Setting Sail: A Policy Paper on Innovation and Entrepreneurship from the Alma Mater Society

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Executive Summary

This document is constructed on the basis of a series of Principles, Concerns, and Recommendations relating back to the four core pillars of Campus Culture, Kingston Community, Academics and Access, and Student Support. Within this framework, the AMS has endeavoured to outline the many considerations that would productively contribute to the development of an entrepreneurial community at Queen's.

This Policy Paper's key recommendations for the university, divided by fundamental area of focus, are as follows:

Campus Culture

- Endeavour to adopt a *funnel model* approach as a means of cultivating a campus-wide culture of entrepreneurship and innovation;
- Integrate a commitment to innovation into the University's mission, visioning documents, communications strategy, and metrics for success;
- Work to mitigate the culture of risk aversion on campus;
- Work alongside Deans, Department Heads, and the Queen's University Faculty Association to ensure innovative initiatives receive campus-wide buy-in and integration;
- Investigate the possibility of establishing a Living Learning Floor in residence based around the theme of innovation and entrepreneurship;
- Ensure student involvement and consultation at every point;
- Extend support services for entrepreneurs to students demonstrating innovation and entrepreneurship in student-run services, on-campus entrepreneurship organizations, and entrepreneurial on-campus clubs;
- Collect data in an effort to assess the impact of its commitment to innovation and entrepreneurship.

Kingston Community

- Support the partnership between entrepreneurship organizations on campus and in the Kingston Community through consultation with City stakeholders and in participation with *Startup Kingston;*
- Incorporate a retention strategy, in consultation with the City of Kingston, as a component of its innovation strategy;
- Reinforce pathways to Kingston organizations and resources such as *Innovation Park*, *LaunchLab*, community incubator space, and community office space;
- Allow community members to register in campus programming where possible on a cost-recovery basis.

Academics and Access

- Introduce a new, competitive bursary program geared towards student entrepreneurs;
- Continue to offer stipends to students participating in the Queen's Summer Innovation Initiative;
- Work to establish female-to-female mentorship programs and speaker series' geared towards women in entrepreneurship;
- Work to expand the definitions of *innovation* and *entrepreneurship* on campus;
- Ensure course offerings are structured in a manner that brings all students in touch with the concepts of innovation or entrepreneurship;
- Increase the availability of capstone projects; internships; and experiential, entrepreneurial, and work-integrated learning opportunities on campus;
- Work to transform the Queen's campus into a hub for experiential and entrepreneurial learning over the summer semester;
- Develop a series of credentials as part of a certificate program geared towards entrepreneurs which would offer a comprehensive slate of fast-tracked courses on a wide range of subjects pertaining to launching a start-up;
- Create a program allowing instructors developing cutting-edge course offerings to temporarily suspend the use of USAT data in decisions regarding tenure and promotion, contingent upon a successful application to the relevant Curriculum Committee. During this period, the instructor should be required to meet regularly with the Centre for Teaching and Learning to ensure students continue to receive a high-quality experience.

Student Support

- Commit central resources to supporting the entrepreneurial mission of the University, including an ongoing financial contribution from the University Fund;
- Commit funding from the Initiative Campaign towards the construction of a permanent incubator space on campus;
- Consider securing a central university space for *SparQ Labs*;
- Investigate the formation of a deal-flow pipeline moving from local seed investors, to local investor networks;
- Investigate the possibility of developing a crowd funding platform supporting Queen's innovations;
- Work to enhance and expand the availability of legal, consulting, and accounting services, provided by students studying in these fields, to entrepreneurs;
- Investigate the possibility of licensing Queen's-originated technology through *PARTEQ Innovations* in exchange for founder stock in a new enterprise based on that technology;
- Support Career Services in developing the infrastructure necessary to support students looking to pursue entrepreneurship as a career path;
- Make space available on campus for events that aim to bring the entrepreneurial community together.

Campus Culture

Principles

> **Principle 1: Queen's University should strive to foster a holistic, campus-wide culture of innovation.**

The relationship between innovation and the university mission has become increasingly apparent in recent years. In the context of a labour market where "any net job growth comes entirely from startup firms"[1], the evolution of an entrepreneurial culture on North American campuses has become an important vehicle for developing the higher order thinking skills that comprise the foundation of a university education. In 2013, "46% of Canada's postsecondary students … said they see themselves starting a business after graduation"[2], and the demand for entrepreneurial thinking within traditional fields and established organizations has become a prevalent phenomenon.

Many members of the Queen's community have expressed an interest in innovation through active involvement in start-ups, participation in business incubators and accelerators, and the creation of on-campus clubs and organizations mandated to support and foster innovation. In response to rising campus involvement and a pressing provincial context, Queen's identified entrepreneurial learning as a key strategic priority in the University's 2012 Proposed Mandate Statement. This decision represents a tangible step towards the broader engagement of the Queen's community in the innovative mission of the institution.

As Queen's looks to develop a campus-wide culture of innovation and entrepreneurship, there are several important factors that would contribute to success. First, the University should endeavour to bring every area of the institution into contact with innovation in some capacity. While hubs for entrepreneurship bear historical association to business schools or engineering programs, innovation has an important role in every area of study. Exposing students in the humanities or health sciences to entrepreneurship constitutes an important step in advancing the development of an entrepreneurial ecosystem.

Beyond pan-university involvement, a productive entrepreneurial culture also requires pan-university collaboration. An effective system operates through a 'network' approach, whereby different units work in tandem on a variety of projects and the siloes that separate programs and disciplines are flattened. Similarly, effective entrepreneurial communities are not hierarchical, and work to engage members from all levels of an organization. The connections and information sharing this promotes ultimately result in value creation for the entire community, and allow every discipline to innovate in the manner that is most suited to them.

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[1] Council of Ontario Universities. *Entrepreneurship at Ontario Universities: Fuelling Success.* (Toronto: Council of Ontario Universities, 2013).

[2] Ibid.

Finally, reduction of risk culture is a fundamental component in fostering a culture of entrepreneurship on campus. In creating a climate that is conducive to innovation, the university must work to dispel the cultural and systematic barriers that contribute to risk-aversion and the high opportunity cost associated with pursuing a start-up. This will require a shift in strategic alignment that will see the university's metrics for success weighted less towards the attainment of a job or the pursuit of traditional courses and research; instead, work-integrated learning, self-employment, calculated risk-taking, and 'failing fast' must become components of the University's proxies for success. To perpetuate an institutional culture shift, this should be reflected through visioning documents, strategic priorities, and the recognition system for students and faculty.

As stated in the Kauffman Foundation's paper, *Entrepreneurship Education Comes of Age on Campus*, "[the] culture at [a] university can have a bigger impact than a single center, course, or extracurricular program in encouraging significant numbers of students to be entrepreneurial." [3]This is well articulated in the mission statement of the Kauffman campuses, which seek to, "…make entrepreneurship a campus-wide experience, to help schools become more entrepreneurial, and to ensure that thousands of students on diverse campuses would begin to see their own knowledge and resources from a more entrepreneurial perspective."[4] As Queen's works to enhance entrepreneurship, students believe it is important that the entire community be given equal opportunity to engage. While many individuals will not see themselves as innovators, this will enable those who might to come into contact with the information, resources, and support they require to succeed.

Principle 2: The University's approach to innovation should be entrepreneur-driven.

In his book entitled *Startup Communities*, Brad Feld emphasizes the importance of ensuring that an innovative ecosystem is, at its heart, driven by entrepreneurs. According to Feld, "The most critical principle of a startup community is that entrepreneurs must lead it. Lots of different people are involved in the startup community and many nonentrepreneurs play key roles. Unless the entrepreneurs leads, the startup community will not be sustainable over time."[5]

In the context of a campus culture of innovation, 'entrepreneur-driven' is synonymous with student-driven. This is reinforced by his postulation that, "students are by far the most important contribution of a university to a startup community."[6] As the primary focus of programming and support, students must also become the primary proponents of this community's evolution. In fact, in a document generated by the Kauffman Foundation, it is

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[3] Torrance, Wendy et al. *Entrepreneurship Education Comes of Age on Campus.* (Kansas City: Kauffman Foundation, 2013).
[4] Torrance, Wendy. *Entrepreneurial Campuses: Action, Impact, and Lessons Learned from the Kauffman Campuses Initiative.*(Kansas City: Kauffman Foundation, 2013).
[5] Feld, Brad. *Startup Communities*.(New York: Wiley, 2012).
[6] Ibid.

stated that, "the real driver of this ecosystem is now students."[7]

Students have demonstrated a commitment to furthering innovation at Queen's through a variety of on-campus initiatives. The AMS believes that students should continue to be the motivating force behind the evolution of the University's entrepreneurial ecosystem, and should retain the mechanisms to drive progress in collaboration with the many supporting members of this community.

Principle 3: Student initiatives demonstrating innovation and entrepreneurship, including but not limited to: student-run services, entrepreneurship organizations, and on-campus clubs pursuing innovation, should be recognized for their innovative activity and be supported accordingly.

The involvement of Queen's students in the development of programming and services across the university remains unparalleled in Canada. Queen's prides itself in this culture of student engagement, and the work exhibited by students on campus displays innovation and entrepreneurship in a variety of forms.

The AMS believes that initiatives such as student-run services, entrepreneurship organizations, and campus clubs promoting innovation constitute important instances of innovation at Queen's. As such, these endeavours warrant the same level of recognition, autonomy, and support afforded to initiatives developed through established university channels. In supporting innovation on campus in all its forms, the University will be active in shaping a culture that embraces the diversity and inclusion it relies upon to thrive.

Principle 4: The University's approach to innovation should involve the regular evaluation of its programs and services to ensure Queen's continues to offer value in a dynamic and quickly-evolving field.

