

**Submission
No 34**

SUPPORT FOR START-UPS IN REGIONAL NEW SOUTH WALES

Organisation: University of Newcastle
Name: Mr Mickey Pinkerton
Position: Manager, Entrepreneurship and I2N
Date Received: 4 August 2017

RESPONSE – Support for Regional Startups



The University of Newcastle (UON) welcomes the opportunity to contribute to the NSW State Government's call for submissions regarding support for startups in regional NSW.

There has been considerable debate on what is needed to ensure that Australia as a nation remains competitive in the global knowledge-based economy, with recognition that we are recognised as a valuable contributor to the ever increasing rates of scientific discovery and technological innovation. Australia offers a strong creative environment, a social sense of solving some of the world's most pressing issues, a culture that embraces diversity and a lifestyle to attract some of the world's best talent. Integrating these elements and aligning them to Government investments and programs, and to national, state and regional innovation goals, will ensure economic growth and prosperity in the knowledge based economy of the future.

As stated in the call for submissions, nearly a quarter of Australian startup businesses are founded outside of capital cities and indications are that this number will increase. It is also frequently stated that universities play a vital role in innovation ecosystems, as generators of new knowledge and discovery. As a research-intensive University with global reach and reputation, but firmly regional foundations, UON has a unique perspective and has been an active participant in developing a national dialogue focused on renewing cities and their regions. UON has been actively involved in innovation and entrepreneurship over the past 3 years and has made a concerted effort to engage globally with the world's leading practitioners. UON is the sole Australia university in the Leadership Circle of the Global Consortium of Entrepreneurship Centres.

The higher education sector, as for the national economy, is experiencing increasing disruption and undergoing significant change. All Universities, in varying degrees, are pursuing an approach that will see the Australian research and innovation culture become more entrepreneurial, adaptive to stakeholder needs, and commercially responsive. In the future, successful universities will be part of strong innovation ecosystems that demonstrate clear and facilitated communication and collaboration pathways for industry and universities to share knowledge, human capital, capacity and opportunities.

UON's NeW Futures Strategic Plan 2016-2025 acknowledges this shift and supports institutional action via the following lead strategies: the UON Entrepreneur, the Innovation Hub, the Global Impact Clusters, UON Business & Industry Connect and the Integrated Innovation Network (I2N). Our resolve is most clearly stated under the lead objective, Driving Global and Regional Impact: "We work with partners across the world to build equitable prosperity, social cohesion and healthy communities. We engage with business, industry and government to deliver innovation and impact. We exploit new knowledge to create startups, new business and new jobs across our region."

This UON response highlights our institution's own initiatives and support for regional startups and considers the specific questions outlined in the call for submissions namely:

- the effectiveness of state government policies and programs aimed at supporting startups in regional areas
- possible new initiatives and reforms to reduce barriers and capitalise on the advantages associated with regional startups
- policies and programs in other jurisdictions



- any other related matters.

1. The effectiveness of state government policies and programs aimed at supporting startups in regional areas

In the past year, UON has been the recipient of two State Government funding grants which we are using to directly support startups in regional areas: \$1.5m under the Boosting Business Innovation program (BBI) and \$9.8m for the Hunter Innovation Project under the Hunter Infrastructure and Investment Fund (HIIF, with our project partner, Newcastle City Council, Newcastle Now and Hunter DiGiT). Combined, the funding has allowed UON to fast track both hardware (physical facilities) and software (tailored programming) initiatives focused on capability building and growing the local innovation ecosystem.

The BBI grant has enabled UON to rapidly consolidate its lead role in enhancing the culture of entrepreneurship within the Newcastle region, and support the growth of startups and new industries in our region. A significant aspect of this funding is the freedom given to our university to curate a program of activity based on the specific needs of our regional ecosystem, and engaging the entire entrepreneurial pipeline. This includes not just serial entrepreneurs, but potential entrepreneurs (e.g. students), aspiring entrepreneurs, mentors, investors and service providers.

Specifically for UON in its region, this has translated into the establishment of the Integrated Innovation Network (I2N), an association of UON and partner innovation hubs. The I2N initiative acknowledges the substantial evidence that the best innovation ecosystems are those where new industries and opportunities are delivered through collaboration across sectors and through sharing of knowledge and experience. With the I2N, UON is seeking to anchor this cross-pollination at key locations across a region undergoing significant transformational change: Three76 Hub (Newcastle, from Nov 2016), Defence Hub (Williamstown, from Oct 2017), Upper Hunter Innovation Hub (Muswellbrook, from July 2017) and DaSH, a Lake Macquarie Council co-working space (from Mar 2016). This network is further enhanced through partnership and connectivity with local Business Enterprise Centres throughout the region. In addition, a significant investment in the Hunter Innovation Project (described below) will further solidify this network.

