nursing at the Tighes Hill TAFE NSW campus. She was extremely helpful with providing detailed knowledge of the types of nurses and the requirements to setup training facilities in the Nelson Bay area. To offer Certificate three training which is an enrolled nurse level that was the most in demand as identified by Harbourside Haven and Regis it would cost around \$50,000 to set up and would require integration and support from local aged care providers because four hundred hours of experience are required. For Assistant in Nursing (AIN) training it would only require a training room with a smartboard and clinical training could be completed at aged care providers in the area if a partnership was formed. The work placement for an AIN is one hundred and twenty hours. Jean said that if a meeting was organised between her and aged care providers in the area then setting up training could be established if the conditions are met.



14.8 APPENDIX H – INTERVIEW WITH ALLOGGIO ACCOMODATION

This meeting was with the Managing director of Alloggio, Will Creedon who is also the head of Tourism Hunter. The meeting with Will covered many issues in the CBD and caused a rethink of some aspects of Bay Space. After explaining to Will, the composition and physical nature of Bay Space he estimated the build cost to be around \$15 million dollars. Will is a big advocator of educating the community to deal with the market opportunities that are possible if the community can successfully attract Asian tourism. The key issue with the local businesses is the seasonality which is the naturally occurring high and low periods that are accepted as norms rather than attempting to change the situation. The process of changing the mindset was labelled as “retooling”.

14.9 APPENDIX I – INTERVIEW WITH MOONSHADOW CRUISES

James McArthur the CEO of Moonshadow Cruises talked about the emergence of the Asian market as the future of tourism in the area and how businesses need to consider. Moonshadow cruises have staff on board that speak a few languages such as Chinese when they can but noted that finding staff can be difficult. James noted that the seasonality of the tourism cycles meant that some staff would be lost to more permanent work because it is hard to keep staff on with the same hours all year around. If local businesses were adapting more to meet the needs of the Asian market the seasonality issue could be removed. James agreed that the education hub could help remove seasonality and with more students staying in the area there could be an increase in staff with the language skills required to meet the growing Asian market.



14.10 APPENDIX J - TALK AT REAL FUTURES

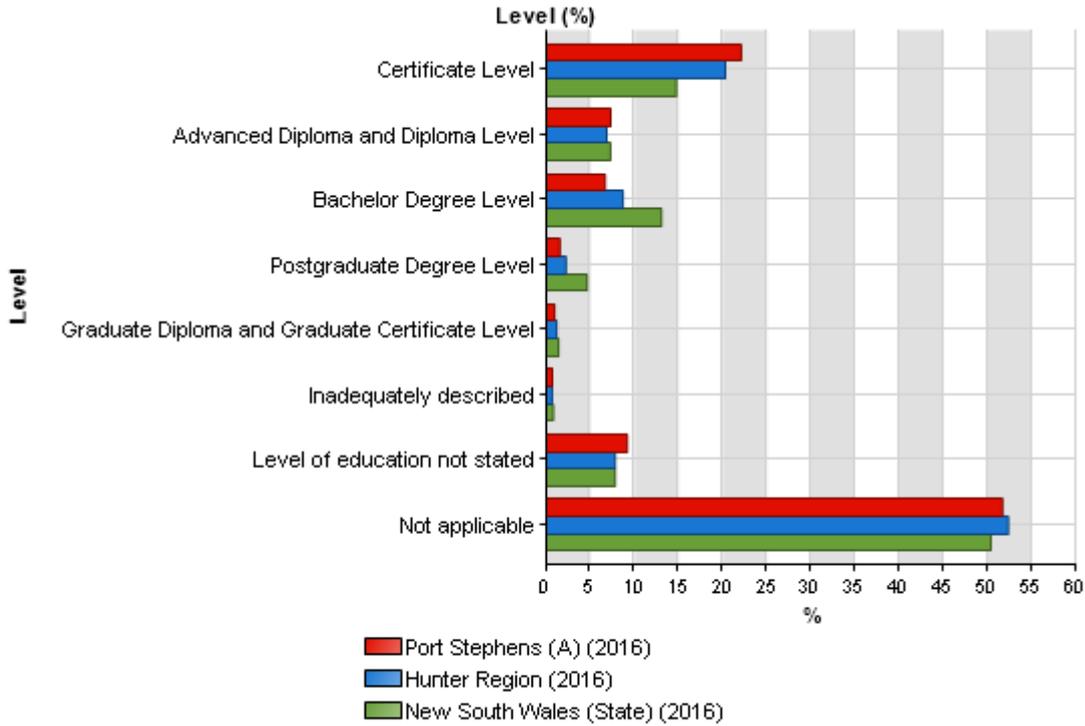
The talk was at a 7am breakfast and focussed on selling the key points of Bay Space and postulated the idea that the location could be on the dilapidated council carpark. This caused debate with a local councillor who was concerned about carparking which highlighted the need for Bay Space to retain the existing number of parks whilst assuring the carpark component of Bay Space is also fit for the future by providing additional parks to meet future needs. Real Futures is a group of community leaders who advocate for the growth and access to better educational offerings and higher quality education. They also run programs in local schools to connect students to local business leaders. The attendants at the meeting unanimously voted to endorse the Bay Space proposal which was very promising.

