The Collaborations team Concept

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# **INTRODUCTION**

This report is one of the four projects that contributes to the proposed Innovation Hub here in CMUA. We will focus on the collaboration resources of the hub.

CMU-A has design thinking class in which students identify their areas of interests and they develop detailed conceptual design of each proposed idea. The project ceases at the end of the class as there is no further system to support the implementation of the idea.

Broadly, for CMUA students, there is no service allowing these students to request mentors and skill training to mature their ideas, develop prototypes and bring ideas to the market. Students who have innovative ideas are facing significant barriers to engage with adequate resources.

The SA government has strong interests in funding start-ups and supporting entrepreneurs. However, the grant and support will only be awarded to mature start-up ecosystems who can prove their maturity by showcasing successful start-ups. For example, the University of South Australia’s Innovation Center has recently been awarded multi-million dollars as it has produced several successful start-ups.  CMU-A has been left behind in the game as there is no such system and its absence have no doubt prevented CMU-A from accessing these resources from the government.

Small- to medium-sized businesses have strong ongoing relationship with CMUA through its student projects and internship initiatives. However, industry partners generally have one-step engagement in these opportunities whereby they propose a project and students work on the projects either reside in the organisation or work externally. Students are expected to submit final products at the end of the projects. Students will only be able to work on mature ideas and the industry have limited opportunities to collaborate.

CMU-A currently only have small influence among the local industries due to small student number and high turnover of students, although the CMUA students have been highly regarded by the industry. The University would be able to reinforcement its branding by attracting industry partners through the establishment of an innovation hub.

# **PROBLEM STATEMENT**

The way we defined our focus is to answer the question of who do we want to collaborate with? Or at least, what qualities the parties that we want to collaborate with should possess? We arrived at this question from the result of the student survey conducted by the Student Motivator group. One of the results of the survey indicated that there are students who conceived ideas that they deem to have the potential for development and innovation. However, there have been no records or indication that there have been push from the students to develop their ideas. According to the same survey, one of the things that students expect from the Hub is the opportunity to talk to and interact with mentors. These mentors are not necessarily the faculty members of CMUA but people from the industry who have the necessary skills and credentials to provide guidance and provide feedback about the idea.

Thus, given this need from the students, we arrived at the formulation of the question posed earlier. Aside from knowing who to collaborate, we also forward a method on how to connect the students with their possible mentors.

# **THE OBJECTIVES AND TIMEFRAME**

We identify three objectives for this study:

1. To design a service that allows student-entrepreneurs and student-researchers an avenue to connect to mentors from outside the university;
2. To create a process that governs the provision of this service;
3. To provide a long-term plan that contributes to the continuity of this service, and the operations of CMUA’s Innovation Hub, in general.

The timeframe recommended for this study is shown below:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Activity \ Week** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** |
| Brainstorming the collaborations process |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Scoping and Assumptions Testing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Learning Launch |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Board Presentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Establishing the Innovation Hub |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hiring the Collaborations Team |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Engagement with Legal Experts |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Establishing the Mentor Pool |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Marketing Execises for CMUA Students |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Finalizing Process |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beta Testing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**TABLE 1.** *The proposed timeline of establishing the Innovation Hub. Note that at this time, we have only spent the first six weeks.*

# **METHODOLOGY**

As we are designing a service product, most of our results are derived from interviews from students, faculty and staff of CMUA, and industry partners. While we endeavoured to interview representative from private firms, we were only able to talk to one private firm, particularly Microsoft. Our interviews explored different information requirements of different parties and how we can integrate it to the process of the hub. Finally, in the interview with CMUA staff, we explored the network of CMUA with the private sector and its reputation based on feedback with industry partners.

Throughout, we employ design thinking methods and processes in evaluating our assumptions and directions.

# **THE SOLUTION: The Collaborations Team**

Our solution calls for instituting a Collaborations Team who will serve as the broker between student-entrepreneurs and the possible mentors. The Collaborations Team will be headed by an Innovation Officer (IO) whose primary role and function is to [Insert later]. The roles and function of the Collaborations Team and the Innovation Officer will be discussed in detail later.

The schematic process of introducing the student-entrepreneur and the mentor and the matching method is broken down in four general steps and is shown in Figure 1. We note that at the start of the process, we assume that the projects and ideas the goes through this process have already been filtered and assessed prior.

## The Collaborations Teams’ Process

### **STEP 1:** Data Collection

To start the matching process, students whose projects have been assessed and selected needs to submit two documents: (1) a short summary of their project or idea; and (2) a mentor request form. The short summary of the project should include enough information and background[[1]](#footnote-1) for both the of IO and the candidate mentor to make a personal assessment. The mentor request form, on the other hand, should contain information that can be used to identify candidate mentors. Such information includes field of interests, skills, goals, or other relevant information that the IO or the mentors deem important.