This network is only in its infancy, with full benefits and impact still to be realized, but the BBI funding has enhanced a significant UON investment and allowed UON to rapidly play a direct role in the local startup scene which has added legitimacy to the regional innovation culture and gives the community confidence that entrepreneurs are supported through their early stages. The funding has also helped to gauge not only the level of entrepreneurship understanding within the community and provide workshops and events that help fill those gaps, but also validate the market focus of UON's Global Impact Clusters via startup activity. It has created direct jobs for Hub staff, indirect jobs as the startups supported through I2N Hubs and initiatives make their first, second and third hires, and a significant amount of work has been done to raise awareness of entrepreneurial activity in our region.

The Hunter Innovation Project (HIP), on the other hand, is a longer range initiative to build a 1500 square metre purpose built Hub for startups and innovative companies due for completion in 2019. Additional elements of the project include smart cities infrastructure and a digital precinct (both sub-

RESPONSE – Support for Regional Startups



projects are being driven by Newcastle City Council (NCC)). This central innovation hub will provide a space where participants from the region's hubs can come together for events and workshops, encouraging greater density of activity and a central place to showcase the region's innovation. This will represent an interesting case study of a distributed innovation ecosystem, with a central dense hub, that could be used to inform a larger connected network of regional innovation hubs across Australia.

UON has been quick off the mark to leverage the BBI and HIIF awards, securing \$470K in Federal Government grants to develop Australia's first regional accelerator program in partnership with Slingshot. Additional awards which draw on the location of one or more of the hubs and their competitive advantage as part of a distributed network have also been successful but are currently under embargo. In addition, UON has contributed significant annual funding to its own startup investment fund

UON's experience of other State government programs which startups can take advantage of include MVP grants and Tech Vouchers.

We are aware of 3 members of Three76 Hub having made MVP applications in 2017; two have been successful and one is yet to be decided. The consensus from applicants is that the process is clear, not administratively onerous and relatively quick. The funding provides some financial breathing space for very early stage businesses to build prototypes faster, provide resources for obtaining customer feedback and test their underlying business model.

In contrast, developing a steady flow of Tech Vouchers has been a more difficult task than expected. While we receive many enquiries from both researchers and businesses, the actual uptake for this scheme has been muted. There have been various reasons for this including:

- Funding was considered insufficient for project need, companies applied for other schemes
- Many interested SMEs were ineligible due to high turnover (> \$30M)
- In one case the SME had not been in operation for 1 year
- In another case the operator was very small and couldn't access the matching cash

On the subject of matching funds, while startups acknowledge that it can be incredibly difficult to get matched funding they do appreciate that it means they have some 'skin in the game'. A sliding scale of Government investment for such schemes, ranging from a 75 Gov:25 Startup split for early stage startups with smaller revenue bases, to a 25 Gov:75 Startup split for more established businesses with traction, might address some of these issues.

Finally, although in its infancy, the Sydney School of Entrepreneurship is a welcome addition to the scene. We look forward to seeing how its proposed student mobility scholarships will bring students from Sydney to the regions to forge a genuine interconnected model across its partner universities to increase collective impact and power.

2. Possible new initiatives and reforms to reduce barriers and capitalise on the advantages associated with regional startups

i. Identifying regional innovation clusters



UON proposes that identifying innovation clusters in regional areas and supporting collaboration of specialized verticals across Australia and globally will increase the productivity of business, drive innovation across industry and research, stimulate new business creation and breed scalable high-growth companies. The need to differentiate clusters is an important aspect in focusing limited resources within regional locations to ensure they remain competitive with Australian capital cities and global clusters. For example, Agtech, Energy, Advanced Manufacturing and Defence in the Hunter; Fintech and SaaS in Sydney. It is important that regions self-identify innovation clusters and have the ability to change direction based on commercial outcomes and opportunities.

ii. Entrepreneurs in residence programs

Regional locations are faced with the challenge of developing a critical mass of experienced entrepreneurs who can cycle back into the ecosystem to guide the next generation, more so than their state capital cousins. A state-wide Entrepreneurs-in-residence program through which a series of experienced entrepreneurs, angel/VC investors and startup advisors can be brought to regional areas from capital cities and overseas for periods of time to work with all parts of the startup ecosystem to accelerate their maturation would be valuable. They would provide coaching and mentoring to entrepreneurs, advise incubators and accelerators to ensure they are operating in line with international best practice, work with angel investment groups to help them grow and professionalise their activities and attract more investors, and encourage entrepreneurship as a career path by engaging the wider community. This could be operated by SSE as an outreach program to all NSW universities and TAFE.

