

ASSESSMENT OF THE JAMAICA INNOVATION  
ECOSYSTEM AND THE PREPARATION OF A DRAFT  
STRATEGIC PLAN

For

**THE DEVELOPMENT BANK OF JAMAICA**

Prepared by:

Wayne Beecher



## Assessment Report

June 2018

### Document Management

#### Revision History

Date of this revision:

Revision date	Previous revision date	Summary of Changes	Author	Changes marked
June 20, 2018	-----	Version 1.1	Wayne Beecher	

#### Approvals

This document requires the following approvals.

Signed approval forms are filed in the Management section of the project file.

Name	Signature	Title	Date of Issue	Version
Audrey Richards		Project Coordinator		One (1)

#### Distribution

This document has been distributed to

Name	Title	Date of Issue	Version

**TABLE OF CONTENTS**

- 1 EXECUTIVE SUMMARY..... 6
- 2 INTRODUCTION ..... 11
  - 2.1 Background ..... 11
  - 2.2 Assessment Approach ..... 11
  - 2.3 Design Thinking Process ..... 12
- 3 STRATEGIC CONTEXT ..... 13
- 4 INNOVATION ECOSYSTEM MAPPING ..... 15
  - 4.1 Ecosystem Mapping ..... 15
    - 4.1.1 Public sector initiatives ..... 15
    - 4.1.2 Academia ..... 17
    - 4.1.3 Private sector initiatives ..... 19
    - 4.1.4 Planned private sector initiatives ..... 21
- 5 INNOVATION ASSESSMENT LISTENING BOARD ..... 23
  - 5.1 Key Challenges..... 24
    - 5.1.1 Culture challenges ..... 24
    - 5.1.2 Intellectual property..... 25
    - 5.1.3 Financing ..... 26
    - 5.1.4 Lack of Advance Business Support ..... 27
  - 5.2 Key Industry Factors ..... 29
- 6 STRATEGIC ANALYSIS..... 31
  - 6.1 Value Chain Analysis ..... 33
  - 6.2 Current Strategic Canvas ..... 35
  - 6.3 Challenges & Opportunities..... 36
    - 6.3.1 Entrepreneurial Movement towards an Innovation Culture ..... 36
    - 6.3.2 Advance Business Support..... 38
    - 6.3.3 Mentorship ..... 38
    - 6.3.4 Intellectual Property Commercialization. .... 38
    - 6.3.5 Innovation Fund ..... 39
    - 6.3.6 Collaboration Platform ..... 39
- 7 STRATEGIC PLAN ..... 41
  - 7.1 Design Principles ..... 41

7.2	Strategy Characteristics.....	42
7.2.1	Tagline:.....	42
7.2.2	Strategic focus:.....	42
7.2.3	Strategic divergence.....	42
7.2.4	Strategic vision:.....	42
7.2.5	Strategic goal:.....	42
7.2.6	Strategic mission:.....	42
7.3	Strategic Framework.....	43
7.3.1	Innovation fund.....	43
7.3.2	IP Commercialization platform.....	43
7.3.3	Integrated Innovation.....	44
7.3.4	Acceleration.....	44
7.3.5	Adaptive financing.....	44
7.4	Strategic Canvas.....	46
7.5	Strategic Options.....	47
7.5.1	In-direct approach.....	47
7.5.2	Direct approach.....	47
7.5.3	Catalyst approach.....	47
8	BUSINESS MODEL & Implementation.....	49
8.1	Business Model Canvas.....	49
8.2	Funding Strategy.....	50
8.3	Implementation Plan.....	51
8.3.1	Indicative execution calendar.....	51
8.3.2	Indicative budget.....	52

## 1 EXECUTIVE SUMMARY

Recent trends of lowering levels of inflations, reducing policy rates and other improving macroeconomic conditions, support the recent World Bank forecast for modest GDP growth of 2.3% by 2019 for Jamaica. However, issues related to competitiveness and productivity could jeopardize its growth potential. Jamaica's productivity, as measured by output per worker, has declined by 7.1 % over the last decade. This compares unfavourably to growth in productivity of 13.5% in the US, 5.2% in the UK and 8.1% in Canada; the country's major trading partners. Only entrepreneurship driven by deep innovation, enabled by technology and appropriately positioned to leverage its unique strategic advantages, have proven to be globally competitive enterprises that can positively impact the economic growth and competitive advantage of a nation.

This assessment was conducted to understand the challenges and opportunities in the ecosystem supporting the development of dynamic firms with global competitive potential. The assessment did confirm that there are several initiatives in execution; or planned, that could contribute to the development of a vibrant entrepreneurship and innovation ecosystem. However, there seems to be no definite strategic intent which orchestrates these disparate initiatives. Though some of these initiatives may be deemed successful on an individual level (even without clear measures of success being established), those successes have little or no impact on the factors necessary to drive productivity and competitiveness at the microeconomic level. Although the public sector has the highest number of activities in the ecosystem; indicating the government's commitment to stimulate entrepreneurship, these activities tend to be more appropriate for microenterprises, which have not proven to be effective in delivering a positive impact on economic growth.

The assessment revealed notable gaps that must be bridged to create a viable and vibrant entrepreneurship and innovation ecosystem, which are highlighted in the figure 1 below. Perhaps the prime directive resulting from the strategic analysis is the need to create a cultural shift towards a more entrepreneurial mindset, coupled with financing and support, designed to unleash the full potential of the "majority" who are often excluded from the economic playing field due to restriction in access to the required resources.