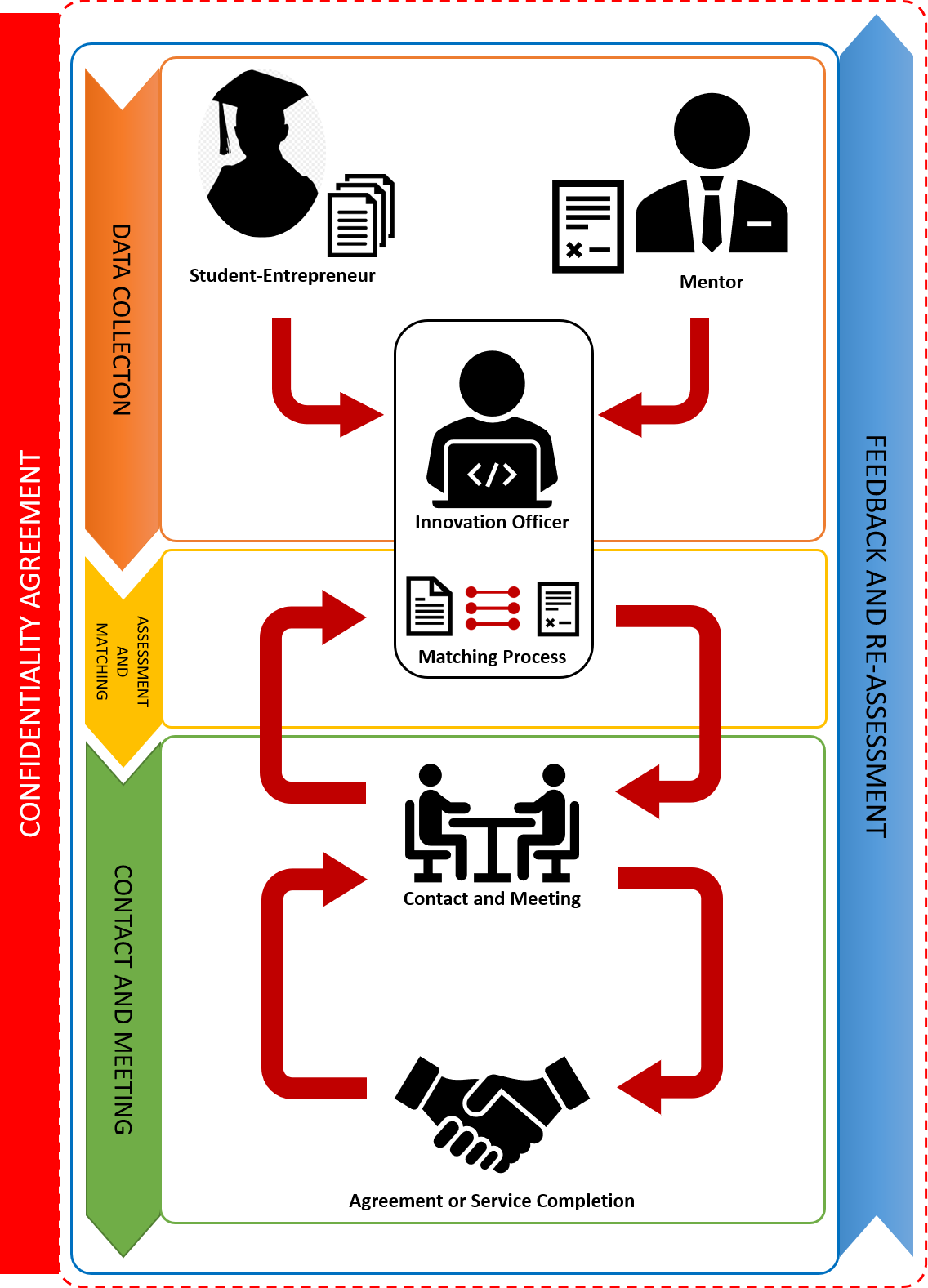
On the candidate mentors, the IO will request them to complete a Mentor Information Form where relevant information such as fields of interest, availability, expectations, and other credentials and information that they are willing to share. The IO should require a curriculum vitae to assist in the information gathering. Proposed formats of both Mentor Request and Mentor Information forms are shown in the Appendix.

### **STEP 2:** Assessment and Matching

Once the innovation officer has received the mentor request form from the student-entrepreneur and deemed it complete, the IO will commence researching possible mentors based on the information in the Mentor Request form. The search for candidates can be done either manually or automatically, depending on the system. It may also involve contact with the candidates and gauging their interest. Ideally, the IO should come up with several candidates that is best matched with the student’s research and interests. Recommendations on the rules on matching students and mentors will be discussed later.

### **STEP 3:** Contact and Meeting

Once candidates are identified, the IO will initiate contact between the student-entrepreneur and the candidate mentor. We recommend this be done through email or through any identified means of communications preferred by the mentor. Details of a first meeting, either personal, through calls, or videoconferencing will be facilitated by the IO. If both parties are satisfied, the matches will be established with the innovation officer conducting ongoing meetings to monitor the progress. As it is highly likely students will grow new needs at different stages of the project, the innovation officer will match students with new mentors when required.



**FIGURE 1.** The schematic process of the matching process of the Collaborations Team.

Once contact and collaboration is established between the parties, the IO leaves further scheduling and contact activities to the student and mentor. However, is should be made aware of any significant progress in the project. Also, once an end to the collaboration has been decided between the mentor and the student, the IO should be informed as this will be considered as the service completion. Should the relationship proceed beyond the one-year initial time-frame, it has to be decided whether that should be treated as service completion or another category altogether.

### **STEP 4:** Feedback and Re-assessment

Throughout the whole process, feedback and re-assessment should be provided by all parties. For example, if the initial meeting between the student and the candidate mentor resulted in both parties deciding that there might be more appropriate mentors. If this happens, the IO must be provided feedback as to why this is the case. Information from these cases can be used to improve the matching process of the Collaborations Team. Aside from match failure, other feedback regarding the manner and conduct of either party, or other qualities are welcome.

## The Collaborations Team and the Innovation Officer

The main function of the Collaborations Team is to be the broker or point of contact between students, be they entrepreneurs or researchers, and mentors, be they representative from private firms, the government, or specialist individuals. The team will be headed by the Innovations Officer.