While entrepreneurial activity has been prevalent in the Queen's community for some time, the University's stated commitment to innovation and entrepreneurship remains relatively new. Particularly given the rapid evolution of the field in question, it is important that this emergent community be consistently evaluated and assessed. The collection of data on a number of metrics and Key Performance Indicators would provide tangible indications of progress in university programming, and would also underline areas for improvement. As the University's entrepreneurial mission evolves, the community would benefit from metrics that could delineate a path forward, underline opportunities for growth, and aid in the strategic allocation of resources. Students believe that measurement constitutes an important component of success, and are in support of the use of data tools in enhancing entrepreneurship at Queen's.

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[7] Torrance, Wendy et al. *Entrepreneurship Education Comes of Age on Campus.* (Kansas City: Kauffman Foundation, 2013).

Concerns

Concern 1: Queen's lacks an integrated approach to innovation and entrepreneurship on campus.

At present time, a fundamental disconnect exists between the university's vision for innovation and the actions being carried out by the institution's respective units. While Queen's has committed to the expansion of experiential and entrepreneurial education as a key priority moving forward, the establishment of programs, services, and supports for this mission remain relatively stagnant at the faculty level. Though it's true that units such as the Faculty of Engineering and Applied Science and the Queen's School of Business have committed considerable resources to the improvement of these offerings, buy-in from other parties continues to be lacking. Further, campus involvement with initiatives such as the Queen's Innovation Connector is similarly disproportionate, with student representation from certain programs of study far exceeding that unit's commitment to supporting their success.

Conversely, while the University has established entrepreneurship as a priority, there are no central resources being committed to realizing this goal. In the absence of some level of central involvement, participation across the university has been disjointed, uneven, and siloed.

Students are concerned with the lack of coordination surrounding the innovative mission of the University. Whether this is manifested through the disproportionate burden being shouldered by some faculties, the relative lack of central support currently being offered, or the fact that this initiative has yet to be adopted in a coordinated fashion across different departments of the university, Queen's must make considerable strides before a campus-wide culture of innovation can be realized.

Concern 2: At the present time, a misalignment exists between innovation on campus and the University culture as communicated through its mission, visioning documents, communications strategy, and metrics for success. This creates an opportunity cost associated with entrepreneurship, stifling the growth of innovation at Queen's.

While Queen's is expanding opportunities to engage students in innovation and entrepreneurship, there is a persistent divide between success in this emergent field and the proxies for success that are prevalent across the university's culture. Though students are exhibiting interest and aptitude in entrepreneurial pursuits, the institution continues to base success around factors such as job attainment and GPA, with assessment tools and recognition schemes centered around these factors. The result is that a discrepancy exists between the prevailing definition of the Queen's experience and the emergent entrepreneurship experience, making success in one a direct result of relative lack of success in the other. Put simply, the misalignment between the University's metrics for

success and its entrepreneurial mission creates an opportunity cost associated with participating in innovation. So long as students must choose between academic achievement and entrepreneurship, the culture of innovation will be suppressed.

Concern 3: University structures are hierarchical, posing a threat to the *network* approach of many innovation ecosystems.

While innovation ecosystems thrive in an environment that promotes horizontal collaboration and knowledge transfer, universities are traditionally siloed, with historical barriers persisting between different Departments and through the many levels of the to-down administrative structure. Unless we are able to adopt a more open culture of information sharing and interdisciplinary initiative, the budding entrepreneurial community will be stifled by the structural barriers that limit institution-wide collaboration, support, and value creation. Put simply, without adopting a network approach, Queen's will be unable to truly establish a campus culture of entrepreneurship.

Concern 4: Many students do not have the opportunity to come into contact with meaningful opportunities surrounding innovation and entrepreneurship during their time at Queen's.

The University has made strides towards engaging a diverse complement of students in entrepreneurship in recent years, and avenues exist to participate in innovation outside the classroom. That being said, despite an increase in the number of opportunities available, a relatively small percentage of the Queen's population comes into contact with concepts surrounding innovation and entrepreneurship in a purposeful way over the course of their degree. As a result, many students who may otherwise have been positively influenced by the entrepreneurial community on campus simply do not have the chance to do so. The fact that many students must still discover innovation at Queen's through lucky coincidence is a threat to the growth and expansion of the community as a whole.

Concern 5: Currently, no convenient vehicle exists for students to meaningfully participate in the formation of University programming and services for innovation on campus.

While students have actively engaged in the development of the emergent entrepreneurial culture at Queen's, their efforts have largely consisted of grassroots initiatives that have rarely seen official university affiliation. Conversely, where students have participated directly in university-generated programming, they have had no tangible involvement in the development of the program itself.

While students have derived benefit from both circumstances listed above, the AMS

believes that students should have the ability to actively participate in the formation of university programming in some capacity. In recognizing the importance of encouraging an entrepreneurial culture that is predominantly student-driven, it would be of benefit to the University to create more avenues for student engagement in program development and institutional planning. This would allow another layer of involvement, and would ensure supports for innovation can be tailored to the needs of the entrepreneur.

> **Concern 6: Student initiatives displaying innovation and entrepreneurship have not been adequately recognized by the University, and at times have been actively displaced.**

Queen's has a strong tradition of student-driven innovation, present across a variety of initiatives and programs. The University's unparalleled clubs network, innovative committees and conferences, and student-run services have all demonstrated entrepreneurial spirit and drive, and have done so for a number of years.

While students support the advent of formalized university programming to enhance entrepreneurship at Queen's, it cannot come at the expense of current student initiatives. Currently, the recognition attributed to university-led programming has not been extended to student-run clubs and services. Instead, many current initiatives are burdened by a lack of space, resources, mentorship, and support, and have seen increasing competition from growing university programs.

Furthermore, several student clubs that provided an alternative venue for innovation have been actively displaced in favour of University-led initiatives. In the creation of QIC's SparQ Labs, student groups were moved out of their space with little notice and no alternative provisions, hindering them in fulfilling their mandate. In disenfranchising these groups, the University cannibalized longstanding innovative activity and demonstrated a clear preference for University-led initiatives in the context of innovation.

Students believe that an emergent culture of entrepreneurship on campus should operate in tandem with longstanding student initiatives. While the AMS recognizes the importance of central programming in propagating a culture of entrepreneurship, this cannot come at the expense of existing groups. So long as new programming competes with what is already in place, a campus-wide network will be unable to grow and thrive.

> **Concern 7: Currently, Queen's lacks adequate and consistent metrics to assess the University's performance in innovation and entrepreneurship, or to tailor future programming to the needs of its entrepreneurs.**

Queen's has a relative lack of data with which to assess the progressive expansion of innovation on campus. Without a full complement of data tools and a framework with which to interpret results, the University is limited in its ability to engage in effective

planning or establish long-term goals and directions for current programming and services. Without set Key Performance Indicators or established metrics for success, it will be difficult to allocate resources efficiently or ensure the entrepreneurial mission of the university receives coordinated support through its growth.

Recommendations

Recommendation 1: Queen's University should endeavour to adopt the *funnel model* approach as a means of cultivating a campus-wide culture of entrepreneurship and innovation.

The 'funnel model' provides a possible approach for fostering innovation and entrepreneurship on campus. Through the provision of a diversity of opportunities for engagement, ranging from passive learning to robust support services for students looking to launch a start-up, this model works to ensure all students receive an appropriate level of programming to meet their needs while ensuring that no student graduates without coming into contact with innovation in some capacity.

The wide end of the funnel is comprised of low-impact opportunities that introduce students to innovation. This may encompass tours of innovation incubators during frosh week or the integration of this topic into small areas of the curriculum. Attracting students through a wide funnel ensures every individual has the chance think about innovation and how it may apply to their academics, extra-curriculars, and career aspirations.

As we move along the funnel, opportunities become more active and engaged. Students may take courses based around exploring entrepreneurship, or may pursue capstone projects within their program of study. This section of the funnel could also encompass networking nights, idea sharing forums, and informal pitch competitions.

Finally, the narrow end of the funnel is the jumping off point for new businesses. Students in this area are engaged with business incubators and accelerators, and are seeking funding, overhead services, and space for their start-up.

The wide end of the funnel will involve the most students, with involvement decreasing as engagement becomes more active and necessitates higher risk. One key element of the funnel model is that no student is left behind; whether or not they elect to progress along the funnel, every student is introduced to the front end. As such, no individual who could have benefitted from the innovative initiatives at Queen's will miss the opportunity to do so.

The AMS recommends that the University establish a model whereby all students are introduced to innovation in some capacity. To provide diverse options for those who wish to engage, this should include a full complement of opportunities that are tailored to

different levels of involvement. While only a small portion of students will progress towards the launching of a business, this will ensure the innovative community can be Queen's-wide.

> **Recommendation 2: A commitment to innovation should be integrated into the University's mission, visioning documents, communications strategy, and metrics for success.**

To foster a culture of innovation and entrepreneurship on campus, the University must first ensure that the factors necessary to support this community are not at odds with the institution's driving forces. Put simply, Queen's entrepreneurship mission cannot be divorced from its other strategic priorities; instead, efforts to further innovation should be systematically integrated into everything we do.

In aligning its mission, visioning documents, communications, and proxies for success to reflect a thriving innovation ecosystem, the University would go a long way towards decreasing the opportunity cost of entrepreneurship. Where innovation and success at Queen's can become simultaneous, students and the University will not have to make the choice between entrepreneurship and academic excellence.

In its draft Strategic Mandate Agreement to the Province, Queen's committed to enhancing innovation and entrepreneurship on campus. The AMS is supportive of this effort, and recommends that the University investigate the possibility of integrating these objectives into all institutional visioning documents.

In concert with this initiative, the AMS recommends that the University's communications strategy to current, past, and prospective students recognize the role of innovation in the Queen's community. As an element of this, Queen's should investigate the possibility of recognizing entrepreneurial activity on campus, whether it be through awards, start-up profiles, financial aid, or academic credit. In aligning its strategic priorities with those that would describe a thriving innovation ecosystem, Queen's can create the climate necessary for entrepreneurship to grow.