Figure 1: Key Challenges & Opportunities resulting from the empathic listening exercise

In responding to these challenges and opportunities a strategic framework was developed which comprise the following elements:

- Setting up an Innovation Fund, which would be used to finance research and innovation during the early stages of the business development lifecycle when the business has no revenue from customers;
- Establishing an Intellectual Property (IP) Commercialization platform to facilitate the capture, registration, promotion and monetization of intellectual property assets; and
- Creating an integrated business support platform which supports Incubation and Acceleration of high potential entrepreneurs with the capacity to scale globally. This would include an advance business development framework based on the human centred, design principles adopted to stimulate innovation.

## ANNEXES

ANNEX I	Stakeholders Mapping
ANNEX II	Listening Board: Culture
ANNEX III	Listening Board: Intellectual Property& Legal Issues
ANNEX IV	Listening Board: Financing Challenges
ANNEX V	Listening Board: Business Support Services
ANNEX VI	Key Industry Factors
ANNEX VII	Indicative Budget & Calendar



## KEY DEFINITIONS

**Research & Development:** Systematic creative work resulting in the creation of a new body of knowledge used to formulate new materials or entire new products as well as to alter and promote existing ones.

**Innovation:** The process of translating knowledge, ideas or interventions into products or services that create value for which a customer will pay.

**Entrepreneurship:** A human experiment designed to generate sustainable business models to deliver new products and services to the market under conditions of extreme uncertainty.



## 2 INTRODUCTION

### 2.1 Background

The Development Bank of Jamaica's (DBJ's) strategy increasingly gives focus not only to facilitating access to credit, but also access to equity (via the Jamaica Venture Capital Programme, JVCP) to provide long term financing solutions for high potential businesses. With a focus on facilitating economic growth, the programme seeks to foster the development of a dynamic ecosystem for private equity and venture capital (VC) investing in Jamaica.

The JVCP is focused on supporting the development of an entrepreneurial and early stage ecosystem in Jamaica. One of the main imperatives will be to foster the development of a sustainable deal flow of investment ready businesses. In developing strategies to build the entrepreneurial ecosystem, DBJ seeks a greater appreciation of the existing initiatives, the synergies among these initiatives and their effectiveness in stimulating entrepreneurship and innovation, as well as catalysing a pipeline of new businesses, which have the potential to compete and grow locally, regionally and globally.

The JVCP aims to spearhead a multi-year programme aimed at fostering greater collaboration among private and public-sector stakeholders, promotion of innovation and driving the development of an entrepreneurial ecosystem which will equip all ecosystem players with the required resources to achieve the vision, that:

*"By 2020, Jamaica is among the top three entrepreneurial and investment hubs for the Caribbean and Central America".*

### 2.2 Assessment Approach

The assessment was done with a view of creating a sustainable model for the establishment of an Entrepreneurship and Innovation Hub. As such, the assignment followed the protocol usually employed in developing an innovative entrepreneurial enterprise. The latest protocol for developing human center world class firms is the design thinking process. No quantitative methods were used to undertake this assignment, rather a qualitative approach which relies on deep engagement and empathic listening was applied to the assessment. The assignment was undertaken in collaboration with DBJ team, which participated in the process of broadly identifying the general problems, emphatic listening engagement and ideation sessions to generate possible solutions.

## 2.3 Design Thinking Process

The assessment was done with a view of creating a sustainable model for the establishment of an Entrepreneurship and Innovation Hub. As such, the assignment followed the protocol usually employed in developing an innovative entrepreneurial enterprise. Following a board definition of the issues, the exercise began with an emphatic listen exercise designed to develop a deep understanding of the challenges, pain and needs of emerging opportunity driven entrepreneurs. This was followed by a definition of the main challenges and opportunities related to those challenges. Ideation sessions were then conducted, and a model generated to frame the solution. The next step of the process is to solicit feedback from the stakeholder on the desirability, viability and feasibility of the model. The final step in the process is to implement the model by operationalizing an Entrepreneurship and Innovation Hub, to pilot the innovation process with at least one area of focus as determine during the final consultation. Appropriate monitoring and evaluation system will be incorporated the pilot period to measure performance, capture lessons learnt an evolve the model in response to market demands.



Figure 1: Innovation Process

### 3 STRATEGIC CONTEXT

Over the last three decades, the Jamaican economy has only experienced an average growth rate of 0.5% per annum, which is below the regional average of 1.5%<sup>1</sup>. However, improving macroeconomic indicators are signally a potential positive shift towards an accelerating growth trajectory. Recent trends of lowering levels of inflations, reducing policy rates and a stabilizing competitive exchange rate, support the recent World Bank forecast for modest GDP growth of 2.3% by 2019<sup>2</sup>. However, as a small open economy, Jamaica is exposed to external risk, along with internal constraints, which could jeopardize its growth potential.

One of the main components of the Government's growth agenda is improving competitiveness. A key driver of competitiveness and growth is productivity. However, Jamaica's productivity, as measured by output per worker, has declined by 7.1 % over the last decade<sup>3</sup>. This compares unfavourably to growth in productivity of 13.5% in the US, 5.2% in the UK and 8.1% in Canada; the country's major trading partners. Only entrepreneurship driven by deep innovation, which employs the latest developments in strategy, technology and business practices, has proven to deliver the sort of exponential productivity required to stimulate economic growth<sup>4</sup>.

**Commented [ND1]:** Aside from lack of investment in technology, could migration be a major contributor? Some are of the view that migration-remittances are a good thing but if our highly skilled citizens are leaving how can we expect productivity to improve?