The team will then initiate a meeting to discuss students’ idea and mentoring details. If both parties are satisfied, the matches will be established with the innovation officer conducting ongoing meetings to monitor the progress. As it is highly likely students will grow new needs at different stages of the project, the innovation officer will match students with new mentors when required.

Role description and key responsibilities for the innovation officer, the idea candidate shall possess:

* strong communication and interpersonal skills and the ability to build up and maintain rapport with diverse stakeholders, including university faculties, students, industry partners, other innovation hubs, and the SA government
* solid business acumen and previous business development experience with proven track record; willing to promote CMU-A innovation hub at entrepreneurship themed events and conference.
* A true passion for innovation and a strong desire to help student entrepreneur success; previous experience working with start-ups and students
* A good understanding of American University system

The key responsibilities of the IO are:

* identify and approach potential mentors for CMU-A innovation hub
* promote CMU-A innovation hub at start-up themed events
* available to meet students by appointment
* collect and analyse student and mentor needs and conduct paring service to link students to mentors
* monitor and follow-up the progress of mentorship and source extra or alternate mentors for students when required
* conduct campus wide training workshop to cover skills, focusing on pitching, venture capital, business proposal writing and so forth.

Aside from the specific function of the Collaborations Team regarding the matching process, we also imagine that the general process and maintenance of the Innovation Hub can be folded into their roles and responsibilities.

## The Rules of Matching

In this section, we briefly discuss how should the IO decide if a student-entrepreneur and a candidate mentor is a match. Using the forms that we recommend in the appendix; we base the compatibility on how similar the answers of the students and the mentors are. Specifically:

* Mentor must possess the core skills requested by students.
* The mentor must be available to meet students based on agreed frequencies.
* Mentors are interested in students' ideas or projects.
* Mentors and students shall have mutual interests.
* Students and mentors can get along well with each other.

Aside from this information, the IO has a certain discretion on the recommendation based on how they know the student and the candidate mentor. However, when the IO is using their discretion in making recommendations, the primary goal must always be the development of the student’s project or research.

## The In-House Innovations Board

Aside from the mentors from outside the university, we also recommend the creation of an in-house Innovations Board. The board’s primary function is to serve as the initial point of guidance for students of the university. As it is, it could be one of the ways that the ideas that undergo matching are already filtered. We recommend the board have five members and be from the following industries.

* **Finance.** The mentors would have useful knowledge and experiences to guide the students how to maintain their financial status in a good condition. They would help students build robust architecture contains key financial components of their projects. The students could learn the way of using sophisticated approach to control their budget and manage the cash flow well. They would learn how to develop the project that is sustainable and stable with strong and reliable financial management techniques. The students would get to know how to arrange reasonable amount of wages to their employees if they’re building a startup company. Each one should be paid based on the effort and contribution to the project. There are also other kinds of fixed or variable cost, it’s important to allocate the cost within a preset threshold, which would abide by the limit of the budget. In this way, the students are able to develop their ideas in the right direction with good financial management.
* **Policy**. The policy in house mentor has significant experience in policy research domain. The mentor will have a robust understanding on problems and issues in the public policy domain. The mentor provides guidance on the value of proposed policy research, gives feedback on the progress of such research and link students to potential research partners.
* **Information Technology.** The IT in house mentor has strong technical skills and has in depth understanding on the emerging technologies, such as Internet of Things, Artificial Intelligence and Blockchain Technologies. He will possess previous startup experience and has the capabilities to advise the best possible way to pitch tech ideas in front of angel investors. He will also give feedback on the market value and difficulty of the ideas from macro level during the idea maturing and product prototyping processes. The IT in house mentor will have a strong network in the industry, he will be able to connect students to potential external mentors and investors when required.
* **Designer.** The designer in house mentor bring in strong design thinking capabilities and have previous startup experience. He will be able to make comments on potential mistakes students might encounter during their journey. This board membereducates students to integrate and design their products based on the empathy with their target users. His strong industrial connection will link students to existing industry partners.
* **Business.** The business in house mentor will have decades experience working with small to medium firms. He is able to advise on the sustainability and value of the business model created by students.

## The Confidentiality Agreement

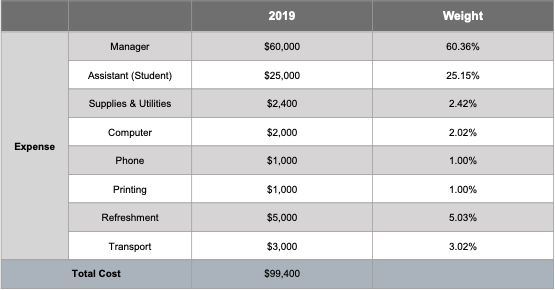
This is one of the critical elements of the solution we are proposing. The confidential agreement will serve as the regulation that governs the actions of the parties to the Innovation Hub. After all, in the field of innovation and ground-breaking ideas, secrecy and ownership of ideas remain to be of utmost importance. Also, as the number of people who knows of a certain idea increases, the risk of oversharing increases. Thus, the uniqueness of an idea is also in danger. Such an agreement protects the interest and idea of the student-entrepreneur or – researcher from being used by other people.

However, despite identifying how essential the treatment of confidential information and their disclosure is to the operations of the Innovation Hub, we deem this to be beyond the scope of this study. The details of such an agreement should be left to the legal experts so that it better protects the interest of the parties. So instead of trying to craft an agreement for the hub, we forward some ideas and concepts that should be considered when coming up with the agreement itself.