14.11 APPENDIX K – QUALIFICATIONS

Qualifications (2016 Census - Place of Usual Residence - People)

The total number of people usually resident in Port Stephens (A) zones in all Qualification cohorts on Census Night 2016 was 69,556.

Population by Qualification



Level	Port Stephens (A) (2016)		Hunter Region (2016)		New South Wales (State) (2016)	
	Persons	%	Persons	%	Persons	%
Certificate Level	15,371	22.10%	143,638	20.30%	1,100,959	14.72%
Advanced Diploma and Diploma Level	5,065	7.28%	48,373	6.84%	543,136	7.26%
Bachelor Degree Level	4,626	6.65%	61,515	8.69%	976,885	13.06%

Level	Port Stephens (A) (2016)		Hunter Region (2016)		New South Wales (State) (2016)	
	Persons	%	Persons	%	Persons	%
Postgraduate Degree Level	1,055	1.52%	15,578	2.20%	344,482	4.61%
Graduate Diploma and Graduate Certificate Level	636	0.91%	8,132	1.15%	103,345	1.38%
Inadequately described	466	0.67%	4,453	0.63%	58,381	0.78%
Level of education not stated	6,372	9.16%	55,279	7.81%	582,904	7.79%
Not applicable	35,965	51.71%	370,707	52.38%	3,770,138	50.40%
Total	69,556	100.00%	707,675	100.00%	7,480,230	100.00%

Selected Geography





Port Stephens (A) (2016)

Port Stephens (A)	Persons	%	Area (ha)	%	Persons / ha
Port Stephens (A) LGA 16400	69,556	100.00%	85,843.570	100.00%	0.81
Total	69,556	100.00%	85,843.570	100.00%	0.81

Definitions (Based on Australian Bureau of Statistics, Census Dictionary, 2016)

Qualifications

This variable describes the level of a person's highest completed non-school qualification (i.e. educational attainments other than those of pre-primary, primary or secondary education). Qualifications are coded using the Australian Standard Classification of Education (ASCED), 2001. This data provides a resource to investigate the relationship between levels of education and employment outcomes, income and other socioeconomic variables; and as a proxy measure of socioeconomic status*.

This variable is applicable to persons aged 15 years and over who stated a completed qualification. It includes a 'Not applicable' category, which comprises:

- Persons who have a qualification that is out of scope of this classification
- Persons with no qualification
- Persons still studying for a first qualification
- Persons aged under 15 years

Qualifications corresponds with the ABS Census variable 'QALLP Non-School Qualification: Level of Education'.

* For further insights into the region's economic and socio demographics, please refer to 'School Completion', 'Occupation' and 'Weekly Income'.

Place of Usual Residence

The Census count for Place of Usual Residence (PURP) is a count of every person in Australia on Census Night, based on the area in which they usually live. Each person is required to state their address of usual residence in Question 8 on the Census form. Where sufficient information is provided, this enables the area in which they usually live to be identified and coded. The count of persons at their usual residence is known as the de jure population count.

Census counts compiled on this basis minimise the effects of seasonal factors such as the school holidays and snow season, and provide information about the usual residents of an area as well as internal migration patterns at the state/territory and regional levels.

Prior to 2001, Place of Usual Residence was only coded to SLA level. For the 2001 and 2006 Census, usual residence data were available at Collection District (CD) level. For the 2006 Census, if respondents gave insufficient usual address information, their usual residence was imputed at CD level, whereas in 2001, it was classified as 'Inadequately described'.