However, while Jamaica is "one of the leading islands for total entrepreneurial activities in the Caribbean"<sup>5</sup>, not all entrepreneurial activity will contribute to improved productivity and competitiveness. Indeed, the Global Entrepreneurship Monitor Report indicates the prevalence of a higher rate of necessity driven entrepreneurial activities when compared to opportunity driven entrepreneurship in the Jamaican landscape. To achieve the development impact required, a notable shift from necessity driven entrepreneurship to opportunity driven innovative entrepreneurship will contribute more to increasing rate of economic growth<sup>6</sup>. Innovative entrepreneurs usually adopt strategic technologies and business models to overcome gaps in the market and solve problems which not only improve their own competitiveness but has a cascading impact on the overall economy. For the Jamaican economy to develop traction towards rapid growth momentum, massive investment is required to attract, unleash and empower a new class of innovative entrepreneurs who can compete locally and globally.

---

<sup>1</sup> Average real GDP growth rate according to the World Development Indicators.

<sup>2</sup> Global Economic Recovery; World Bank 2017

<sup>3</sup> BOJ

<sup>4</sup> Prof. Bourne (2010).

<sup>5</sup> Global Entrepreneurship Monitor (GEM) Jamaica Report 2017

<sup>6</sup> Prof. Bourne (2010) presentation on Entrepreneurship and Economic Growth

However, constraints exist within the entrepreneurial ecosystem which stifle the emergence of innovative entrepreneurial ventures. This report will seek to uncover these constraints and make recommendations, convert these challenges to opportunities and suggest a strategic framework to exploit these opportunities to achieve greater social and economic impact.

## 4 INNOVATION ECOSYSTEM MAPPING

### 4.1 Ecosystem Mapping

There are several innovation initiatives in execution or planned that point to the potential for a vibrant ecosystem. However, there seems to be no definite strategic intent which orchestrates these incongruent initiatives. Though some of these initiatives may be deemed successful on an individual level (even without clear measures of success being established), those successes have little or no impact on the factors necessary to drive productivity and competitiveness at the microeconomic level.

The diagram below provides a graphical highlight of the initiatives supportive of innovative entrepreneurship.

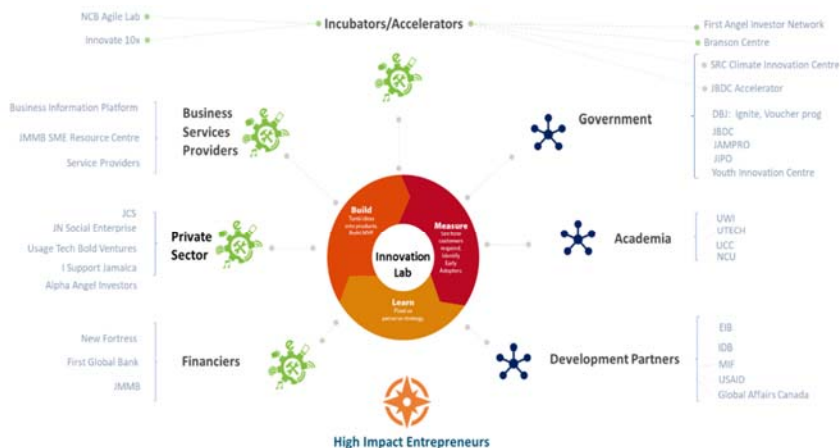


Figure 2: Innovation Ecosystem Stakeholder Mapping

#### 4.1.1 Public sector initiatives

The public sector has the highest number of activities in the ecosystem, indicating the government's commitment to stimulate entrepreneurship. However, most of these activities tend to be targeted at microenterprises and conventional forms of business formation. A summary of the main public-sector lead initiatives supportive of innovation enabled entrepreneurs is captured in the table below.

Table 1: Public Sector initiatives supporting innovative entrepreneurs

Public	Service Offered	Segment	Ecosystem Role	Strategy	Action
JDBC Accelerator	Capacity Building	Entrepreneurs	Facilitator	Align curriculum and establish partnership for deal flow	Partnership
JDBC Incubator	Capacity Building	MSME	Facilitator	Align curriculum and establish partnership for deal flow	Partnership
SBDC	Capacity Building	SME	Facilitator		Affiliate
JAMPRO	Access to Markets and FDI	Corporate	Networks access	Leverage existing channel to engage diaspora and potential international partners for skill set transfer and investments for early stage entrepreneurs	Partnership
SRC	Research & Development	Impact entrepreneurs	Innovation support	Leverage existing capacity in agricultural processing and personal care development to support MVP product development for non-digital entrepreneurs	Partnership
Climate Change Innovation Centre	Incubate climate technology solutions	Entrepreneurs	Innovation	Align curriculum and establish partnership for deal flow	Affiliate
E-Government	Ideate technology solution	Public Sector	Innovation	Identify opportunities to scale internal solutions	Affiliate
JIPO	Administration of Intellectual Property	Individual and enterprise	IP Policy & Framework	Combine effort to establish a robust IP commercialization platform	Partnership



Jamaica Business Development Corporation (JBDC) is the most well established public-sector brand in the entrepreneurial ecosystem. Traditionally, their focus seems to have been on the lower end of the MSME segment, to whom they offer training, business support services, and product development. However, JBDC recent experiment with an Accelerator program, signals an expansion of their service offering and was well received by innovative entrepreneurs. The introduction of a financial support services unit to address deficiencies in the entrepreneurs' financial intelligence is also a relevant offer which supports the upscaling of entrepreneurs. This offer could be more valuable to the entrepreneurs if it was complemented by funding to support innovative experimentation and business model development during the early stages of their enterprises. JBDC had recently experimented with the provision of credit financing; however, pivoted away from that model due to portfolio quality challenges. The provision of retail credit by government entities has historically been a challenge due to the moral hazard related to the prevailing political culture. Hence, a partnership to support JBDC accelerator program with innovation funding through a private entity should prove a powerful value proposition to stimulate the rise of innovation driven entrepreneurship.