* **Confidentiality Agreement or Non-disclosure agreement?** While confidentiality agreements and non-disclosure agreements have virtually the same function, we think what we call the legal document influences the likelihood that parties will sign these agreements.
* **When do parties sign the agreements?** This is another essential question as this might affect the possible mentor pool of the service.
* **Are there different agreements for different types of projects?** As we have identified three distinct projects, namely, innovation-to-market; research-to-policy; and the special project which has elements from both business and policy fields, should the agreements that cover these projects the same.
* **Who pays for the legal costs?** This is critical as we have identified that neither the student nor the mentor would be willing to shoulder this cost.
* What should it exactly protect? Whose name appears on publications and patents? Use of idea?
* What are the terms of the agreement? Penalties?
* Are the interests of the university and the student-entrepreneur treated as the same?
* What happens when there is a patent issue arising from the project?

# **BUDGET PROPOSAL**

We propose that the Collaborations Team be granted the following budget. Note that at this time, we imagine the team to be composed of two people, a fulltime staff of the university and a student assistant. The figures shown below are estimates of the possible expenses the Collaborations Team may incur.



**TABLE 2.** *The proposed budget for the Collaborations Team of the Innovation Hub.*

# **CONCLUSION**

In this report, we forwarded a collaborations solution for the proposed CMUA Innovation Hub. The solution focuses on initiating a mentor-mentee relationship with mentors from outside the industry. We also provided the processes and rules that govern the provision of this service. Also, we discussed recommendations on the rules and responsibilities as well as to how to choose the members of the Collaborations Team, particularly the Innovations Officer.

# **FUTURE RECOMMENDATIONS**

One of the main assumptions of this report is that CMUA students are the source of the new ideas that will be developed in the Innovation Hub. This is a somewhat limiting assumption given the low population and the high turnover rate of CMUA students. However, one of our interviewees mentioned that we should consider opening the services of the whole Innovation Hub to the general population. People not connected to CMUA who have ideas of their own are possible customers of the Hub. How it will operate that way should be decided based on the demand. However, we need to be clear as to what we bring to the table as there are a lot of innovation hubs currently operating in South Australia.

# **APPENDIX I**

## Mentor Request Form

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**Mentor Request Form**

Please complete this form and return it as soon as possible. Forms can be sent via fax to +(61.8).8211.9444 or email to the **Innovation Hub** (innovation@australia.cmu.edu).

First Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Last Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email Address:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Andrew ID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Request Mentor Type:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Major:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please describe skills that you are looking for from a mentor.

Which stage are you at for your idea/project?

Please use one sentence to provide a summary for your idea/project.

Please tell us how and why you came up with the idea.

What relevant skills and academic experience you have related to your idea/project

What relevant extra-curriculum activities do you have?

How often would you like your mentor to meet you?

## Mentor Information Form

**Mentor Information Form**

Please complete this form and return it as soon as possible. Forms can be sent via fax to +(61.8).8211.9444 or email to the **Innovation Hub** (innovation@australia.cmu.edu).

First Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Last Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email Address:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Company Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Industry:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone Number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please describe what skills you can provide for the students?

Which stage are you interested to mentor?

How often are you willing to meet with students?

What are your domains of interest?

What relevant project experience you have that can benefit students?

What relevant extra-curriculum activities do you have?

## Mentoring Matching Form

**Mentoring Matching Form**

Please scan this form and save a copy for record.

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mentor Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Project Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Company Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Industry :\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone Number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Does mentor possess skills that the student is looking for?

Is the student at the stage where the mentor is interested?

Is the mentor available to meet the student at required frequent?

How compatible is their domain of interests?

Would the student get along well with the mentor?