> **Recommendation 3: Queen's should work to mitigate the culture of risk aversion on campus in an effort to increase the number of students participating in entrepreneurial endeavours.**

In recognizing that failure is a fundamental element of entrepreneurial success, it is important that the Queen's community work towards the adoption of a less risk-averse mentality. In doing so, it is critical that the risk associated with pursuing a start-up is mitigated and that appropriate supports are made available to students who do encounter temporary failure.

Independent of the supports in place, though, the University community must establish a structure that incentivizes failing fast. Entrepreneurship will be stifled so long as students, faculty, and the University are unwilling or unable to take calculated risks. One argument for Canada's lagging success in innovation within the OECD is that Canadian universities tend to operate in a more risk-averse environment as compared to their counterparts.

Isolated parties have already demonstrated a willingness to shoulder risk with the aim of advancing entrepreneurship at Queen's. The Faculty of Engineering and Applied Science, the Queen's School of Business, and many donors have contributed considerable monetary and in-kind resources towards the establishment and growth of the Queen's Innovation Connector, and students are increasingly pursuing entrepreneurial endeavours at risk to their personal assets or academic prospects.

The AMS believes that the University, Faculty, and other academic units should demonstrate a willingness to do the same. Students acknowledge that a publicly-assisted institution must treat its finances in a responsible manner. That being said, until some funding is invested in the prospective entrepreneurial community at Queen's, we will struggle to move forward. Ultimately, a culture shift that embraces a moderate level of risk is a critical element of the success or failure of our innovation agenda.

Recommendation 4: Queen's should work alongside Deans, Department Heads, and the Queen's University Faculty Association to ensure innovative initiatives receive campus-wide buy-in and integration.

In order to thrive, entrepreneurship at Queen's requires buy-in from all the institution's moving parts. In recognizing that innovation ecosystems are achieved through a network approach rather than top-down planning, it is critical that there is integration and agreement across all parties, from the Provost to the curriculum committee to the professor teaching a course.

It is important to recognize that innovation may mean something different to different students, different faculty members, and different Departments. That being said, the AMS believes it is important that each stakeholder group within the University undertake a process to examine how innovation may be integrated into their philosophy, operations, and academic offerings.

To help facilitate the buy-in and culture shift necessary to bring this about, the AMS recommends that the University investigate the possibility of implementing Chairs in Entrepreneurship, or hiring an Entrepreneur in Residence. Through the support provided by these individuals, other stakeholder groups on campus will have a powerful resource in aligning their operations with the innovation mission of the University. Ultimately, this will be a catalyst for the change necessary to integrate entrepreneurship on an institutional scale.

Recommendation 5: Queen's should investigate the possibility of establishing a Living Learning Floor in residence based around the theme of innovation and entrepreneurship.

Residence has established a series of Living Learning Floors based around a variety of lifestyles and interests, giving students an opportunity to engage with like-minded individuals and tailor their residence experience to their interests. These floors are set to expand in the coming years.

At Waterloo, the *VeloCity* campus harbours a residence for entrepreneurs, allow for immersive interaction and programming for students who are highly interested in innovation. The AMS recommends that Residence Life examine the possibility of creating a microcosm of this system by establishing a Living Learning Floor geared towards innovation and entrepreneurship. This would go a long ways in establishing a community of support that is immediately accessible to young innovators upon entering Queen's.

Recommendation 6: The University's innovation strategy should see student involvement and consultation at every point.

Students have expressed an interest in establishing programming and acting as partners in visioning a more entrepreneurial Queen's experience. It is recognized that a successful innovation ecosystem is ultimately driven by its entrepreneurs; in the context of the University, many of these entrepreneurs are students.

Students have been establishing innovative initiatives at Queen's for decades, and we hope to do so for decades to come. As such, the AMS recommends that the University allow avenues for student input wherever possible as they transition towards a more centrally coordinated innovation agenda. This will ensure current and future programs are tailored to meet the needs of our entrepreneurs, and that current student initiatives are coordinated - rather than cannibalized - by new activity.

An entrepreneurial culture that is driven by its participants becomes self-perpetuating. In involving students wherever possible in the expansion of services and programming, the University will ultimately enhance the long-term viability of its entrepreneurship mission.

Recommendation 7: The Queen's Innovation Connector should consider the creation of a Board of Directors to enable a higher level of student input and University engagement in its activities.

As the University's campus-linked accelerator, the Queen's Innovation Connector offers opportunity and partnership for individuals looking to engage in innovation on campus. That being said, more Faculties could benefit from engagement with this resource; while the Queen's Innovation Connector aims to support innovation and entrepreneurship

campus-wide, at present time they interface primarily with the Faculty of Engineering and Applied Science and the Queen's School of Business.

Students believe in the importance of incentivizing all disciplines to come into contact with QIC in some capacity. Currently, though, units outside of Engineering and Applied Science and the Queen's School of Business provide no formal support to the organization, nor do they seek out active opportunities for engagement.

The AMS proposes that the Queen's Innovation Connector consider the implementation of a Board of Directors, which would include student representation and faculty members from across the university. In doing so, QIC would incentivize involvement from every unit on campus, creating a touch point for entrepreneurship within each Faculty. This would create a strong advocacy voice for entrepreneurship on campus, and would ensure QIC is able to respond to the needs of all stakeholders.

In tandem with this, all Faculties and Schools should extend formal support to the Queen's Innovation Connector. While students believe costs should be shouldered by the University rather than individual faculty budgets, the AMS is concerned that only two Faculties have expressed support for, and invested in the growth of, QIC. Before participating in the evolution of this service, it is important that all Faculties recognize its importance and commit to its success.

> **Recommendation 8: Support services for entrepreneurs, including but not limited to: mentorship, seminars, speaker series', and space, should be extended to students demonstrating innovation and entrepreneurship in student-run services, on-campus entrepreneurship organizations, and entrepreneurial on-campus clubs.**

The AMS believes in the importance of acknowledging the wealth of innovative activity students are currently engaged in at Queen's. Indeed, students have been running their own services, planning conferences on the topic of entrepreneurship, and compiling innovative design teams for many decades. While we would like to work with the University to advance the formal supports and programming for entrepreneurial students, we also believe it is important that we continue to support the initiatives that are already in place.

As mentorship, seminars, speaker series', and space fall under increasing demand in our growing entrepreneurial community, it is important that these same supports are extended to existing or future student-run programs and services displaying innovation. To ensure these initiatives are able to share resources and operate in concert with new University programming, the AMS recommends that, through an application process, these vital resources be made available to the benefit of student initiatives.

While the AMS is firmly in support of increased entrepreneurship on campus, students would like to see current efforts enhanced - rather than diminished – by the presence of a formal University agenda.

Recommendation 9: The University should collect data in an effort to assess the impact of its commitment to innovation and entrepreneurship. This data should act as a driver for evolution in programming.

The AMS believes in the unique opportunity data provides in the analysis and improvement of operations and programming. As we endeavour to enhance and expand the culture of entrepreneurship on campus, students are committed to the continued assessment of our progress.

The AMS recommends that the University collect data surrounding entrepreneurship activity at Queen's, and that the University's performance be reviewed periodically. This supports the process of differentiation whereby the Province will use specified metrics to evaluate progress on a variety of objectives related to entrepreneurship. It will also be a helpful tool in driving continuous improvement as we work to respond to a quickly evolving field.

Students recommend that the University select a series of Key Performance Indicators, in consultation with students and in consideration of the Differentiation Framework, by which to assess itself. This provides an avenue for self-assessment, and could also be instrumental in a goal-setting process to promote future improvement.

Kingston Community

Principles

> **Principle 5: Queen's should ensure its innovative initiatives are rooted in the broader context of the Kingston community.**

As Queen's seeks to expand its involvement in innovation and entrepreneurship, it cannot operate in isolation from the surrounding region. It is important that initiatives and support services are established in the context of the broader Kingston community; not only does the City provide integral supports for student innovation, but the success of the start-up community is intrinsically linked to regional economic development. As stated in, *The contribution of universities to innovation and economic development: in what sense a regional problem*, "The innovation paradigms that have most influenced evolving policies are not ultimately directed at excellence in innovation per se. Rather they are based on the notion that scientific innovation and regional economic growth are inseparable and mutually supporting."[8]

The successful integration of Queen's students in the surrounding region also has a strong impact on graduate retention. It has been identified that establishing a connection with the municipality "helps root students and their companies in local networks and resources, often before they graduate, thus keeping many of them nearby."[9] Queen's has supported this notion through its Proposed Mandate Statement, denoting that, "Stimulating student entrepreneurship … includes attracting and retaining the creative class, developing a talent economy, and connecting students to the business community as economic development objectives."[10]

The importance of connecting students to the surrounding community through entrepreneurial endeavours is dually recognized by the Province's recent Differentiation Framework, which has identified *Jobs, Innovation, and Economic Development* as an area of strategic focus. More specifically, this component of the Framework is meant to, "[highlight] institutions' collaborative work with employers, community partners, and regions … serving the needs of the economy and labour market, and promoting a culture of entrepreneurship."[11]

Ultimately, a partnership between the Queen's and Kingston communities will result in a higher graduate retention rate and a more supportive atmosphere for emergent

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[8] Power, Dominic and Malmberg, Anders. *The contribution of universities to innovation and economic development: in what sense a regional problem?* (Oxford: Cambridge Journal of Regions, Economy, and Society, 2008).

[9] Torrance, Wendy et al. *Entrepreneurship Education Comes of Age on Campus.* (Kansas City: Kauffman Foundation, 2013).

[10] Queen's University. *Institutional Vision, Proposed Statement and Priority Objectives.* (Kingston: Queen's 2012).

[11] Ontario Ministry for Training, Colleges, and Universities. *Ontario's Differentiation Policy Framework for Postsecondary Education.* (Toronto: Ministry for Training, Colleges, and Universities, 2013).

businesses. This will contribute to the establishment of a critical mass of entrepreneurs and start-ups in the surrounding area, and will aid in attracting investors and business support services to Kingston. By retaining graduates and their businesses in the near-campus area, Queen's will solidify broader alumni involvement in the form of mentorship, funding, and expanded opportunities, all of which will contribute to the growth of the University's innovative mission.