**Commented [ND2]:** Would like to know more about this

**Commented [ND3]:** Would like to see banks/VCs/PE firms partner with each accelerator/incubator.....UTECH -JMMB & RevUp-NCB are current partnerships.....there is room for more

The Scientific Research Council (SRC) and The Jamaica Intellectual Property Office (JIPO), are perhaps the government's most latent assets in catalyzing an innovation ecosystem. It is reported that Jamaica has the highest levels of intellectual property assets in the region<sup>7</sup>. However, the commercialization of these intellectual property assets is not being sufficiently pursued or actualized at a rate at which they can have a notable microeconomic impact on the competitiveness and productivity of local firms. To unlock the unrealized value of these intellectual assets, a combination of: deeper engagement with the private sector; adaptation of an entrepreneurial mindset; and the development of greater levels of expertise clustered around the generation, valuation, protection, monetization and commercialization of intellectual property is required.

**Commented [ND4]:** This confirms recent conversations the team had with individuals in the innovation space regarding technologies that are here

#### 4.1.2 Academia

Most successful entrepreneurship and innovation ecosystems are anchored around a robust and dynamic academic foundation. One example of this is the impact Sandford University had on the development of Silicon Valley.

---

<sup>7</sup> Dr. Cliff Riley, executive director SRC and Dr. Winsome Leslie, IDB consultant designing an innovation program for JIPO; 2018

The educational and academic system in Jamaica has not yet fully evolved from the conventional model typical of the industrial age when most of these institutions were conceived. Geared towards delivering a skilled workforce for the industrial and commercial complex, entrepreneurship is not yet well established or infused in the curriculum of most educational institution. However, most tertiary institutions do have well established research capacity. The University of West Indies (UWI) and University of Technology (UTECH) do have a repository of research-based body of knowledge that could be transformed into intellectual property assets. Stakeholders from both institutions and the SRC posit that that many of the research emanating from these institutions have notable commercialization potential. The SRC pointed out that a key part of their initialization process, when undertaking new ventures, is to do a research of the papers publish by these universities.

Given the wealth of the R&D potentials residing in the main universities, why are there not more innovation driven ventures emerging out of the academic community? Cultural constraints enabled by incentive programs not designed to support the commercialization of IP are areas that need to be further explored to adequately answer this question. Nonetheless, there are some promising initiatives indicating a shift towards the academic community support for innovation driven entrepreneurship. The table below highlights the current academic lead initiatives supporting innovative entrepreneurs and the strategic positioning of these initiative in emerging innovation ecosystem.

Table 2: Academic initiatives supporting innovative entrepreneurs

Academia	Service Offered	Segment	Ecosystem Role	Strategy	Action
UWI	Entrepreneurship & Commercialization Centre Co-Working space	Pre-Seed	Facilitator	Align curriculum and establish partnership for deal flow	Partnership
UTECH TIC	Co-Working space	Early Stage Firms	Facilitator	Align curriculum and establish partnership for deal flow	Partnership
UTEC Corporate Labs	Research & Incubation	Corporate Sponsors	Facilitator	Align curriculum and establish partnership for deal flow	Partnership
X Labs	Prototyping Lab	Pre-Seed	Innovation supplier	Incorporate lessons learnt from pilot and partner to scale effort to add an inventive and practical dimension to the co-	Partnership

				working model.	
<b>NCU</b>	Capacity Building	Pre-Seed/ Seed	Facilitator	Opportunity to establish entrepreneurship & agricultural research technology expertise beyond the corporate area, for a more inclusive model	Partnership
<b>UCC</b>	Pitch Coaching	N/A	Facilitator	Leverage partnership with Seed Stars World to improve local capacity building	Affiliate

1

he main innovation/incubation programs offered by the University of the West Indies (UWI) and the University of Technology (UTECH seem to focus primarily on offering co-working spaces for startup entrepreneurs. UWI recently pivoted from an incubator, to an entrepreneurship and commercialization unit, with the intent to capitalize on R&D potential of the wider university community. Although its early days, this effort seems to be limited by a lack of legal skills needed to execute transaction involving intangible assets. UTECH partnership with private corporate sponsors to establish technical labs to work on specific business challenges is a step in the right direction and should be supported and expanded. This initiative sets the framework for deeper levels of Academic and Private-sector engagement which is critical to a thriving innovation ecosystem.

**Commented [ND5]:** So this is where the recent JIPO intervention fits in. Maybe we can follow-up to see how conversations with financial institutions regarding IP backed financing are progressing

**4.1.3 Private sector initiatives**

Sensing the opportunities emerging in the entrepreneurship landscape, several innovative entrepreneurs have begun to emerge; particularly in the digital economy and agricultural technology landscape. However, this class of entrepreneurs are constrained due to lack of available support, appropriate to their level of needs. However, few private organizations have responded to the growing demands for a more sophisticated business support platform. Some of these initiatives are in their formative stage, hence their levels of success and efficacy cannot be clearly established; nonetheless, it is an encouraging trend. The table below highlights the current private-sector lead initiatives supporting innovative entrepreneurs, and the strategic positioning of these initiatives in emerging innovation ecosystem.