# **APPENDIX II**

## Scoping Reports

|  |  |
| --- | --- |
| **Determining the constraints and needed resources by CMUA stakeholders in developing novel and innovative ideas or solutions** | |
|
|
| **Project description** *What is the problem or opportunity?* | *Carnegie Mellon University - Australia (CMUA) currently has no facility that encourages the development of innovative and novel ideas. This project is part of a bigger initiative to create an ‘innovation hub’ at CMUA. This study specifically aims to determine what constraints and necessary resources will enable students, faculty, or the CMUA community at large to come up with these new ideas and further develop it as a viable business opportunity* |
| **Scope**  *What are the parameters of the problem to be solved or the opportunity to be explored?* | *Carnegie Mellon University enjoys a reputation of being a technologically-inclined school where breakthrough discoveries and progress come from. This is evident from the long history of CMU. These ideas and developments, however, are limited to the Pittsburgh (PGH) campus in the US. Also, CMUA frequently competes, and succeeds in multiple data science and technology competitions. We intend to harness this capability and enable ideas coming from the community to be developed further. Specifically:*   1. We will be working closely with the students and faculty of CMUA to understand their constraints and needs in creating or designing a new novel idea. 2. Based on the interviews, we will determine possible solutions to the constraints and needs of the students and faculty. We also intend to determine who can provide the necessary resources or address the identified constraints. 3. Finally, this project will contribute to the possible development of an ‘*innovation hub*’ facility here in CMUA. |
| **Constraints**  *What key aspects of the environment must you work within?* | 1. **Limited time-frame:** One of the main constraints of this study is the short time-frame where a majority of the students stay in CMUA only for a year *(ie. Global Master’s programs).* 2. **Limited enrollments:** CMUA only has a small group of students; limited enrollments will constrain the scale of the innovation hub and associated collaboration resources. 3. **Campus Policy**: The design of CMUA’s operations, specifically needing the approval of CMU’s main campus in the US might present an obstacle in the implementation of the solutions. 4. **Time:** Given the time constraint of the course, we will mainly focus on the issues and constraints of the students and the faculty. 5. **Budget:** The necessary resources determined by this study might prove to be costly and thus need a sizeable investment from the university. 6. **Assumption:** it has been assumed that it is necessary to design an ‘innovation hub’ for CMUA. |
| **Target users**  *Who is your customer or end user? For whom are you designing?* | The target users of this study are the CMUA community in general. Specifically:  Internal Users:   * CMUA Students and Faculties   External Users:   * CMUA Alumni * CMUA industry partners   Direct Users:   * CMUA Students * CMUA Faculty and Staff * CMUA collaboration partners   Indirect Users:   * Admin staff, career staff   We also foresee that the reputation of the Carnegie Mellon University brand will also improve from the results of this project. Consequently, third-party organizations who cooperate with the university will also benefit. |
| **Exploration questions**  *What key questions will you need to answer through your research?* | CMU-A Students   1. Have you had the experience of coming up with a novel idea, or a possible business product that you believe can be developed further? If yes, what happened to that idea? 2. What kind of resources do you need to develop your idea? 3. Were you able to access the resources you need? If yes, where and how did you access these resources? 4. Do you think that CMUA campus provides the resources you need in order to realize your ideas? 5. If CMUA were to provide these resources, would you have used them?   CMU-A Faculty   1. Are there any similar programs which aim to help students build a bridge between their ideas and reality held by the school or students before? 2. What kind of resources would a student need to develop a possible novel/innovative business idea? 3. Are these resources available in the CMU system (CMU/CMUA)? 4. Can these resources be provided by an “innovation hub” that will be instituted in the CMUA campus? 5. How can these resources be made available and accessible to the CMUA community? 6. How can you evaluate the feasibility of the students’ ideas? 7. How can we match the students with the appropriate collaboration resources?   CMU-A Partners   1. What resources (technical assistance, mentorship, fundings, networking resources) can you provide to support the students and what outcomes are you expecting alongside with the support down the students/individual end. 2. Have you ever provided any resources to CMU-A students? 3. What kind of projects/ideas would you be interested in collaborating and supporting? 4. How do you see the ‘Innovation Hub’ idea?   CMU Main campus   1. What resources can main campus to provide to support the students/individuals in the ‘ innovation hub’.   CMU-A Alumni   1. As part of the CMUA community, what kind of resources/help are you willing to provide to help the current students? |
| **Expected outcomes**  *What outcomes would you like to see? What will the results of the project help us to do? What value do you believe you can provide?* | The outcomes we expect from this study are the following:   1. We expect to understand the needs of a starting student-entrepreneur to further examine and develop their idea/product. 2. We expect to determine if these needs/resources can be provided by the university, or at least identify who can provide these resources. 3. The creation of an ‘innovation hub’ here at CMUA. 4. A start-up company primarily based in the CMUA campus. |
| **Success metrics**  *How will you know if you've succeeded?* | Specifically for this project, we have the following success metrics:   1. Identified the constraints and needs of CMUA students and faculty in developing their ideas/solutions. 2. Identified who can address these constraints. 3. Identified who can provide the resources necessary. 4. Made the resources available and accessible to the CMUA community.   As part of the bigger initiative of setting up an ‘innovation hub’:   1. The launch of an innovation and collaboration space or system, at the CMUA campus. 2. Establishment of at least one CMUA-based startup company. |

## Design Criteria

|  |  |
| --- | --- |
| **Design criteria:**  **Determining the constraints and needed resources by CMUA stakeholders in developing novel and innovative ideas or solutions** | |
|
|
| **Design goal** | For Students:   * Provide crucial feedback regarding the merits and viability of an idea * Link students to people and/or organizations who can comment or provide guidance to students * Must cater to all students anytime, or at least according to agreed procedures * Link students to existing opportunities in the economy * Provide ongoing mentorship outside the academic curriculum (ie. entrepreneurial, presentation skills) * Provide access to existing resources from other innovation hubs (e.g. Share ideas, physical infrastructure)   For Faculty/Staff:   * Must be multi-functional * Must be accessible to faculty and/or staff as well * Must fit in their schedule   For CMUA:   * Help improve the reputation of the school as a technology-oriented university * Be an avenue to showcase the talents and capabilities of CMUA students * Strengthen students’ employability and create more opportunities * The solution shall attract investment and funding for CMUA   For Industrial partners:   * Enable them to see the ideas, abilities, and talents produced by CMUA * A possible source of their future employees with top-grade skills * A venue to see a potential investment opportunity * A possible mode of advertising and in turn help increase student’s reputations and legitimacy |
| **User perceptions** | * Efforts put forth by anyone from the community should be incentivized by the school administration (ie. for students, generating ideas can be considered for academic credits or an internship) * Faculties think their time and effort should be rewarded * Students feel their entrepreneurial skills will be improved * The partners can see the direct value from the collaboration * Identify the blindsides of proponents regarding the proposed idea * The innovation hub should be multi-purpose (ie. do business processes, a venue for networking, a place to relax) |
| **Physical attributes** | * Easily accessible to the CMUA Community (eg. can accommodate reserved time or walk-ins, operating 24 hours and on weekends) * Versatile enough to be used by the community (eg. PPM, IT, IS students, faculty, staff, etc) * Must have resources to enable various business processes (eg. meetings, calls, brainstorming, presentations, data storage, networking events, etc) * Has a form of physical existence to indicate CMUA has such service (eg. A poster in campus, logo, a pre-scheduled meeting with mentors, etc) * Have supervisors and professors in the specific area which can give proper advice to projects. |
| **Functional attributes** | * Must be able to provide advice and guidance to every member of the community * A venue to connect entrepreneurs to investors (eg. venture capitalists, government) * Enable the creation of a startup company in CMUA * Help enhance the reputation of CMUA in Australia * Improve employability of CMUA graduates * Enhance the visibility of CMUA as a hotspot for idea generation * Expand the network of CMUA, or at least improve communication channels between CMUA and the industries and firms in South Australia * Enable to deliver both internal (ie. specific for CMUA) and external ideas (ie. startup) |
| **Constraints** | * Not everyone in the community is geared towards setting up a business or developing an idea * Many students do not stay in Adelaide permanently (some students only stay for one year) * Small population of the community (ie. no undergraduate students) * Difficult to do a comprehensive study in a five-week timeline * Businesses in Adelaide are resistant to change * This is project will be impacted by other groups’ design. * Potential competition may arise as we always only have limited resources in Adelaide (Interview with Microsoft indicates that there are 48 hubs operating in Adelaide at the moment) |