Principle 6: Where possible, the University should enable the involvement and participation of individuals external to the Queen's community in the events and programming it offers.

In recognizing the importance of promoting the diversity and inclusiveness of an entrepreneurial community, students believe in the benefit of extending opportunities to individuals external to the Queen's community. Wherever possible, programming and events that aim to foster a culture of innovation and entrepreneurship should see representation from outside the student population. In promoting opportunities beyond Queen's, the University is able to extend the reach of its entrepreneurial culture, providing students with the opportunity to network more broadly and enhancing the diversity of experiences and perspectives contributing to discussion. This will serve to strengthen the entrepreneurial community as a whole, and will set the stage for the inclusion of Queen's students in the emergent start-up culture extending across the City of Kingston.

Concerns

Concern 8: Innovation initiatives at Queen's currently see limited, late-stage links to the Kingston community.

Students recognize the importance of establishing pathways linking University initiatives to relevant resources in the Kingston community. For example, the provision of space at Innovation Park though the Queen's Summer Innovation Initiative represents a unique opportunity for the integration of the Queen's start-up community with a regional network of innovators, business solution providers, and companies.

By in large, though, entrepreneurship at Queen's sees very few formal linkages to the Queen's community, and those that do exist remain limited and late-stage. While the surrounding municipality provides an avenue for the expansion of the University's entrepreneurial network, there is insufficient infrastructure in place to foster collaboration.

At present time, there is a relative disconnect between the entrepreneurial initiatives being implemented by the City and the emergent ecosystem being developed on campus. Considering the resources available in the surrounding area, including mentors, entrepreneurs-in-residence, business incubators, industry solution providers, and inexpensive office space, students are concerned that Queen's has a relatively low level of

coordination with its municipal counterparts. As both communities work to establish a critical mass of programming and services, the parties are missing out on an important opportunity to work together. In the long term, failing to meaningfully integrate with the City may stifle the university's ability to establish a truly productive and integrated entrepreneurial ecosystem.

> **Concern 9: As a city predominated by the public sector, Kington has a somewhat risk-averse culture that can truncate attempts to foster innovation and entrepreneurship.**

By in large, Kingston can be classified a public sector city. The major organizations that dominate the region include universities and colleges, military bases, prisons, and hospitals, all of which perpetuate a culture of risk aversion across the region. Considering the importance of calculated risk in developing an entrepreneurial ecosystem, students are concerned that the relative lack of enterprise in the city may make it difficult for the university's entrepreneurial ecosystem to thrive as it works to integrate itself into the surrounding region.

> **Concern 10: In large part, champions for innovation and entrepreneurship in the Kingston community are not linked to Queen's.**

Particularly in its formative stages, an entrepreneurial community requires dedicated champions to gain momentum. In the City of Kingston, several successful local entrepreneurs have committed themselves to filling this role, allocating time and resources to further the local start-up community. Concurrently, Queen's has benefitted from several vocal advocates who have worked to advance the innovative mission on campus.

As the University and City look to attract interest from outside of the region and current alumni network, though, students are concerned that there is a lack of coordination between these parties. Just as Kingston would benefit from access to many Queen's alumni, the University's entrepreneurial ecosystem would benefit from new injections of seed capital and mentorship. As the two communities look to integrate more productively, there is an opportunity to establish the critical mass of vocal champions that both groups are currently lacking.

Recommendations

> **Recommendation 10: Queen's should support the partnership between entrepreneurship organizations on campus and in the Kingston Community through consultation with City stakeholders and in participation with *Startup Kingston*.**

In an effort to create pathways for collaboration between the Queen's and Kingston startup communities, it is critical that partnerships and joint endeavours between City groups and

on-campus initiatives be actively pursued.

In recognizing the importance of grounding an entrepreneurial ecosystem in the local business community and surrounding resources, students recommend that the University continue to consult with organizations such as the Kingston Economic Development Corporation and the Economic Development Working Group when considering formative changes to the Queen's start-up community. This will allow a network to develop between on- and off-campus innovation hubs, creating a strong culture of entrepreneurship as the two communities evolve in concert.

Where possible, collaborative efforts between student or university groups and community initiatives should also be incentivized and supported. One instance demonstrating this kind of activity is the proposal to bring the *Startup Canada* franchise to Kingston. A group of students and community entrepreneurs, in consultation with the AMS and KEDCO, have proposed the introduction of *Startup Kingston* as an umbrella organization to consolidate entrepreneurial initiatives, events, and resources in one area. It would provide information surrounding any and all opportunities for local entrepreneurs, and would operate as a uniting force to aid the integration of the Queen's and Kingston startup spheres.

Recommendation 11: Queen's should incorporate a retention strategy, in consultation with the City of Kingston, as a component of its innovation strategy in an effort to better integrate the University with the municipality.

It has been established that the Queen's innovation ecosystem should be integrated into the broader Kingston community. As a component of this, students are in support of the creation of a targeted retention strategy aimed at student entrepreneurs and young start-ups.

Retention of recent graduates and budding companies is an important element in the growth of any start-up community. The percolation of these entities into the near-campus area strengthens ties between Queen's and Kingston, creates a critical mass of innovators and resources, and serves to establish a strong and united entrepreneurial culture. Ultimately, this will improve access to mentors, industry solution providers, and seed funding, all of which serve to strengthen and expand the community of innovators.

Beyond this, though, graduate retention is also a tool for economic development. In producing a targeted retention strategy aimed towards entrepreneurs, Queen's will be able to incentivize investment and buy-in on the part of the City. In recognizing the benefits of participating in the economic growth of the region in which we are situated, the University can set the stage for mutually beneficial collaboration with the Kingston community.

Recommendation 12: Pathways to Kingston organizations and resources such as *Innovation Park*, *LaunchLab*, community incubator space, and community office space should be reinforced for student entrepreneurs.

The University and the Queen's Innovation Connector have worked hard to establish pathways to community resources such as Innovation Park and LaunchLab. The AMS recognizes the impact of these efforts on the entrepreneurial community, and supports the continued reinforcement of linkages that allow students to transition smoothly from Queen's to the Kingston start-up community.

The AMS recommends continued partnerships that will allow students to take advantage of the resources offered in the City. Particularly where formal relationships can be established, as is the case with QSII participants transitioning from QIC into space at Innovation Park, students recognize and support the effort to lower barriers that hinder transition into the start-up sphere.

Recommendation 13: Campus innovation organizations should endeavour to host events in community venues, and, where possible, the University should allow community members to register in campus programming on a cost-recovery basis.

The creation of a network of entrepreneurs spanning the Queen's and Kingston start-up communities could be enhanced through the provision of physical space. In allowing community events to be hosted at Queen's and vice versa, entrepreneurs would be given a powerful opportunity to establish relationships and lay down the groundwork for future collaboration.

Further, Queen's is uniquely equipped to offer space for events. As a University, we boast large-scale infrastructure and tech support, giving us the ability to host a wide variety of events while accommodating more participants than many Kingston venues. In recognizing that physical space could represent an important contribution on that part of the University, the AMS recommends that the Queen's investigate the possibility of easing the process of event booking on campus for external entrepreneurship organizations.

Students also support the inclusion of community members in on-campus events, and the hosting and advertising of some Queen's events in the near-campus community. To reinforce this objective, the AMS recommends that a number of community members have the opportunity to participate in university entrepreneurship programs on a cost-recovery basis.

Academic Involvement and Access
While these may seem separate, academic involvement is at the cornerstone of increasing access.

Principles

Principle 7: All Queen's students should have equal access to opportunities promoting the exploration of innovation and entrepreneurship on campus.

The AMS believes that all students should have equal access to the opportunities afforded by a campus-wide culture of innovation, regardless of mitigating factors such as program of study, financial situation, or academic requirements. As the University works to foster a university-wide community, two main considerations should be taken into account: first, every student should be exposed to entrepreneurship in some fashion over the course of their education; and secondly, access barriers that may prevent a student from pursuing this avenue if they so choose should be broken down.

In growing its entrepreneurial culture, Queen's would benefit from a system that allows all students to come into contact with entrepreneurship in some capacity. This does not force innovation onto any student, but rather ensures each individual is afforded the chance to determine if entrepreneurship is a viable choice for their future. As stated in *Entrepreneurship Education Comes of Age on Campus*, "A [university's] gatekeeping function probably is central, not incidental, to successful entrepreneurship education."[12]

For those students who choose to pursue some level of entrepreneurship, factors such as personal finances or time constraints should not preclude them from doing so. The AMS believes that a robust system of support should exist for students looking to engage in the innovative community to ensure every willing and qualified individual can benefit from, and contribute to, the University's entrepreneurial mission.

Principle 8: The University's approach to entrepreneurship should be interdisciplinary in nature.

Entrepreneurship is, by definition, an interdisciplinary undertaking. The removal of barriers between programs of study is a fundamental element of creating an effective entrepreneurial network, and collaboration across disciplinary boundaries provides an essential starting point for innovative thinking and creative breakthrough. Students believe that robust interaction between Departments and Faculties constitutes a cornerstone element of Queen's entrepreneurial ecosystem, and the AMS encourages the development of interdisciplinary relationships at all levels of the institution.

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[12] Torrance, Wendy et al. *Entrepreneurship Education Comes of Age on Campus.* (Kansas City: Kauffman Foundation, 2013).

Principle 9: The University should provide opportunities for innovation and entrepreneurship at the curricular level.

The establishment of curricular opportunities for innovation is an essential step in introducing entrepreneurship across the university and in reducing the access barriers and opportunity cost associated with engaging in entrepreneurial activity.

Integrating innovation into the curricula for various programs is an effective means of exposing more students to some level of entrepreneurship. Ryerson provides a strong example of this, offering a variety of courses that accommodate varying levels of interest and engagement. Whether it be through a start-up based course or through integration into another area of study, almost every student is provided with the opportunity to take a class that introduces them to entrepreneurship before attaining their degree. Put simply, this ensures that any student who is suited and interested, regardless of discipline, is given the chance to consider the relationship between entrepreneurship and their career aspirations.