Table 3: Private Sector initiatives supporting innovative entrepreneurs

Private	Service Offered	Segment	Ecosystem Role	Strategy	Action
First Angel Network/ICD	Angel Investment & Capacity Building	Growth Firms	Demand Condition	Align curriculum and establish partnership for deal flow	Affiliate
Alpha Angel	Angel Investment	Growth Firms	Demand Condition	Align curriculum and establish partnership for deal flow	Affiliate
Branson Centre - Accelerator	Capacity Building	Growth Firms	Demand Condition	Align curriculum and establish partnership for deal flow	Affiliate
NCB Agile Lab	Ideate and Incubate...Fin Technology	Internal to NCB	Influence Innovation	Identify opportunities to scale internal solutions	Affiliate
Innovate10x	Ideate and Incubate...Fin Technology	B2B	Influence Innovation	Identify opportunities to scale internal solutions	Affiliate

First Angel Ja and Branson Centre of Entrepreneurship have the highest levels of brand awareness of all the current innovation initiatives. Launched in July 2014, First Angel Ja is the first angel investment network in Jamaica. To date, it has made nine (9) investments from 126 completed applications. Alpha Angels is Jamaica’s second angel investor network based in Montego Bay. However, Alpha Angel is less active and has only made one investment to date. The Branson Centre began operating as an incubator for pre-seed and startup entrepreneurs. The incubation program included a variety of platforms to serve their clients and was successful in engaging 2,146 entrepreneurs via their virtual platform and over 1,000 at training events. The pivot from a seemingly successful incubation program to an acceleration model seems not to be based on market demand, but a strategic decision to better leverage its resources to develop a sustainable business model. The acceleration program targets early stage and growth firms. No direct funding is offered to the participants; however, the Branson Centre has established referral arrangements with a few local financial institutions.

NCB and JMMB have led the way in establishing innovation labs in pursuit of disruptive innovation that could inspire exponential growth in their business. These are well established financial local institutions, but with stated ambition to pursue regional and international growth. NCB Agile Lab has an internal client focus, however, the skills set acquired could have spillover

effect on the wider ecosystem; either through the migration of talent to serve other players in the industry, or by encouraging rival firms to pursue similar or better innovation capabilities as a strategic response. JMMB is the main sponsor for Innovate 10x and will be the main client of the lab in the early stages. However, Innovation 10x is designed to serve other firms within and without the financial sector.

#### 4.1.4 Planned private sector initiatives

The table below highlights the emerging private-sector lead initiatives planned to support innovative entrepreneurs and the strategic positioning of these initiative in emerging innovation ecosystem. Although some of the concepts are still being developed, the quality of the partners and stated intent of the initiatives, makes them ideal partners of the Entrepreneurship and Innovation Hub, and as such required early engagement.

Table 4: Planned Private Sector initiatives supporting innovative entrepreneurs

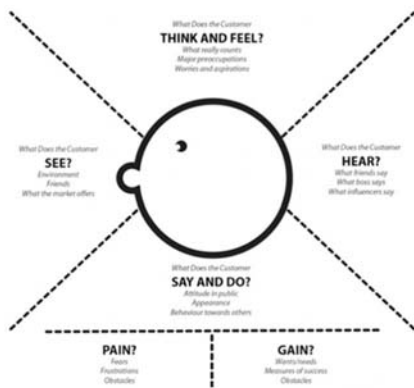
Planned Initiatives	Service Offered	Segment	Ecosystem Role	Strategy	Action
<b>New Fortress International</b>	Institute of Entrepreneurship	Entrepreneurs	Facilitator	International access to human capital, network and mentorship. Potential investor for an Innovation Fund	Partnership
<b>First Global Bank</b>	SME Innovation Lab	SMEs	Demand Condition	Commercial insights and potential corporate venture investor	Partnership
<b>JN Enterprise Jamaica</b>	Social Enterprise Innovation	Impact Entrepreneurs	Facilitator	Potential deal flow for impact entrepreneurs; Potential corporate venture investor	Partnership
<b>Business Information Platform</b>	Online tool to support start up enterprises	Entrepreneurs	Facilitator	Modify concept to create an automated platform to	Partnership

<b>(BIP)</b>				coordinate the entire ecosystem.	
<b>IP Exchange</b>	Platform to valuation & trading IP Assets	Inventors & creators	IP management	Modify existing concept to create a comprehensive commercialization platform, to include developing IP and Innovation expertise	Partnership
<b>JMMB SME Resource Centre</b>	Business Development	Entrepreneurs	Demand Condition	Align curriculum and establish partnership for deal flow	Affiliate
<b>Usage Technology - Bold Ventures</b>	Networking and Knowledge space for digital engineers	Digital Engineers	Influence Innovation	Align curriculum and establish partnership for deal flow	Affiliate
<b>Jamaica Computer Society</b>	Co-Working Space and Digital Technology Hub	Digital Engineers	Influence Innovation	Align curriculum and establish partnership for deal flow	Affiliate

## 5 INNOVATION ASSESSMENT LISTENING BOARD

In undertaking the assessment of the local innovation landscape, an empathic listening exercise was conducted. A tool was specifically designed to capture the qualitative responses from the stakeholders; and deduce the existing challenges and corresponding emerging opportunities. The tool is called a “Listening Board”. It represents a practical application of the philosophy underlying “human centered design thinking” originating from IDEO, Standard University. It is also consistent with the “bottom up” approach to entrepreneurship development posited by Danny Warshay, Executive Director of Johnathan M. Nelson Center for Entrepreneurship at Brown University and serial entrepreneur.

Empathic listening methodologies were used to gather an in-depth understanding of the issues affecting the players in the innovation value chain. The assignment was undertaken from the perspective of the entrepreneurs pursuing innovative ventures. The listen board exercise captured responses from over 80 stakeholders from over 30 organizations operating in the innovation ecosystem landscape.