## Napkin Pitch

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| **Collaborative Resources** | |
| **Concept**  Collaboration. In this age of instant connection and accessibility, cooperation and collaboration have become easier than ever. However, one can easily make the mistake of trying to collaborate with everyone that you can think of. This inevitably results in a project that lacks clear goals and objectives. After all, the old adage that ‘too many cooks spoil the broth’ still rings true. The question then becomes, how do you choose the right person or organization to collaborate with?  The question of how to choose who to collaborate with is underpinned by the question of who does one have a line of communication with. In other words, who or which organizations part of your network that you can approach should you have a collaborative opportunity.  What if there is a service that allows anyone from the CMUA Community to start a conversation with an appropriate person or organization that addresses one’s needs? What if this service allows one to survey who is in one’s immediate network who has the necessary expertise to advise on a specific topic? What if this service gives one an idea of how to communicate with them and what kind of minimum information they require to pique their interest?  Aside from these aspects:   1. The service can accommodate every member of the CMUA Community 2. The service is accessible from multiple points (eg. physical, online, etc.) 3. Should the information already available in the service is not enough, complementary support should also be available. | **Approach**  The approach of this solution is to have a sort of a “one-stop-shop” of information that will connect students and mentors. What kind of information will the solution provide:  For the students, or proponents in general:   1. Choices of mentors or organizations in the same industry related to their idea; 2. Means of communication to that mentor or organization; 3. Expectations of that mentor or organization as to what topics or ideas they are interested in; 4. Turnaround time, or at least when one can expect a response; 5. Other relevant information that may help the student choose (eg. general location, interests, and hobbies)   The solution would require the following solutions:   1. A document that provides a comprehensive plan for the idea or solution to be developed; 2. Background of the proponent (ie. CV or resume) 3. Expectations of the proponent as to what kind of advise or help one needs; 4. Indicator if the proponent is asking another person or organization for the same help; 5. Other relevant information that may help the mentor assess the qualifications of the proponent (eg. LinkedIn page, professional certifications, etc).   In this case, the identified parties, the would-be mentee, and the would-be mentors are incentivized. The would-be mentee will have an opportunity to have a mentor. The two parties can benefit from the development of the idea, especially if the resulting business proves to be successful. If the mentor represents a private firm or an organization, they are able to see them before everyone else possibly profitable ideas.  Finally, CMUA as the main host of this solution will immensely benefit should the solution prove to be successful. |
| **Needs and Benefit**  Based on surveys and interviews with the CMUA community, various members of the community have come up with some ideas that have the potential of being developed to a business solution. However, one of the issues the interviews have identified is the lack of a mentor, or at least, access or a line of communication to an appropriate mentor. This shortcoming constitutes the basic need that our solution intends to address.  Aside from that, our solution provides other benefits such as:   1. Improving CMUA’s links to the industry which leads to more opportunities for students and alumni (eg. internship, employment opportunities) 2. Reinforces CMUA’s brand as a premier, top-notch graduate school focused on Public Policy and Technology. 3. By being immediately accessible to members of the community, the burden of initiating communications falls on the individual. 4. The solution allows organizations and people from the industry to see the capability of members of the CMUA community (eg. students, alumni) | **Competition**  The solution, as with all ideas, isn’t immune to competition and constraints. Some of those are:   1. There are already multiple avenues or platforms that enable the same result. For example, there are innovation hubs within the area that provides the same opportunities of mentorship and more. 2. If one is persevering and industrious enough, a quick internet search should provide the same information the solution can provide. 3. The buy-in of the CMUA’s administration is important, especially they will host the solution thus subject to the usual budget, space, and other variable constraints. 4. Also, the current curriculum may not be designed to add more activity to the proponent. It has been noted in previous interviews that heavy academic workload is a major constraint for students. 5. The small population of the CMUA community can be a double-edged sword for this solution. The small population can make the internal adoption of the solution easy. However, the small population of CMUA can signal the industry that the university is of minor consequence. |