With the introduction of the Australian Statistical Geography Standard (ASGS) for the 2011 Census, usual residence data are available for Statistical Area Level 1 (SA1) and can be aggregated to higher levels of geography



such as Postal Areas (POAs) and State Suburbs (SSCs). However it is only coded if sufficient information is supplied and, if respondents give insufficient usual address information, their usual residence will be imputed at SA1 level. The variable Imputation Flag for Place of Usual Residence (IFPURP) is used to indicate if a person's place of usual residence has been imputed for the Census.

The 2011 Census also asks where a person usually lived one year ago and five years ago. Data for these questions are coded to the Statistical Area Level 2 (SA2). Use of usual residence indicators, in conjunction with the other variables relating to usual residence, makes it possible to identify the pattern of net movement of people between three dates, i.e. Census Night, one year ago and five years ago.

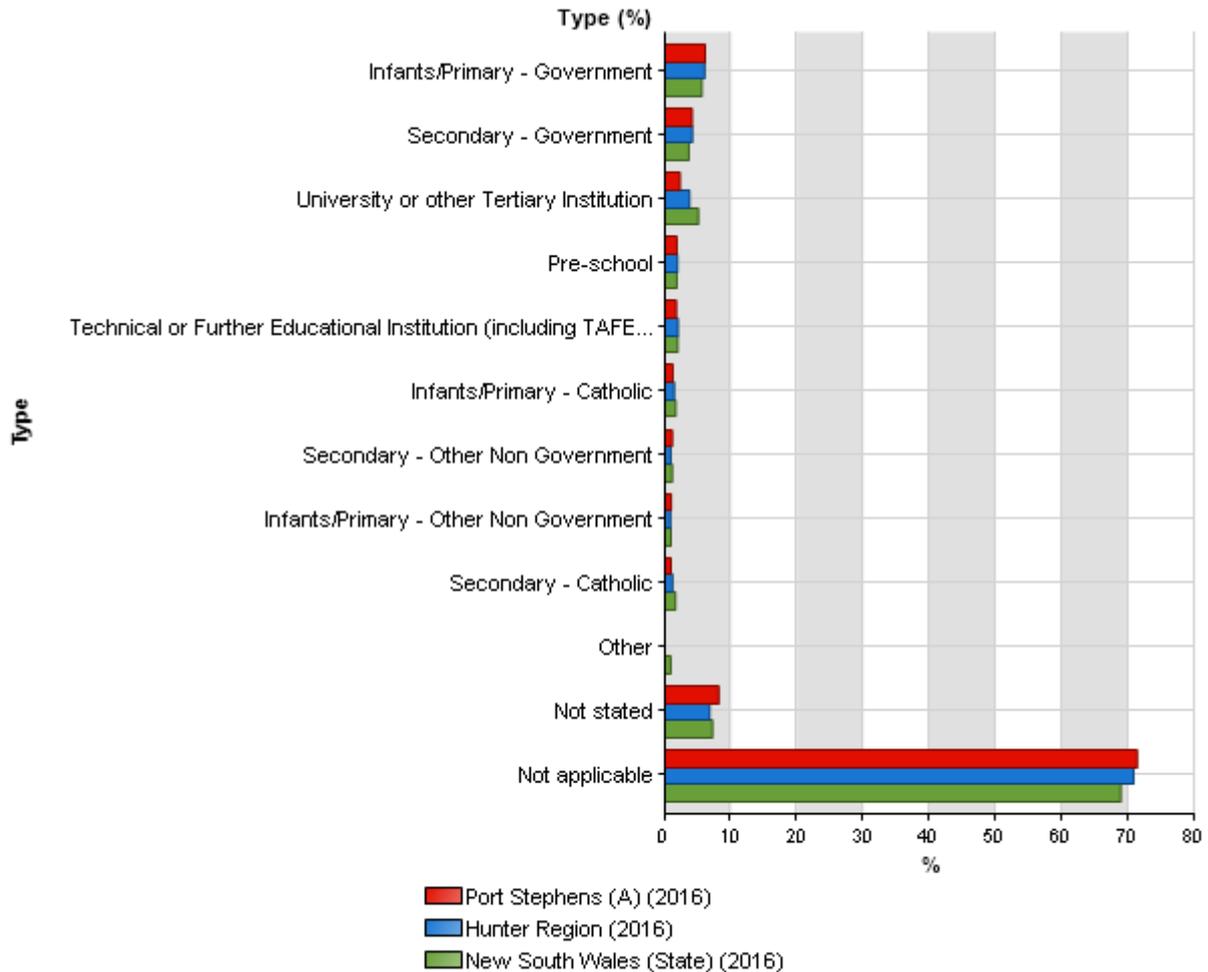
Census usual residence counts form the basis of the Estimated Resident Population (ERP).