iii. Experiential programs built around business establishment

Universities have an important role to play in educating and cultivating future entrepreneurs. A study by the National University of Singapore (NUS) examined the impact of (a) traditional classroom-based entrepreneurship education programs and b) experiential entrepreneurship programs and startup internships. They found that participation in classroom-based entrepreneurship programs positively influences entrepreneurial attitudes, but not actions. On the other hand, participation in experiential programs positively influences both entrepreneurial attitudes and actions. Providing this environment allows students to experience the reality of forming a startup in a relatively safe environment, with regular support (including seed-funding and coworking space) and guidance by engaging successful entrepreneurial alumni as guest lecturers, mentors and teachers. International successful examples include the University of Waterloo (Canada) with its “Velocity” program; and Universities of Bath, Bristol, Exeter, Southampton & Surrey (UK) through SET squared. This could be achieved through a competitive and regular scheme of small grants (eg a \$5000) to cover establishment costs.

While SSE provides coursework for credit to a number of undergraduate students, being able to experience starting up a real business close to their place of study/home would be a valuable experience to regional students. It would provide confidence they can continue their endeavor in a regional location which would help to diversify regional economies, have startups becoming primary job creators, and reverse the migration of tech talent to capital cities or overseas.

iv. Early stage funding

Due to geography and economy, regional startups do not have the same access to angel investment opportunity as their counterparts in large cities. This can be compacted for a region such as the Hunter, where advanced manufacturing is emerging as a specialization, as the development of deep



tech hardware startups require longer time frames to deliver revenue and market penetration than is experienced by fintech or SaaS solutions. This profile of startups are often forced to bootstrap through necessity, which delays the potential economic returns to the regional community.

UON therefore recommends consideration of funding initiatives for very early stage regional startup development in targeted specialisations. Providing state support at an early stage of startup development would help budding entrepreneurs refine their ideas to create greater probability of success, to develop better ideas or to build prototypes. It is also recommended that this funding be aligned with startup support programs in place in regions, where experienced entrepreneurs are supporting the startup growth. Money is very much in need, and it would be best placed where startups support helps the startups to invest this wisely in their business growth. This follows the example of highly successful startups programs in place in Israel, funded by the Chief Scientist.

Similarly, the removal of the application of bankruptcy laws for startups in approved accelerator programs would create a further important buffer at this tender stage of growth.

v. Prototyping facilities

A recurring theme in the Hunter, with its emerging prevalence of startups working on hardware and/or robotic solutions, is physical prototyping. The region is blessed with a strong manufacturing heritage and there are many SME engineering and materials companies able to assist startups with early production runs. Nonetheless a repeated concern is that there is no 'one-stop-shop' replete with a full suite of industrial skills and design experience, and only so much can be done in University studios and engineering workshops. We were encouraged by the ongoing discussions between TAFE and Tech Shop about a proposed facility at TAFE's Tighes Hill campus, and UON fully supports the establishment of such a hub, to which other smaller, niche facilities (university, council or other) can relate to as spokes.

vi. Programs to encourage female, disadvantaged youth and Indigenous startups

This issue is acknowledged throughout the startup community but has particular relevance to regions where support networks for these cohorts are even thinner or non-existent. This could potentially create hubs as ghettos of privilege and gender removed from the challenges that such cohorts face, despite everyone's good intentions. The development of regional specific program and seed-funding could address this.

vii. Encouraging public sector intrapreneurs

Allow and encourage State public servants based in regional centres to periodically work in regional startup hubs, to collide with the researcher base and tech innovators, and to develop and trial new ideas inside these hubs whilst still employed by government. The State Government's Smart Work Hub pilot program has been an excellent initiative which although aimed at commuters (industry or government) saw SMEs and startups also take advantage of these facilities and new micro-ecosystems of innovation activity emerge.

3. Policies and programs in other jurisdictions

To grow productivity Australia should look to its primary unrealised assets: our major regional centres, including the Hunter and the Central Coast of NSW. These regions, and others such as the

RESPONSE – Support for Regional Startups



Illawarra and South West Victoria, are home to communities of extraordinary talent and resilience, and to world-class research-intensive universities, and as such can become the engine rooms of our national innovation economy. Regional cities, supported by their globally connected research-intensive universities, should become core components of our national innovation ecosystem through a targeted program of investment – there is international evidence highlighting the unique characteristics of such regional centres and their transition from rustbelts to brainbelts with a sustained and cohesive program of State and industry seed investment.

The footprints of our major regional cities, including Newcastle, Wollongong and Geelong, benefit from the quality of their universities' education and research, are not challenged by the density and cost of a capital city, and are scaled appropriately for collaborative innovation. The collaboration between universities, industry, government and community, will create a talent pool capable of harnessing the opportunities of the innovation economy, and drive new businesses and opportunities through translational research and business collaboration.