Another important outcome of curricular integration is the reduction of the opportunity cost associated with pursuing a start-up. Currently, Queen's students must make the choice between committing time to their academics or a part time job, or committing time to an entrepreneurial endeavour. The opportunity cost associated with innovation, often in the form of forgone wages or a lower GPA, poses a strong disincentive to its pursuit. The result is that the culture of entrepreneurship is greatly hindered, and that many interested students who may excel in a start-up are never given the opportunity to do so.

By introducing a curricular avenue to pursue this activity, students are no longer forced to choose between academic success or a part-time job and an interest in innovation. This increases access in a direct and tangible way, and lays the groundwork for expanded participation in innovation across the entirety of campus. Students believe that the introduction of a variety of courses featuring an entrepreneurial component constitutes an important step towards advancing Queen's innovative mission.

Principle 10: Queen's should attribute credit in a flexible manner that recognizes experiential, entrepreneurial, and work-integrated learning.

An important element of an innovative curriculum includes the establishment of experiential, entrepreneurial, and work-integrated learning opportunities. This is a key component of Queen's Proposed Mandate Statement to the Province, which proposes, "Developing 21st century skills through experiential and entrepreneurial learning"[13] as an area of focus for the institution moving forward.

Learning opportunities of this nature are by no means absent at Queen's; in fact, we have a uniquely high abundance. As outlined in our Proposed Mandate Statement, "By their fourth year of undergraduate study, 60 percent [of students] have participated in community

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[13] Queen's University. *Institutional Vision, Proposed Statement and Priority Objectives.* (Kingston: Queen's 2012).

service or volunteer activity, 50 percent have tutored other students on campus or in the Kingston community, 38 percent have completed a practicum, internship, field experience, co-op, or clinical assignment in and around the city, and 33 percent have participated in community-based projects."[14]

Considering the essential role student engagement plays at Queen's, the University should look towards the attribution credit in recognition of the uniquely transformative learning experiences available at our institution. Students believe that recognizing and supporting these many innovative endeavours through formalized courses and academic credit would enhance entrepreneurship on campus as well as support an area of strategic advantage for the University. Not only would this harness the learning already happening across campus, but it would encourage more students to participate in the spirit of initiative that makes Queen's unique.

Principle 11: Queen's should actively incentivize innovation in teaching and learning.

Students believe that pedagogical development constitutes an important component of a campus-wide culture of innovation. In recognizing the increasing importance of soft learning outcomes such as critical thinking and collaboration in an evolving job market, students are supportive of evolution in the classroom that effectively promotes active learning and skill development.

As the University looks to incentivize innovative teaching and learning, though, it is important that instructors have access to the necessary resources and supports to create an environment that is conducive to success. Services such as the Centre for Teaching and Learning play an essential role in supporting and enabling innovative course delivery, technology-enabled learning, or unique program design. To be successful in promoting this change, it is important that instructors receive encouragement, support, and recognition at every stage.

Concerns

Concern 11: Certain groups face barriers when looking to participate in innovation and entrepreneurship.

While there are a variety of barriers that may prevent an individual from pursuing a start-up or participating in an entrepreneurial endeavor, there are two particular groups who are consistently underrepresented in start-up communities: women, and persons from low income backgrounds.

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[14] Queen's University. *Institutional Vision, Proposed Statement and Priority Objectives.* (Kingston: Queen's 2012).

As assessed by CIBC, "Start-up activity is still dominated by men, who now account for almost 70% of total start-ups. In fact, the share of start-ups run by women fell from 45% in the 1990s and the early 2000s to nearly 40% currently… Among established businesses (non start-ups) the percentage of female entrepreneurs rose from 27% in the early 1990s to the current 33%. This suggests that women decide to start a business, they stay in business longer."[15] Given the disparity between men and women pursuing start-ups, students are concerned that there may be systemic access barriers in place preventing women from engaging fully in the entrepreneurial community.

Similarly, individuals from low-income backgrounds tend to participate less actively in start-up communities. The financial barriers associated with forgoing part-time work, investing early-stage capital, or accumulating debt decrease the likelihood that a low-income student will elect to pursue entrepreneurship as a career path. Further, a cultural barrier links low-income families to prevalent debt aversion, underscoring the financial hurdles an individual might have to overcome to engage in a start-up community.

> **Concern 12: Students and faculty members from many disciplines fail to see the link between entrepreneurship and their field of study, limiting the diversity of students looking to access these opportunities.**

While innovation can be understood as a mindset that can be applied to any discipline, traditional connotations surrounding innovation and start-up culture may create a barrier for students and faculty in considering the integration of a culture of innovation into their field of study. While students and faculty across the institution already demonstrate innovation and entrepreneurial spirit in their work, the fact that many would not identify as entrepreneurs may prevent them from involving themselves in this emergent campus-wide community. Particularly in the case of the humanities or social sciences, traditional notions of entrepreneurship can constitute a limiting factor in developing a culture of entrepreneurship that engages every area of the university.

> **Concern 13: Queen's offers a limited number of courses on topics directly relating to innovation and entrepreneurship, and those that are offered tend to be heavily embedded within a specific Faculty or School.**

The AMS believes that curricular opportunities that expose students to innovation play an important role in expanding access and engagement in entrepreneurship on campus. As such, students are concerned that relatively few courses of this nature are currently offered at Queen's. While some faculties have integrated entrepreneurial elements into their curriculum through the creation of a dedicated course or through the addition of components in existing courses, these opportunities tend to be restricted to upper-year

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[15] CIBC. *Start-ups – Present and Future.* (Toronto: CIBC, 2012).

students in specific programs of study. While beneficial, these options are available to a limited pool of students, and do little to expand the culture of innovation at Queen's.

At the current time, there is a shortage of university-wide courses with the objective of introducing students more generally to concepts surrounding innovation and entrepreneurship. The AMS is concerned that this limits student opportunity, and will have an impact of the diversity of students who will engage in Queen's emergent entrepreneurial culture.

Concern 14: Queen's does not actively incentivize the innovation in pedagogy necessary to enabling an increase in experiential, entrepreneurial, and work-integrated learning opportunities offered on campus.

Students believe innovation in the classroom should play an important role in perpetuating a culture of entrepreneurship, and could serve to improve the student learning experience as a whole. That being said, a shift of this nature must be taken on with appropriate supports in place to ensure academic quality is not compromised as a result. In tandem with measures that protect educational quality, instructors should also be provided with appropriate mechanisms to reduce the risk associated with unique course development, and should receive appropriate encouragement and recognition should they choose to engage in a new method of course delivery.

While students commend the university's identification of innovation in the classroom as an important path forward, the current structure creates a systemic barrier to innovation. Whether it be through the shortcomings of the current USAT system, the relationship between course delivery and the tenure and promotion process, or the relative lack of established support for instructors, Queen's does not have a framework in place at the present time to encourage this kind of activity.

Recommendations

Recommendation 14: In an effort to decrease the opportunity cost associated with pursuing a start-up, the University should introduce a new, competitive bursary program geared towards student entrepreneurs, and should continue to offer stipends to students participating in the Queen's Summer Innovation Initiative.

The AMS recognizes that pursuing a start-up can be a large investment in terms of both time and resources. In an effort to enable more students to engage in entrepreneurial activity, it is important to address some of the barriers students experience in considering self-employment.

Chief among these is the financial investment required to launch a start-up. Particularly for students, who often shoulder a large burden of debt and who may be forgoing another

source of income to pursue entrepreneurship, the financial implications of this career path may make the opportunity entirely inaccessible to many students.

To address this, the AMS recommends the University, with help from the Office of Advancement, look into the establishment of a series of scholarships for entrepreneurs to offset the costs they will bear. These would range in size to reflect the varying needs of different businesses, and would be obtained through a competitive application process, with applicants being evaluated on criteria such as the submission a business plan.

Recommendation 15: The University, in partnership with the QIC, should work to establish female-to-female mentorship programs and speaker series' geared towards women in entrepreneurship.

In recognizing that women are considerably less likely than men to pursue a start-up, the creation of targeted programming may be an effective tool in introducing more women to the concept of entrepreneurship and supporting them through to the launching of a business.

The AMS recommends that the University, in partnership with QIC, investigate the possibility of establishing female-to-female mentorship opportunities to assist female entrepreneurs in overcoming the specific barriers associated with starting a business. Further, the creation of a speaker series or event recognizing women in entrepreneurship could serve to introduce more female students to the start-up community.

Recommendation 16: Queen's should work to expand the definitions of *innovation* and *entrepreneurship* as understood on campus.

As mentioned in Recommendation 4, it is important to recognize that different students, faculty members, or Departments may understand and engage in innovation in different ways. The Kauffman Campus essays state, "several campuses emphasized the importance of allowing various consistencies to define entrepreneurship in ways that fit with their disciplinary perspectives and the missions of their schools ... as well s the level of the various departments and schools. It is important, they emphasized, to let departments and faculty engage entrepreneurship in ways that resonate with their mission."[16]

To enable more professors and departments to meaningfully interact with innovation and entrepreneurship in teaching and learning, the AMS suggests that the Faculties engage their Departments in a similar exercise. Ultimately, this will help implement Queen's goal to expand entrepreneurial learning on campus, and will ensure this subject matter is widely relevant.

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[16] Torrance, Wendy et al. *Entrepreneurship Education Comes of Age on Campus.* (Kansas City: Kauffman Foundation, 2013).

Recommendation 17: Course offerings should be structured in a manner that brings all students in touch with the concepts of innovation or entrepreneurship.

The AMS believes that every student should have the opportunity to come into contact with innovation over the course of their time at Queen's. In integrating an element of entrepreneurship into curriculum content, the University could ensure all students are exposed to this concept and career path. Whether this is something that impacts their studies, changes the way they think within the context of a future job, or pushes them to pursue a start-up of their own, it would provide a valuable dimension to each student's educational experience. Regardless of the outcome, this exposure – as dictated by the funnel model – ensures every student who is interested in innovation has the opportunity to consider and explore it, at least on a cursory level.