### Listen Board Methodology

Consultative exercises included: focus group discussion and meetings with individuals and teams from stakeholders’ groups within the ecosystem

Experiential exercises included: ideation meetings, business development sessions with several entrepreneurial groups, user experience of the services at existing incubators and co-working spaces, emersion in social media platforms and chat groups used by regional digital engineers

The listen Board captures the challenges from stakeholders. The responses are then categorized and prioritized based on the frequency of the responses. From these responses, critical design considerations are deduced, which represent issues that must be addressed to present a relevant solution to the category of challenges. These critical design considerations are then

reframed as board solutions that must exist in a sustainable and competitive innovation ecosystem. These high-level reframed solution statements are called “key industry factors”. These key industry factors are then used to assess the strategic state of the overall ecosystem on a “strategic canvas”. The strategic canvas is a tool used in the Blue Ocean Strategy to represent the strategic positioning of a firm in new uncontested market space. The strategic canvas should clearly highlight the divergence of the strategy position away from existing competitive forces. The intent is to make the competitors irrelevant.

Four categories of responses emerge from the empathic listening exercise. These categories of responses represent notable gaps that must be bridged to create a viable and vibrant entrepreneurship and innovation ecosystem. Highlights of the main challenges emerging from the listening exercise were:



Figure 3: Key Challenges highlighted from the empathic listening exercise

## 5.1 Key Challenges

The key challenges from the listening exercise follows.

### 5.1.1 Culture challenges

Most stakeholders confidently expressed that significant entrepreneurship potential exists but is not being harnessed and adequately supported. This explains the low conversion of the



country's latent entrepreneurial potential into actual entrepreneurial activities reported by the Global Entrepreneurship Monitoring Report.

Perhaps the most pronounced obstacle to unleashing and sustaining dynamic entrepreneurial activities is the lack of the innovation-mindset which embraces failure as process on the path to success and not an outcome in and of itself. The existing social paradigm views temporary setbacks as failures, which carry significant cultural penalties and correspondingly is a limiting psychological inhibitor to innovative entrepreneurship, which often require experimentation and "failure" before success is attained. Therefore, although the link between innovation and failure is understood conceptually, and entrepreneurs may verbalize the willingness to take risk (such as starting a new business); the deep rooted psychologically fear of failure, will force them towards less risky ventures that do not expose them to the rigors of the innovation process.

Commented [ND6]: Solid point

Most stakeholders indicated that "Trust" is an issue in the ecosystem. Entrepreneurs express extremely low levels of trust in the government. The mistrust seems to stem from the negative impression about the current tribalistic political culture, which is perceived as systemically corrupt and exploitive of the "small man" and by extension small enterprises. The nepotistic nature of the political culture also undermines meritocracy and diminish the value of hard work and bold risk taking, which may not yield the correspondent rewards. This is compounded by the perception of incompetence and stifling bureaucracy, as evidenced by the recently suspended "Startup Jamaica" program executed by the government to support digital entrepreneurs. Most entrepreneurs perceived the current bureaucratic culture in the public sector to be in direct conflict to the innovative and dynamic culture required to support entrepreneurs who can be globally competitive. They perceive that the current environment is unfriendly to innovators due to: limited access to finance, inappropriate business support programs and an unfriendly legal and tax system, which they just don't understand. For example: the application of a standard minimum business tax on a startup firm engaged in research and development, and not yet earning revenue, is inexplicable.

Commented [ND7]: I thought we would have an R&D tax credit policy.....

Entrepreneurs and some stakeholders also expressed that the culture of financial risk aversion is a further bottleneck to innovation. The general perception is that investors still expect high returns for minimum risk, and thus not receptive of disruptive innovations, which they don't understand, and show little interest in researching. This has resulted in some entrepreneurs and innovators expressing little or no interest in equity investments, even though they have potential Intellectual Property (IP) assets that could be commercialized.

### 5.1.2 Intellectual property

The research highlighted the need for a standardized or acceptable methodology for valuing Intellectual Property (IP), as none currently exists. Thus, establishing the need for a

comprehensive "Innovation Policy or Framework" to incentivize the creation, management and protection of IP. A comprehensive framework for managing (protecting") IP can be a precursor to the rise of a competitive nation; Taiwan<sup>8</sup> is a worthy case study in this regard.

A review of the definition of "assets" within the context of IP, and the implication for the emergence of "Intangible Assets" class needs urgent considerations by financial players within the innovation ecosystem. The impact on the design of new financial products and the business valuation could be game changing; particularly, given that traditional commercial banks currently have limited capacity for managing the risk associated with unsecure innovative ventures.

Notable commercialization potentials exist within the university system but are not being commercialized. The major constraint expressed relates to cultural issues emanating from the incentive program for researchers and faculty, which encourages peer review publication over pursuing the commercialization of innovation. However, there is also resource constraints due to inadequate resources available to support R&D generation for commercialization. The universities reported that they have referred some R&D innovations to the SRC; however, they are not sure of the progress thereafter, as there is no formal mechanism to track further developments.

Almost all stakeholders expressed concerns about the limitation of expertise in IP management (patent, deal structuring, etc.) to meet the needs of the growing demand for innovation services, particularly improvement in the quality and quantity of legal expertise in IP Laws and Regulation. This is important since most of the stakeholders expressed a lack of awareness of the effectiveness of Trademark Regulations and enforcement capacity.