However there is increasing formal and anecdotal evidence that specialization is critical in regional centres. In his LinkedIn post, 'Five observations for regional innovation hubs from a North American Innovation Tour', Chad Renando (Community Manager of incubator Fire Station 101 in Ipswich, Qld) poses an important question: "Does the ecosystem mature as a result of specialisation, or is a mature ecosystem required for there to be specialisation?"

In an Australian context the answer is not yet clear, and so UON advocates a dual approach of ongoing initiatives to develop our regional ecosystem to maturity while contemporaneously identifying key areas to specialise.

The regional specialisation approach is covered in some detail in *The Smartest Places on Earth: Why Rustbelts are the emerging hotspots of global innovation*. The case studies include:

- Raleigh, North Carolina (Research Triangle Park – Bioscience, new materials, energy)
- Albany, New York (Hudson Tech Valley – semi-conductors)
- Akron, Ohio (New Materials, polymers)
- Minneapolis, Minnesota (Medical devices & Bioscience)
- Portland, Oregon (Silicon Forrest – Bioscience)
- Eindhoven, The Netherlands (Semi-conductors, new materials)
- Lund-Malmö, Sweden (Life Science, new materials)
- Oulu, Finland (Medical instruments, wireless)
- Dresden, Germany (Semi-conductors)

There are many examples of successful approaches in other countries and other Australian states and territories, and we do not intend to list them here. However, a few examples are given below:

- The New Urban Mechanics model utilised by the City of Boston: this is a local government initiative based in the Mayor of Boston's portfolio, undertaking research and design projects aimed at making civic life more meaningful for more people. This has numerous facets to it, including open sourced urban art using ICT, a prototyping lab where civilian ideas are tested in terms of impact and scalability before being utilised by government, and development rules ensuring that any development provides sufficient low cost co-working spaces and housing so



that entrepreneurs are encouraged to set up their startups in Boston (<https://www.boston.gov/departments/new-urban-mechanics>)

- South Australian government approaches to collaboration with external parties in order to solve intractable social challenges using innovation and design (e.g collaboration with innovative companies such as The Australian Centre for Social Innovation (TACSI) to develop new service delivery models (<http://tacsi.org.au/>). This company was started by the South Australian Government and is now also used by the NSW Government)
- In the ACT, the Chief Minister has collaborated with the innovation community to set up the CBR Innovation Network (CBRIN, <http://cbrin.com.au/>). This is an independent entity, a company limited by guarantee, devoted to diversifying and growing the ACT economy through innovation & entrepreneurship. It provides co-working, acceleration and incubation programs for startups, as well as programs to build the startup pipeline, grow innovation capacity in companies large and small, and build new industry sectors. It connects innovators to what they need, promotes the ACT as an innovation hub, and accelerates economic and social impact by filling the gaps in the ecosystem's capability.

4. Any other related matters

When visiting innovation ecosystems in other countries, it is clear that there is a general interest in the accelerating Australian innovation scene. However, many say that they will not engage fully until action is taken to connect across Australia – overseas Venture Capitalists are interested in investing, but not keen to have to sift ideas from multiple sources across Australia, and believing that without a national approach there is insufficient volume for them to bother.

To address this we recommend that Australia would benefit from drawing together its innovation ecosystem building activity across the country. Currently numerous entities are growing ecosystems, or parts of ecosystems, and they could all support Australia's move to a world-class ecosystem by learning from one another. A National Centre for Innovation could be set up to address this:

- providing world-class tools and program content to support ecosystem building in cities and regional areas
- connecting ecosystem builders to learn from one another
- experimenting with new ways to communicate the benefits of innovation to all Australians, and engage more potential innovators into the innovation agenda
- seeking new ways to build world class collaboration between university and industry sectors
- demonstrating critical mass and telling the nation's innovation story across all forms of innovation
- feeding learnings into policy development.

NSW has an opportunity to lead in this space by making a bold and impactful move to be the home of such a Centre – and better still to base it in a regional context.

Summary

In summary, UON's observations are as follows:

RESPONSE – Support for Regional Startups



- current State Government funding has allowed UON to enhance its significant existing spend on innovation and entrepreneurship initiatives by fast tracking key activities focused on growing the regional innovation ecosystem
- the BBI program in particular is to be commended for the flexibility it has given UON to curate a program of activity based on the specific needs of our regional ecosystem and which has been successfully leveraged to attract further Cth funding
- based on UON's experience possible new initiatives could explore some of the gaps and barriers for regional startups that we have observed:
 - access to angel and VC networks
 - access to experienced mentors and experts with startup experience
 - specialisation and associated prototyping facilities
 - specific programs to encourage more diversity in regional startups, as well as develop intrapreneurs in SME, corporate and public sector organisations
- UON supports the establishment of a National Centre of Innovation to connect local ecosystems across Australia and provide coordination advice and leadership to develop synergies in local, State and Federal support for both regional and metropolitan startups