## Key Assumptions

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| **Assumptions** | | | |
| **Concept name: An app that matches students with ideas with possible mentors** | | | |
| **Team: Collaborative Resources Team (Elvina, Gao, Huang, Li, Xu)** | | | |
|  | **Assumption** | **Critical (Y/N)** | **Test (thought/field)** |
| **Value test**  Customers want it and will pay for it  Partners want it | Questions to help you generate value assumptions (at least 3):  ● What needs that the customer has does the offering meet?  ● Why is it valuable for the customer to solve those needs?  ● Why is it urgent from the customer's perspective?  ● Have you considered the time sensitivity of those needs?  ● What have you assumed about a budget to meet these needs? | | |
| CMUA students need support (ie. Investment, information) from industry partners and faculty. | Y | Field Test: Interviews and surveys from students and alumni of CMUA(which potentially can be the result from student motivation team) |
| The effort of possible internal mentors can be incentivized by CMU-A and the internal mentors are satisfied with the mechanism | Y | Field Test: Interview with faculties from CMU-A |
| Possible external mentors can benefit, not just for themselves but also for the organization that they represent. | Y | Field Test: Interview with possible mentors and industry partners asking them for their goals and objectives |
| The unique potential (ie. global perspective) of the projects can benefit the industry partner | Y | Field Test: Interview with the industry partner asking how they describe a unique idea |
| The university is satisfied with the establishment of such service | Y | Field Test: Interview with the university incubator team/university admin. |
| **Execution test**  We can produce the experience technically  We can acquire customers  We can operate the business as it grows | Questions to help you generate execution assumptions (at least 3)  ● Who might be uniquely capable of producing the new offering?  ● What current capabilities would a new offering leverage?  ● What capabilities are missing and where will they come from?  ● Whose cooperation is needed, eg among partners and why would they be interested? | | |
| CMUA can hire the person-in-charge to act as the broker between the student and the mentor. | Y | Field Test: Interview with the Leadership of the CMUA administration to gauge what resources they are willing to provide |
| CMUA has a network of industry partners and organizations that it can tap as possible mentor for students. | N | Thought Test: Desktop research looking at members of CMUA community with experience in app designs and coding. |
| We can impose confidentiality agreements to all parties to protect the interest of the student (eg. student, mentor, person-in-charge) | Y | Thought Test: This should be provided as this is critical to protect the student’s interest, as well as the other parties. |
| **Scale test**  Addressable market is big enough  We can acquire customers affordably  Revenues exceed costs at scale | Questions to help you generate scale assumptions (at least 3)  ● Is this need specific to a particular customer or across a segment?  ● Is this need recurring or a one-time need? | | |
| There are ideas from the CMUA community that will entice possible mentors and organizations to help and mentor. | Y | Field Test: Interview and survey students in CMUA about their ideas and use different criteria to assess the potential of |
| The industry partners and collaborators of CMUA are interested and willing to mentor CMUA students. | Y | Field Test: Interview with representatives from industries and other possible mentors |
| The service is accessible to both students and mentors at a fixed time and location. | N | Thought Test: The service can be done in both face-to-face or through online (eg. email, mobile, etc) |
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| **Defensibility test**  We can protect advantage  Advantage increases as we grow the business | Questions to help you generate defensibility assumptions (at least 3)  ● Who are the competitors affected by the new offering?  ● Is there ‘internal’ competition you might face?  ● How are competitors likely to react?  ● What will prevent them from copying the concept quickly?  ● How and why can the team successfully defend its position? | | |
| There are platforms that provide the same service. | Y | Thought Test: Search the internet what specific services other innovation hubs provide and if they also provide the same functions as our system |
| The process is easy and user-friendly to all students. | N | Field Test: We need to run a simulation to decide this aspect and adjust procedures as necessary. |
| The service is sustainable. | Y | Field Test: an interview with CMUA Administration and asking them for their long-term plans for the Innovation Hub. |
| The branding of CMU attracts industrial partners | Y | Field Test: interview with potential firms(e.g. Google, microsoft and SA water ) |
| Business-worthy ideas and startups will be generated in the future. | N | Thought Test: This will be the result of the successful operations of the hub. |

## Learning Launch

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| **Learning launch experiment** | |
| **Concept name: The Collaborations Team Concept** | |
| **Team: Collaborative Resources** | |
| **Key assumption:** The industry partners and collaborators of CMUA are willing to mentor CMUA students. | |
| **Who**  Identify actual people, not a target market | 1. Representatives from companies or organizations such as:    1. Microsoft    2. Macquarie Investment Bank    3. Santos Ltd., Argo Investments Ltd.    4. Deloitte    5. South Australia Blockchain Association (SABA)    6. Ahrens Group Pty. Ltd.    7. Bionomics Ltd    8. Chooli Tech Pty Ltd    9. Popese Pty Ltd    10. TansTech Pty Ltd    11. Haneco Lighting Pty Ltd    12. Uber Australia    13. 58.com Australia    14. Simpliate Pty Ltd    15. Apple Australia 2. Representatives from State and Local government departments such as:    1. Department of Premier and Cabinet    2. Treasury    3. Adelaide City Council    4. South Australia Multicultural Council    5. Department for Education 3. Individuals specifically identified in previous interviews such as:    1. Ross Garnaut    2. Ric Carter    3. Tim O’Loughlin    4. Abbie Keys    5. Larry Lee |
| **Where**  Should be a specific location | CMUA Lounge Room, industry partners’ boardroom or another location convenient for the interviewees |
| **How**  The specific mechanics of the experiment | 30-minute interviews focusing on each company’s willingness to mentor a student from CMUA. The questions should also aim to identify what sort projects or ideas they are interested in. Example questions are:   1. Are you interested in developing business ideas? 2. What kinds of ideas will you be interested in? 3. How much time can you allocate for mentoring? 4. What do you want to know about your possible mentee? 5. How do you prefer to be contacted? 6. How many mentees can you or your organization handle? |
| **Cost**  A moderately detailed estimate | $300 - refreshments to be offered to all interviewees during the interview |
| **Time**  Should be strictly time-boxed | 3 months to conduct all interviews. We allocate a long time period as we expect delays setting up interviews with industry and government representatives. |
| **Confirming data (success metrics)**  Specify the data you need to confirm the assumption (especially behavioral data) and one or more success metrics | The data that will prove our assumption is the number of interviewees who agrees to mentor CMUA students once the process has been finalized. Specifically:   1. 13 out of the 25 total interviewees agree to mentor CMUA students 2. 8 out of the 15 representatives from the industry agrees to mentor CMUA students. 3. 3 out of 5 of the government and public departments agrees to mentor CMUA students 4. 3 out of the 5 individuals agree to mentor CMUA students |
| **Disconfirming data**  Predict data your test may generate that will disconfirm your assumption | The data that will disprove our assumption is the number of interviewees who declines to mentor CMUA students once the process has been finalized. Specifically:   1. 16 out of the 25 total interviewees declines to mentor CMUA students 2. 9 out of the 15 representatives from the industry declines to mentor CMUA students. 3. 4 out of 5 of the government and public departments interviewed declines to mentor CMUA students 4. 4 out of the 5 individuals interviewed declines to mentor CMUA students |
| **Other notes** | 1. Individual interviewees, who are also part of organizations or firms on the interview list *(eg. Abbie Keys from Microsoft and Larry Lee from Macquarie Bank)*, should explicitly declare if they are answering personally for themselves or if they are answering on behalf of the organization that they are a part of. |