### 5.1.3 Financing

Almost all stakeholders expressed concerns that there are limited financing options to support R&D and innovation during the design thinking process necessary to generate innovative early stage firms. Although angel investment networks have emerged as alternative to commercial

---

<sup>8</sup> <https://www.forbes.com/sites/michellegreenwald/2017/02/07/how-taiwan-is-reinventing-its-national-culture-from-manufacturing-efficiency-to-innovation-ip/#5e9017f96650> and [https://www.moega.gov.tw/Mns/english/content/Content.aspx?menu\\_id=1743](https://www.moega.gov.tw/Mns/english/content/Content.aspx?menu_id=1743)

banking finance, the networks are in their nascent stage, and have not yet achieved critical mass. In fact, entrepreneurs expressed more interest in classically designed angel investment networks when compared to venture capital investments. However, they did indicate that current angel investment options seem to target more mature firms and have adopted due diligence process more appropriate for firms in the growth phase of their business development. In addition, the due diligence process for current early stage financing options does not consider where the businesses are in their development lifecycle, the value of their IP and brand potential. As a result, the entrepreneurs express concerns that current financial products are not appropriate to their needs.

**Commented [ND8]:** I think this is okay, just shows that we need more Angels/Angel groups. They'll invest in areas that fit their risk appetite

The absence of a standardized business valuation methodology has impacted the take up of equity financing. Agreeing to a business valuation is an uncomfortable discourse for most entrepreneurs; one that some are willing to avoid at the sacrifice of capitalizing their business for growth. Some entrepreneurs also indicated that the business acumen and credibility of investors cause concern when contemplating sharing equity in their business.

**Commented [ND9]:** Further explanation required. Are they saying that the investors don't understand the needs of a startup?

Potential financiers expressed concern about the quantity and quality of qualified deal flow driven by deep innovation.

#### 5.1.4 Lack of Advance Business Support

Almost all early stage entrepreneurs indicate that they did not just want financing but; instead they required a full suite of services which include: sound advice, access to network as well as financing. They also indicated a need for advance capacity building service which they believe is a critical factor in growing their business. It was suggested that some capacity building programs could be offered:

- shared services platform for financial, administration;
- mentorship and access to global networks (for investment and customer acquisition);
- a road map to successfully navigate all the services available to assist them in growing their business;
- access to market intelligence is important to the design of their business model and business plan;
- industry analysis and market research for strategic analysis; and
- access to marketing and distribution channels to facilitate market penetration

**Commented [ND10]:** This sounds like the service currently being offered by SVL

**Commented [ND11]:** So an ecosystem map?

**Commented [ND12]:** I suppose some of this would be offered by Incubators/Accelerators

Participants in the pitch competitions express feelings of "anti-climax" after winning (participating in) pitch competitions because they are not aware of any structured program for incubation, acceleration or commercialization new idea.

**Commented [ND13]:** Not enough marketing on our end or are the entrepreneurs not seeking out this information?

Digital entrepreneurs express a dire need for talent with deep technical expertise in; digital engineering, design thinking, data analytics and emerging technologies (AI, IOT, blockchain,

robotics, etc.) to build out their teams and support their growth. This issue of a lack of local talent also affects non-digital entrepreneurs, particularly in the areas of product development for agricultural value-added processing, nutraceutical, naturopathic supplements, tonic, foods and drinks.

**Commented [ND14]:** We have lots of comp sci/IT grads what's happening here? Maybe local talent does not want to work in a start-up? The need for a stable income that a start-up in the R&D phase can't provide?

At an industry level, stakeholders indicated the need for human capital to develop the "Innovation Capacity" within the ecosystem. There were some concerns regarding attracting professional executives to pursue opportunity driven entrepreneurial ventures to increase the level of business sophistication in the entrepreneurial space. Such a shift could see an increase use of innovation as a strategic tool to achieve competitive advantage, with positive spill over to the entire ecosystem.

Financiers and business service providers indicate that early stage entrepreneurs are generally weak in financial strategy, planning and analysis. Based on their own self-assessment, entrepreneurs expressed an interest in strategy, innovation and entrepreneurship training which would include personal development and soft skills training.

Almost all entrepreneurs expressed the need for work space from which to develop their innovation and business model. Technology driven entrepreneurs also expressed the demand for specialized equipment and prototyping (and testing facility) workshops to develop their minimum viable products. In this regard, they felt that a Technology & Entrepreneurship Park (cluster) would enhance collaboration and connectivity between supporting organizations. This was supported by research conducted by the UWI which proposed the establishment of a Science & Technology Park which would comprise the major academic, research and commercial district in Kingston and St. Andrew.

**Commented [ND15]:** This sounds like \$\$\$




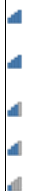
## 5.2 Key Industry Factors

Resulting from the assessment, the following Key Industry Factors were derived:

- Innovation Culture: as a main priority to support sustained engagement in the ecosystem
- Innovation Fund: to finance research and development
- Intellectual Property Platform: to generate, value, protect, manage and monetize intellectual property
- Private Sector Leadership: to build trust and engagement in the ecosystem. Entrepreneurs prefer to partner with people who believe in what they believe in, speak the same language and have the same attitude towards efficiency and openness to change
- Co-Working Space: shared space to encourage creative collaboration and develop social networks for partnership or support. This should be complemented by access to prototyping labs from which minimum viable products can be produced
- Mentorship Program: an enhancement to the current model that includes linkage to international expertise and access to new markets.
- Advance Capacity Building Services to include a shared service platform and advance training.

A summary of the Key Industry factors and the link to challenges can be reviewed below.