Providing an avenue for students to pursue innovation in a curricular setting also lowers the opportunity cost associated with engaging in entrepreneurial activity. Rather than forsaking academic performance or the potential to secure a part-time job, students are able to take on a relatively low-risk commitment that still allows them to interact with these concepts.

To supplement these course offerings, the University should investigate the possibility of implementing more directed entrepreneurship courses. Where possible, these should be open to students in any Faculty; this would allow for powerful interdisciplinary collaboration, and would make the opportunity more widely accessible. To expand upon this, the University could also attach curricular credit to entrepreneurial endeavours; for example, a student could pursue a start-up as a fourth year thesis project with supervision and support from a faculty member.

A diversity of course offerings that explore innovation in different ways and with varying levels of detail provides an opportunity to interact with this field. In adopting this model, no student who would like to pursue a start-up is prevented from doing so, but low levels of involvement are also available to those who are not seeking active engagement.

Recommendation 18: The University should increase the availability of capstone projects; internships; and experiential, entrepreneurial, and work-integrated learning opportunities. This should include a fourth year inquiry-based course in every Department.

High-impact experiential learning opportunities create important avenues for students to innovate within their own field of study. While these individuals may not be pursuing a start-up, this form of student-driven discovery and creativity is a prime example of innovative activity.

The AMS recommends that these transformative learning experiences be expanded across campus. To ensure all students have equal access to opportunities of this nature, the

Faculties and Schools should aim to house at least one inquiry-based capstone project for students in every Department.

Recommendation 19: The University should transform the Queen's campus into a hub for experiential and entrepreneurial learning over the summer semester; this should be undertaken in partnership with the Kingston community.

One barrier the University grapples with on a regular basis is a shortage of space on campus. As we look to expand innovation at Queen's, the availability of space is critical. That being said, the campus remains largely unused over the summer months, with few undergraduate courses being taught. This provides a unique opportunity to transform the campus into a hub for experiential and entrepreneurial learning over the summer.

To a certain extent, this has already begun; the Queen's Summer Innovation Initiative takes place from May to August, taking advantage of unused campus facilities to great avail. The AMS believes programming should be expanded to include internships, experiential learning encompassing a curricular component, and networking events for Kingston entrepreneurs.

By bringing students into Kingston during the summer months and allowing them to interact with the community of innovators and support services present across the City, Queen's would also be establishing a retention strategy for its young companies. If students form networks and relationships over this period, they are more likely to remain in the community with their budding start-up after graduation.

Recommendation 20: The University should develop a series of credentials as part of a certificate program geared towards entrepreneurs. This program should offer a comprehensive slate of fast-tracked courses on a wide range of subjects pertaining to launching a start-up.

As they move through the different stages of business and product development, entrepreneurs will require a variety of skills to contribute to their venture's success. Depending on the nature of the start-up and the background of the entrepreneur, though, different individuals will require substantively different toolkits to succeed. Skills from prototyping to new venture financing to business plan development will play varying roles as the company evolves, and they will often have to be acquired relatively quickly. What's more, these skills may be useful for students pursuing other fields of study or looking to bring entrepreneurship to a corporate setting.

In recognizing the diversity of skills necessary to support a new venture, students encourage the Unviersity to investigate the possibility of collaborating with the Queen's Innovation Connector to create a series of fast-track credentials with the objective of providing a full complement of tools for entrepreneurs. There should be an option to take

these credentials individually or in combination to ensure the program is flexible and responsive to the needs of the innovative community. Further, where an individual is interested in taking the full complement of credentials offered, there should be an option to 'stack' them towards the proposed Masters of Innovation. Overall, this will provide tailored support to budding entrepreneurs, and will also constitute a mechanism for attracting individuals external to the Queen's and Kingston start-up communities.

Recommendation 21: In an effort to incentivize innovative pedagogy, Queen's should create a program that promotes unique course development by mitigating risk to the instructor.

Students recognize the importance of encouraging innovative course delivery and program design across the University. Currently, though, factors surrounding the nature of the tenure and promotion process and the support services available to instructors contribute to a systemic stifling of innovation in the classroom.

As a means of incentivizing innovative pedagogy, Queen's should create a program that promotes unique course development by allowing instructors developing cutting-edge course offerings to temporarily suspend the use of USAT data in decisions regarding tenure and promotion, contingent upon a successful application to the relevant Curriculum Committee. During this period, the instructor should be required to meet regularly with the Centre for Teaching and Learning to ensure students continue to receive a high-quality experience, and USAT data would continue to be collected and assessed for the purposes of course improvement. This would bring instructors into contact with resources and support, while also minimizing the systemic barriers to innovation in the classroom.

Student Support

Principles

> **Principle 12: Queen's should make funding available to support the entrepreneurial mission of the University.**

In the University's 2012 Proposed Mandate Statement to the Province, Queen's proposed entrepreneurial learning as a key area of focus for the institution. In recognizing this commitment, it is important that central funding be made available to support this central priority. While initiatives demonstrating innovation are increasingly prevalent across campus, an entrepreneurial community cannot effectively engage the University in its entirety without strong central backing. A component of this should come in the form of a financial commitment from the University Fund, which is meant to support areas of broad institutional focus.

As stated in *Entrepreneurship Education Comes of Age on Campus*, "One way to broaden ownership without sacrificing independence is to use a blended funding model… These models combine money from the university's general funds and endowment with money raised from outside sources."[17] As Queen's looks to establish a strong entrepreneurial culture across the institution, it must provide the central funding necessary to ensure this activity is able to thrive in all areas of the campus.

> **Principle 13: The availability of funding for entrepreneurs and programs or services that support entrepreneurs is an essential element of an innovation ecosystem.**

Funding is a necessary support, both for new ventures and for the initiatives and organizations that get them off the ground. Queen's would benefit from a critical mass of angel investors and venture capitals to finance start-ups and innovative initiatives in the area. That being said, we are far from reaching this goal, and could stand to develop our ecosystem substantially before reaching this stage.

More immediately, Queen's and Kingston require donations and investments that will provide support for the initiatives and services necessary to the development of an entrepreneurial community. Organizations such as the Queen's Innovation Connector or the Kingston-based Launch Lab require support to thrive, and they in turn nurture the development of the community as a whole. Beyond this, a base level of investor interest in student-led start-ups is also a key element of the growing community. Involvement on the part of the City and Queen's alumni in the development of ventures originating on campus would promote the involvement and retention of current and future innovators.

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[17] Torrance, Wendy et al. *Entrepreneurship Education Comes of Age on Campus.* (Kansas City: Kauffman Foundation, 2013).

> **Principle 14: A holistic approach to innovation should include designated and purpose-built incubator space on campus.**

The prevalence of university incubators at universities across North America has seen a steady rise in recent years. According to the Kauffman Foundation, "of the 1250 or so business incubators in the United States, about one-third are based at universities, up from one-fifth in 2006."[18]

This emergent trend speaks to the important role of dedicated entrepreneurial space in supporting the innovative mission of an institution. In his book *Startup Communities*, Brad Feld supports this notion, saying, "our research found that having a common work environment was extremely important for students, giving them a sense of community that results in their learning faster because they learn from each other, get emotional support to experiment, and are motivated by their peers."[19]

An incubator space plays the important function of housing basic provisions such as meeting rooms, low-level technologies, workspaces and prototyping areas, and licenced software. Beyond this, though, it creates a designated hub for entrepreneurship on campus, and has an intrinsic convening power that unities and supports the innovative mission of the University. As such, students believe that the presence of an incubator space would play a formative role in the development of innovation and entrepreneurship at Queen's.

> **Principle 15: Entrepreneurs should have easy access to regular and relevant mentorship.**

Mentorship is a significant factor in inspiring budding entrepreneurs. Students believe that a mentor with relevant experience plays a singularly important role in the growth and development of a new venture, and that the entrepreneurial ecosystem would be greatly enhanced by a critical mass of mentors coming from a variety of backgrounds and contributing diverse experiences. Whether students have access to these individuals as a group, in person, electronically, or through speaker series' and networking events, a strong and engaged complement of mentors is at the cornerstone of a successful entrepreneurial hub.

> **Principle 16: Entrepreneurs require overhead services, including but not limited to: legal services, accounting support, career services, and industry solution providers.**

For an entrepreneurial community to thrive, it requires a critical mass of embedded support services. Overhead services relating to the legal, insurance, and accounting

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[18] Torrance, Wendy et al. *Entrepreneurship Education Comes of Age on Campus.* (Kansas City: Kauffman Foundation, 2013).
[19] Feld, Brad. *Startup Communities*. (New York: Wiley, 2012).

components of a new venture, in addition to industry-specific supports and tailored space, are essential components of an innovative ecosystem. Furthermore, considering the heavy financial burden placed on growing companies, access to these services must be available at a reasonable cost to the entrepreneur. The AMS believes that a full complement of services should be available to students looking to pursue a start-up; without them, promising young ventures may be unable to gain the momentum necessary to get off the ground.

Principle 17: Entrepreneurs require a community of support.

At its heart, innovation is a community-driven enterprise. The integral importance of strong networks and venues for collaboration underline the necessity of an active network of entrepreneurs. To develop and harness this community of support, the entrepreneurial stack should be consistently engaged in a diversity of events meant to build relationships, spark ideas, and promote success. Regular staples such as hack nights, speaker series, networking opportunities, workshops, and seminars provide important venues to gain new skills and generate new contacts. Most importantly, though, they establish and support the community that is at the cornerstone of entrepreneurial success.

Students believe it is important to create a supportive network for innovators at Queen's and in Kingston. Wherever possible, the University should aid students and other organizations that aim to facilitate interaction amongst entrepreneurs in the region. Ultimately this will result in an active and vibrant entrepreneurial ecosystem which will be successful in generating productive results and engaging new members.