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| **Learning launch experiment** | |
| **Concept name:  The Collaborations Team Concept** | |
| **Team: Collaborative Resources** | |
| **Key assumption: CMUA students need support (ie. Investment, information) from industry partners and faculty.** | |
| **Who**  Identify actual people, not a target market | Alumni:   1. Zaidul Alam 2. Erick Rodriguez 3. Javier Echegaray   MSPPM Students:   1. Rama Wirawan 2. Carl Dwight Demetria 3. Lucia Avellaneda 4. Avery Quillen 5. Anne Chivunde   MSIT Students:   1. Aman Agarwal 2. Donna Frida Safiera 3. Freedierick Paulo Claud 4. Nitesh Singh 5. Nichole Yang   MISM Students:   1. Bob Feng 2. Honda Zhang 3. Kailun Deng 4. Andrey Liu 5. Qingyang Luo |
| **Where**  Should be a specific location | CMUA Premises |
| **How**  The specific mechanics of the experiment | Conduct 30 minute interviews with each person. Interview questions are:   1. Do you have innovative ideas that you would like to further develop? 2. If yes, what kind of external and internal assistance you would like to receive? 3. Who do you prefer to be be your mentor? 4. How often would you like to engage with the mentors and partner companies? 5. What would be the best format to link you with the mentors and partner companies? |
| **Cost**  A moderately detailed estimate | 18 interviews in total, including approximately 9 hours of manpower.  $ 100 extra to buy interviewer drinks. |
| **Time**  Should be strictly time-boxed | 2 months to complete all the interviews. We expected to complete the interview based on current students in this first month and interview with our alumni in the following month. |
| **Confirming data (success metrics)**  Specify the data you need to confirm the assumption (especially behavioral data) and one or more success metrics | The data which would confirm that our assumption is true is that the proportion of people from different groups who believe the students need help from industry partners. Specifically:   1. 2 out of the 3 alumni agree that the students in CMUA need support from faculty and industry partners 2. 3 of the 5 MSPPM students think that they need support from industry partners 3. 4 of the 5 MSIT students say that they need support from industry partners and faculty 4. 3 of the 5 MISM students agree that they need the help provided by industry partners |
| **Disconfirming data**  Predict data your test may generate that will disconfirm your assumption | 1. Only one-third of the total interviewees don’t think that they need support from faculty and industry partners 2. Only one faculty thinks that the students can do things well without the help from industry partners 3. Two-fifths of the MSPPM students don’t think that they need support from industry partners 4. One-fourth of the MSIT students say that they don’t need support from industry partners and faculty 5. Two-fifths of the MISM students disagree that they need the help provided by industry partners |

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| **Learning launch experiment** | |
| **Concept name: The Collaborations Team Concept** | |
| **Team: Collaborative Resources** | |
| **Key assumption:** We can impose confidentiality agreements to all parties to protect the interest of the student (eg. student, mentor, person-in-charge) | |
| **Who**  Identify actual people, not a target market | The university leadership team particularly:   1. Prof. Emil Bolongaita; 2. Deputy Head Danu Miriyagalla; 3. Faith Yong; 4. Ben Olijynk |
| **Where**  Should be a specific location | At Professor Emil Bolongaita, Professor Danu Miriyagalla, Ben Olijynk and Faith Yong’s office. |
| **How**  The specific mechanics of the experiment | Interview to Professor Emil Bolongaita, Professor Danu Miriyagalla, Ben Olijynk and Faith Yong   1. The service must integrate mandatory confidential agreement to protect students’ intellectual property, as part of the leadership team, would you support this idea? 2. Can we implement such an agreement under the University’s policy, if we consider using a broker or a digital platform as an intermediary between students and the resources. |
| **Cost**  A moderately detailed estimate | 30-minute interviews with each individual |
| **Time**  Should be strictly time-boxed | One month, taking the busy schedule of the management team into consideration. |
| **Confirming data (success metrics)**  Specify the data you need to confirm the assumption (especially behavioral data) and one or more success metrics | The data that would prove the assumption is validated is the proportion of interviewees who agree that we can impose confidentiality agreements to all parties to protect the interest of the student. Specifically:   1. All interviewees (professors) agree that both the university and partners are supportive of protecting the rights of students. 2. The university agrees to shoulder the costs associated with confidentiality agreements as part of the operations of the Innovation Hub |
| **Disconfirming data**  Predict data your test may generate that will disconfirm your assumption | 1. If the leadership, particularly Prof. Emil Bolongaita disagrees to using a confidentiality agreement; or 2. If the university cannot shoulder the associated costs |

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1. Since there is an assumption of blah blah blah [↑](#footnote-ref-1)