14.12 APPENDIX L – INSTITUTION ATTENDANCE

Institution Attending (2016 Census - Place of Usual Residence - People)

The total number of people usually resident in Port Stephens (A) zones in all Institution Attending cohorts on Census Night 2016 was 69,556.

Population by Institution Attending



Type	Port Stephens (A) (2016)		Hunter Region (2016)		New South Wales (State) (2016)	
	Persons	%	Persons	%	Persons	%
Infants/Primary - Government	4,210	6.05%	42,398	5.99%	417,469	5.58%

Type	Port Stephens (A) (2016)		Hunter Region (2016)		New South Wales (State) (2016)	
	Persons	%	Persons	%	Persons	%
Secondary - Government	2,853	4.10%	29,088	4.11%	269,252	3.60%
University or other Tertiary Institution	1,567	2.25%	26,364	3.73%	376,133	5.03%
Pre-school	1,235	1.78%	13,422	1.90%	132,043	1.77%
Technical or Further Educational Institution (including TAFE Colleges)	1,189	1.71%	13,948	1.97%	144,104	1.93%
Infants/Primary - Catholic	820	1.18%	9,947	1.41%	122,095	1.63%
Secondary - Other Non Government	760	1.09%	6,137	0.87%	79,918	1.07%
Infants/Primary - Other Non Government	657	0.94%	5,729	0.81%	67,607	0.90%
Secondary - Catholic	621	0.89%	7,917	1.12%	117,686	1.57%
Other	341	0.49%	3,605	0.51%	63,668	0.85%
Not stated	5,653	8.13%	47,817	6.76%	535,262	7.16%
Not applicable	49,650	71.38%	501,303	70.84%	5,154,993	68.91%
Total	69,556	100.00%	707,675	100.00%	7,480,230	100.00%

Selected Geography



Port Stephens (A) (2016)

Port Stephens (A)	Persons	%	Area (ha)	%	Persons / ha
Port Stephens (A) LGA 16400	69,556	100.00%	85,843.570	100.00%	0.81
Total	69,556	100.00%	85,843.570	100.00%	0.81

Definitions (Based on Australian Bureau of Statistics, Census Dictionary, 2016)

Institution Attending

This variable records the type of educational institution each full-time or part-time student is attending, including pre-school through to university or other tertiary institutions. When combined with the age structure and mobility of a region, suburb or precinct, this data assists in providing an understanding of which areas have a higher concentration of students and the implications for planning appropriate facilities and services to retain school leavers (university students) within the region.

This variable is applicable to persons attending an educational institution. It includes a 'Not applicable' category, which comprises:

- Persons not attending an educational institution



Institution Attending corresponds with the ABS Census variable 'TYPP Type of Educational Institution Attending'.

Place of Usual Residence

The Census count for Place of Usual Residence (PURP) is a count of every person in Australia on Census Night, based on the area in which they usually live. Each person is required to state their address of usual residence in Question 8 on the Census form. Where sufficient information is provided, this enables the area in which they usually live to be identified and coded. The count of persons at their usual residence is known as the de jure population count.

Census counts compiled on this basis minimise the effects of seasonal factors such as the school holidays and snow season, and provide information about the usual residents of an area as well as internal migration patterns at the state/territory and regional levels.

Prior to 2001, Place of Usual Residence was only coded to SLA level. For the 2001 and 2006 Census, usual residence data were available at Collection District (CD) level. For the 2006 Census, if respondents gave insufficient usual address information, their usual residence was imputed at CD level, whereas in 2001, it was classified as 'Inadequately described'.

With the introduction of the Australian Statistical Geography Standard (ASGS) for the 2011 Census, usual residence data are available for Statistical Area Level 1 (SA1) and can be aggregated to higher levels of geography such as Postal Areas (POAs) and State Suburbs (SSCs). However it is only coded if sufficient information is supplied and, if respondents give insufficient usual address information, their usual residence will be imputed at SA1 level. The variable Imputation Flag for Place of Usual Residence (IFPURP) is used to indicate if a person's place of usual residence has been imputed for the Census.

The 2011 Census also asks where a person usually lived one year ago and five years ago. Data for these questions are coded to the Statistical Area Level 2 (SA2). Use of usual residence indicators, in conjunction with the other variables relating to usual residence, makes it possible to identify the pattern of net movement of people between three dates, i.e. Census Night, one year ago and five years ago.

Census usual residence counts form the basis of the Estimated Resident Population (ERP).