Concerns

Concern 15: Limited funding has been allocated to supporting and expanding innovation on campus, and the burden of funding has been shouldered by several Faculties.

Queen's has identified entrepreneurship as a strategic institutional priority, and the importance of promoting innovation on campus is recognized by many members of the University community. That being said, outside of those attained through advancement initiatives, central institutional resources have not been committed to realizing this goal. The result has been a disproportionate burden on units, namely the Faculty of Engineering and Applied Science and the Queen's School of Business, who have offered financial and in-kind resources to support an initiative that is meant to offer widespread benefit to the entirety of the University.

Students are concerned that the burden of funding for a stated institutional priority has fallen to several faculties. First, this has a tangible impact on operating budgets and other educational resources that would otherwise be committed to enhancing the classroom experience. Beyond this, though, so long as initiatives are funded by individual departments or units, they cannot become the shared property of the Queen's community.

In order to fully engage the entire university in innovation and entrepreneurship, Queen's must ensure this priority receives proper institutional support.

Concern 16: Despite the introduction of *SparQ Labs*, Queen's currently lacks a comprehensive space to operate as a hub for innovation and entrepreneurship on campus.

Students recognize the importance of dedicated space in promoting campus-wide involvement in innovation and entrepreneurship. While the introduction of *SparQ Labs* represents the allocation of space for this purpose, its small size and the fact that it is housed within a faculty-specific building limit its ability to serve the Queen's community as a whole. This leaves the University without a central space to operate as a hub for the entrepreneurial community on campus. Until this important resource is made available, students are concerned that an interdisciplinary community of support will be limited in its growth.

Concern 17: Entrepreneurs at Queen's would benefit from increased availability of mentorship opportunities.

While mentorship is available to Queen's students through various alumni, faculty members, and resources such as the Queen's Innovation connector, current resources bear few connections to the mentors residing in the greater Kingston area. Students believe that increased involvement of alumni, faculty, and community members in mentoring students looking to pursue entrepreneurial endeavours constitutes an important step in supporting the growth of student initiatives.

Concern 18: Accessible and low-cost overhead business services are disconnected and difficult to locate.

Overhead business services, such as legal services, accounting support, and industry solution providers, are accessible to the Queen's community through a variety of channels. Most notably, organizations such as the *Queen's Business Law Clinic* and student-run consulting firms offer local services to entrepreneurs at a reasonable cost, while also providing hands-on experience to students.

While these organizations represent an essential element in fostering innovation, though, they are currently disjointed in their marketing and promotion. As such, it may be difficult for an emerging business to fully benefit from the expertise they offer to the Queen's community.

Concern 19: By in large, students do not currently take advantage of the University's Technology Transfer Office, *PARTEQ Innovations.*

While the University's technology transfer office, *PARTEQ Innovations*, has a strong history of aiding the Queen's community in commercializing research and licencing technology, it remains primarily directed towards faculty members. By in large, students do not take advantage of the resources, support, and expertise offered through this organization; current intellectual property regulations do not incent entrepreneurs to engage with *PARTEQ*, and the service has not been actively marketing to students. The lack of student engagement with this unit represents a missed opportunity for the growing entrepreneurial community, which could stand to benefit from active engagement with a technology transfer office.

Concern 20: Currently, Career Services offers little support and direction for students looking to pursue entrepreneurship as a career path.

Career Services plays an important role in preparing students to enter the labour market by connecting them with employers and resources related to their chosen field. That being said, Career Services currently offers little support to students looking to pursue a start-up. While information such as the location of local incubators, regional start-up summits, and pitch competitions could prove instrumental to an entrepreneur's success, this information is currently unavailable through regular channels. In recognizing entrepreneurship as a valid career option, students are concerned that it does not currently receive the same support as a traditional field.

Concern 21: Queen's and Kingston lack a unified source of information surrounding community events and support services for innovators.

As the entrepreneurial community at Queen's and in Kingston continues to grow, an increasing number of events and services are available to interested individuals. That being said, these initiatives remain disjointed, making it difficult for students pursuing innovation to fully benefit from the resources and networks established in the region. Students are concerned that the absence of a unified source of information surrounding resources and events may become an obstacle in expanding local engagement in entrepreneurship.

Recommendations

Recommendation 22: The University should commit central resources to supporting the entrepreneurial mission of the University. This should include an ongoing financial contribution from the University Fund.

In its draft Strategic Mandate Agreement proposed to the Province, Queen's listed experiential and entrepreneurial learning as one of three key areas of focus for the

institution moving forward. At around the same time, the University Fund was established under the New Budget Model with the aim of supporting a range of institutional priorities.

Currently, the University Fund is being used in large part to fund Queen's capital budget and the 'hold harmless' payments provided to revenue generating units as they transition into the New Budget Model. Innovation initiatives, on the other hand, are being financed largely by the operating budgets and resources of Faculties and Schools; as of yet, they receive little in the way of central support.

As the portion of the University Fund being allocated towards hold harmless payments diminishes, the AMS recommends that the University commit a portion of this funding to innovation on campus. In recognizing that entrepreneurship is at the forefront of the institution's priorities moving forward, students feel it is appropriate and necessary that Queen's investigate options for providing support. If the University is to be successful in its goal of establishing entrepreneurship as a cultural tenant of the institution, the initiatives it has proposed must ultimately receive central resources and coordination to thrive.

Recommendation 23: The University should commit funding towards the construction of a permanent incubator space on campus. Funding for this capital project should be derived from the Initiative Campaign.

Innovation is a priority area in the University's ongoing Initiative Campaign, providing the opportunity to secure resources that would greatly enhance the innovative mission of the institution. Students support the inclusion of a proposed Innovation Commons as a component of this, and encourage the Office of Advancement in its efforts to bring a dedicated space for entrepreneurship to campus.

Recommendation 24: *SparQ Labs* should be moved out of its current location in the ILC into central University space.

The AMS recognizes the benefits associated with the establishment of a dedicated entrepreneurship space on campus. While the advent of *SparQ Labs* takes a step towards filling this need, though, students are concerned by the funding structure and location of the facility.

It is important that space for entrepreneurship on campus be equally accessible to all students. Initiatives that are deeply embedded within a singular Faculty or School can be exclusionary, and do not promote the creation of an integrated and interdisciplinary network of innovators. With *SparQ Labs* being located in an Engineering and Applied Science building, it does not promote the same level of access from students outside this academic unit.

Further, the AMS believes that space for innovation should receive central funding so as to avoid a disproportionate burden being placed on any one Faculty or School. As it currently stands, the Faculty of Engineering and Applied Science is committing resources from their

own operating budget to provide a service that falls under one of the University's strategic objectives. Students would like to see this initiative receive central support to ensure Faculty budgets are not made to bear undue burden.

Finally, the AMS is concerned that longstanding student-run initiates have been displaced to move the lab to its current location. The supplanting of several innovative clubs and services with little notice and in the absence of a contingency plan to address their space requirements shows a clear preference being placed on University-led initiatives. It is of fundamental importance that student programs receive equal recognition and support as compared to institutional projects; without this, the kinds of grassroots initiatives that establish and sustain a culture of entrepreneurship will not have room to thrive.

The AMS recommends that *SparQ Labs* be moved to a new location in university space to ensure it is accessible to all students and is supported through central resources. This will ensure all students are equally able to make use of the facility, and will alleviate the burden being shouldered by the Faculty of Engineering and Applied Science.

Recommendation 25: The Queen's Innovation Connector, in partnership with the Office of Advancement, should continue its work in securing funding, speakers, and mentors to support the culture of innovation on campus.

A budding entrepreneurial community benefits greatly from a critical mass of relevant mentors, seed funding, speakers, and events. The AMS recognizes the hard work the Queen's Innovation Connector and the Office of Advancement have undertaken to bring these resources to campus, and will provide support in the continued efforts of these bodies in securing funding and in-kind donations to enable the growth of our entrepreneurial ecosystem.

Recommendation 26: Queen's should investigate the formation of a deal-flow pipeline moving from local seed investors, to local investor networks; this can be accomplished in part through the *Network of Angels of Ontario*.

Queen's is well positioned to engage its alumni and City partners in the formation of a deal-flow pipeline to support the financing of start-ups. This would begin with the establishment of local seed investors, and would then seek to access local Angel investors. Finally, it would extend to larger investor networks and venture capitals.

To establish this, it is important to create a critical mass of entrepreneurship in Kingston. Projects of this nature often grow from an initial local concentration of seed funding; in recognizing this, Queen's should continue to create opportunities for procuring seed funding, with the aim of eventually forging connections with investors outside the Kingston community. Relationships of this nature can be established through existing networks through such as the *Network of Angels of Ontario*.

Recommendation 27: The University should investigate the possibility of developing a crowd funding platform supporting Queen's innovations.

In an effort to provide financial support and incentivize community involvement in student entrepreneurship, the AMS recommends the University investigate the feasibility of establishing a crowd funding platform for start-ups and innovative initiatives stemming from Queen's students. This would come in the form of a website featuring companies, business plans, and the level of funding being sought. Through microfinancing, the Queen's community is given the opportunity to provide seed funding and learn about local start-ups.

This crowd funding platform would be accessible to students, alumni, and the public, and would create infrastructure for a community of support surrounding innovation on campus. This form of funding is of low cost to investors, but could go a long ways towards establishing resources for innovation at Queen's. Further, companies have the option of offering rewards or equity for different levels of funding, providing a unique opportunity for investment on the part of the extended Queen's community.

Recommendation 28: Queen's should work to enhance and expand the availability of legal, consulting, and accounting services, provided by students studying in these fields, to entrepreneurs. To complement these initiatives, the University should investigate other opportunities to make business services available in a manner that also provides experience to Queen's students in their field of study.

Entrepreneurs in Kingston currently have access to low-cost legal, consulting, and accounting services through the Queen's Business Law Clinic and on-campus, student-run consulting and accounting groups. These organizations provide essential support at a reasonable price for a new business while also creating hands-on experience for students studying in these fields.

The AMS recommends these initiatives receive continued support, and that opportunities for the provision of further services by students be investigated.

Recommendation 29: *PARTEQ Innovations* should investigate the possibility of licensing Queen's-originated technology in exchange for founder stock in a new enterprise based on that technology.

Currently, students do not benefit from the services offered by PARTEQ Innovations. Particularly for those looking to pursue a start-up, the importance of retaining intellectual property may deter the use of this organization in commercializing innovations.

The AMS recommends that PARTEQ Innovations investigate the possibility of licencing Queen's-originated technology in exchange for founder stock or equity rather than intellectual property rights. This more flexible IP process will incentivize the use of this facility by entrepreneurs. Further, PARTEQ should market itself more directly to students – particularly the underservices market of undergraduate students - in order to fully support the community of innovators at Queen's.

Recommendation 30: Career Services should develop the infrastructure necessary to support students looking to pursue entrepreneurship as a career path.

While an increasing number of Queen's students have expressed an interest in pursuing a start-up, the University currently houses little infrastructure to support them in entering into this field. Information on pitch competitions, local innovation incubators, and networks of support can be vital to a young company's success, and providing an avenue for these opportunities could dramatically enhance the start-up culture at Queen's.

The AMS recommends that the Queen's Innovation Connector and Career Services investigate the possibility of forming a partnership to ensure students who wish to pursue a start-up are appropriately equipped to do so. Through this partnership, students would have access to information and support through multiple outlets, providing important resources to expand the budding community of entrepreneurs at Queen's and in Kingston.

Recommendation 31: The University should make space available for events that aim to bring the entrepreneurial community together.

As outlined in Recommendation 13, Queen's is uniquely equipped to offer space for a variety of entrepreneurial events. From hack nights to workshops to case competitions, space fulfills a unique role in establishing a network of local entrepreneurs.

The AMS recommends that the University ensure campus and community groups contributing to the University's network of entrepreneurs be afforded access to this space in recognition of the networking they accommodate. As Recommendation 13 also states, the AMS is supportive of the inclusion of community members in on-campus events, and students believe that wherever possible community members should have the opportunity to participate in programming on a cost-recovery basis.

Recommendation 10: Queen's should support the partnership between entrepreneurship organizations on campus and in the Kingston Community through consultation with City stakeholders and in participation with *Startup Kingston*.

NOTE: This is a repeated recommendation.

In an effort to create pathways for collaboration between the Queen's and Kingston startup communities, it is critical that partnerships and joint endeavours between City groups and

on-campus initiatives be actively pursued.

In recognizing the importance of grounding an entrepreneurial ecosystem in the local business community and surrounding resources, students recommend that the University continue to consult with organizations such as the Kingston Economic Development Corporation and the Economic Development Working Group when considering formative changes to the Queen's start-up community. This will allow a network to develop between on- and off-campus innovation hubs, creating a strong culture of entrepreneurship as the two communities evolve in concert.

Where possible, collaborative efforts between student or university groups and community initiatives should also be incentivized and supported. One instance demonstrating this kind of activity is the proposal to bring the *Startup Canada* franchise to Kingston. A group of students and community entrepreneurs, in consultation with the AMS and KEDCO, have proposed the introduction of *Startup Kingston* as an umbrella organization to consolidate entrepreneurial initiatives, events, and resources in one area. It would provide information surrounding any and all opportunities for local entrepreneurs, and would operate as a uniting force to aid the integration of the Queen's and Kingston startup spheres.

Policy Statement

WHEREAS Queen's University should strive to foster a holistic, campus-wide culture of innovation.

WHEREAS the University's approach to innovation should be entrepreneur-driven.

WHEREAS student initiatives demonstrating innovation and entrepreneurship, including but not limited to: student-run services, entrepreneurship organizations, and on-campus clubs pursuing innovation, should be recognized for their innovative activity and be supported accordingly.

WHEREAS the University's approach to innovation should involve the regular evaluation of its programs and services to ensure Queen's continues to offer value in a dynamic and quickly-evolving field.

WHEREAS the Provincial Funding Formula should be in tune with the needs of Ontarians and the path ahead for the post-secondary sector.

WHEREAS Queen's should offer a first-rate classroom experience to all students.

WHEREAS the relationship between Queen's and the Kingston community is an integral element of the university's identity.

WHEREAS Queen's should ensure its innovative initiatives are rooted in the broader context of the Kingston community.

WHEREAS the University should enable the involvement and participation of individuals external to the Queen's community in the events and programming it offers wherever possible.

WHEREAS all Queen's students should have equal access to opportunities promoting the exploration of innovation and entrepreneurship on campus.

WHEREAS the University's approach to entrepreneurship should be interdisciplinary in nature.

WHEREAS the University should provide opportunities for innovation and entrepreneurship at the curricular level.

WHEREAS Queen's should attribute credit in a flexible manner that recognizes experiential, entrepreneurial, and work-integrated learning.

WHEREAS Queen's should actively incentivize innovation in teaching and learning.

WHEREAS Queen's should make funding available to support the entrepreneurial mission of the University.

WHEREAS the availability of funding for entrepreneurs and programs or services that support entrepreneurs is an essential element of an innovation ecosystem.

WHEREAS a holistic approach to innovation should include designated and purpose-built incubator space on campus.

WHEREAS entrepreneurs should have easy access to regular and relevant mentorship.

WHEREAS entrepreneurs require overhead services, including but not limited to: legal services, accounting support, career services, and industry solution providers.

WHEREAS entrepreneurs require a community of support.

BIFRT Queen's University should endeavour to adopt the *funnel model* approach as a means of cultivating a campus-wide culture of entrepreneurship and innovation.

BIFRT a commitment to innovation should be integrated into the University's mission, visioning documents, communications strategy, and metrics for success.

BIFRT Queen's should work to mitigate the culture of risk aversion on campus in an effort to increase the number of students participating in entrepreneurial endeavours.

BIFRT Queen's should work alongside Deans, Department Heads, and the Queen's University Faculty Association to ensure innovative initiatives receive campus-wide buy-in and integration.

BIFRT Queen's should investigate the possibility of establishing a Living Learning Floor in residence based around the theme of innovation and entrepreneurship.

BIFRT the University's innovation strategy should see student involvement and consultation at every point.

BIFRT the Queen's Innovation Connector should consider the creation of a Board of Directors to enable a higher level of student input and University engagement in its activities.

BIFRT support services for entrepreneurs, including but not limited to: mentorship, seminars, speaker series', and space, should be extended to students demonstrating innovation and entrepreneurship in student-run services, on-campus entrepreneurship organizations, and entrepreneurial on-campus clubs.

BIFRT the University should collect data in an effort to assess the impact of its commitment to innovation and entrepreneurship. This data should act as a driver for evolution in programming.

BIFRT Queen's should support the partnership between entrepreneurship organizations on campus and in the Kingston Community through consultation with City stakeholders and in participation with *Startup Kingston*.

BIFRT Queen's should incorporate a retention strategy, in consultation with the City of Kingston, as a component of its innovation strategy in an effort to better integrate the University with the municipality.

BIFRT pathways to Kingston organizations and resources such as *Innovation Park*, *LaunchLab*, community incubator space, and community office space should be reinforced for student entrepreneurs.

BIFRT campus innovation organizations should endeavour to host events in community venues, and, where possible, the University should allow community members to register in campus programming on a cost-recovery basis.

BIFRT in an effort to decrease the opportunity cost associated with pursuing a start-up, the University should introduce a new, competitive bursary program geared towards student entrepreneurs, and should continue to offer stipends to students participating in the Queen's Summer Innovation Initiative.

BIFRT the University, in partnership with the QIC, should work to establish female-to-female mentorship programs and speaker series' geared towards women in entrepreneurship.

BIFRT Queen's should work to expand the definitions of *innovation* and *entrepreneurship* as understood on campus.

BIFRT course offerings should be structured in a manner that brings all students in touch with the concepts of innovation or entrepreneurship.

BIFRT the University should increase the availability of capstone projects; internships; and experiential, entrepreneurial, and work-integrated learning opportunities. This should include a fourth year inquiry-based course in every Department.

BIFRT the University should transform the Queen's campus into a hub for experiential and entrepreneurial learning over the summer semester; this should be undertaken in partnership with the Kingston community.

BIFRT the University should develop a series of credentials as part of a certificate program geared towards entrepreneurs. This program should offer a comprehensive slate of fast-tracked courses on a wide range of subjects pertaining to launching a start-up.

BIFRT Queen's should create a program allowing instructors developing cutting-edge course offerings to temporarily suspend the use of USAT data in decisions regarding tenure and promotion, contingent upon a successful application to the relevant Department Head. During this period, the instructor should be required to meet regularly with the Centre for Teaching and Learning to ensure students continue to receive a high-quality experience.

BIFRT the University should commit central resources to supporting the entrepreneurial mission of the University. This should include an ongoing financial contribution from the University Fund.

BIFRT the University should commit funding towards the construction of a permanent incubator space on campus. Funding for this capital project should be derived from the Initiative Campaign.

BIFRT *SparQ Labs* should be moved out of its current location in the ILC into central University space.

BIFRT the Queen's Innovation Connector, in partnership with the Office of Advancement, should continue its work in securing funding, speakers, and mentors to support the culture of innovation on campus.

BIFRT Queen's should investigate the formation of a deal-flow pipeline moving from local seed investors, to local investor networks; this can be accomplished in part through the *Network of Angels of Ontario*.

BIFRT the University should investigate the possibility of developing a crowd funding platform supporting Queen's innovations.

BIFRT Queen's should work to enhance and expand the availability of legal, consulting, and accounting services, provided by students studying in these fields, to entrepreneurs.

BIFRT *PARTEQ Innovations* should investigate the possibility of licensing Queen's-originated technology in exchange for founder stock in a new enterprise based on that technology.

BIFRT Career Services should develop the infrastructure necessary to support students looking to pursue entrepreneurship as a career path.

BIFRT the University should make space available for events that aim to bring the entrepreneurial community together.