Table 5: Key Industry Factors

Challenges	Response Intensity	Design Considerations	Industry Factors
<b>Culture</b> Untapped entrepreneurial potential Fear of Failure Lack of Trust Financial Risk Aversion by financial players		Cultural Shift - entrepreneurial movement Private Sector lead in collaboration - Entrepreneurs serving entrepreneurs	Innovation Culture
<b>IP &amp; Legal</b> Innovation Chasm - failure to commercialize IP No centralized system for IP generation, valuation, protection and monetization Lack of Legal Expertise for IP and Patent Asset		IP Commercialization platform to capture, value, and trade IP IP Training for entrepreneurs and service providers	IP Platform
<b>Finance</b> Limited financial products design to support R&D and innovation Limited quantity and quality of qualified deal flow driven by deep innovation Investors not adequately informed of the opportunities or technologies emerging in the digital economy, which limits their investment decision		Innovation Fund : financing for intangible assets Investor Series to build knowledge and awareness of emerging opportunities	Innovation Funding
<b>Business Support</b> Business support and shared service are as critical as financing for start-up entrepreneurs. Limited local talent pool from which to attract top human resource for innovation and entrepreneurial ventures Need for training in strategy, financial analysis, personal development and leadership Demand for co-working space and prototyping workshop Need for marketing intelligence and industry research		Advance capacity building program Establish formal system for engaging the diaspora and attracting international talents to build entrepreneurial teams for high potential new ventures Mentorship Model that leverages entrepreneurs and corporate executives locally and in the Diaspora Technology Park	Capacity Building Co-Working Space Mentorship

## 6 STRATEGIC ANALYSIS

The Global Competitiveness Index ranks Jamaica 64<sup>th</sup> <sup>9</sup> (scoring 3.4 out of a highest possible score of 7) on the innovation pillar, which is below the average required for a competitive nation. This overall innovation ranking goes counter to Jamaica’s above-average ranking for the “quality of scientific research institutes”, ranking 52<sup>th</sup> with an above mean score of 4.1, which implies a dysfunction in the ecosystem as it relates to innovation transfer. Interestingly, the index assigned a mean score (3.5) for “university-industry collaboration in R&D”, indicating that notable work is required to tighten this engagement to increase the level of commercialization resulting R&D work completed by the science and research institutions. Of significant note is the country’s exceptionally low score related to the registration of patent. The country’s application of **Patent Cooperation Treaty (PCT)** patents is very low with a score of 0.4 (out of a highest possible score of 7), ranking of 81 out of the 137 countries participating in the report. This highlights extremely low conversion rate of the nation’s innovation capacity, quality of scientific research institution, spending on R&D, to globally competitive intangible assets. This correlates with the IP commercialization chasm revealed during this assessment.

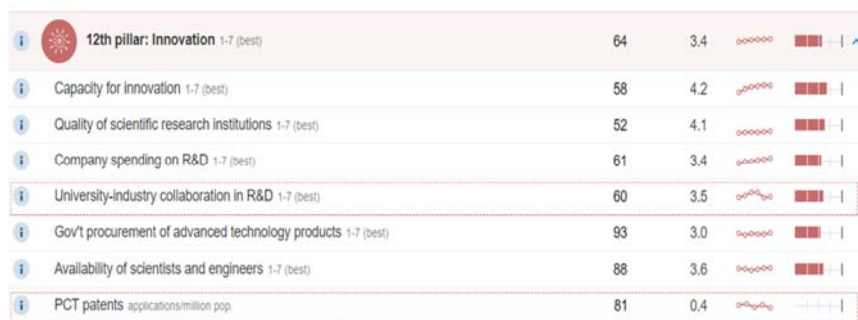


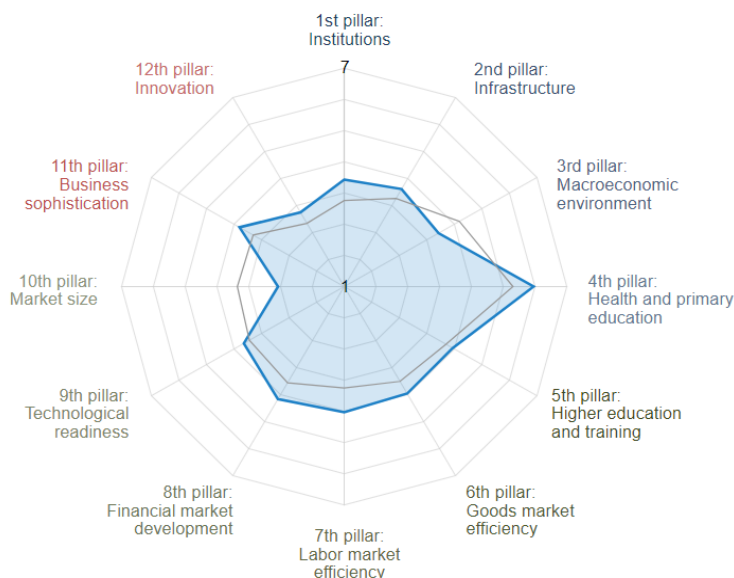
Figure 4: Global Competitiveness Index 2017-2018, Jamaica Innovation Pillar Ranking

The competitiveness of microeconomic landscape is driven by a dynamic private sector where active competition compels firms to continuously improve their innovation and productive capacity<sup>10</sup>. However, Jamaica business scope is characterized by a few large firms, dominating across a narrow economic base, seeking a deeper share of the disposable income of a relative small domestic market. As a small open state, operating in an increasingly sophisticate global

<sup>9</sup> World Economic Report; Global Competitive Report 2017

<sup>10</sup> The Competitive Advantage of Nations by Michael E. Porter. HBS

market, the sustainability of such a model is questionable; and perhaps untenable. Within the context of a global economy, Jamaica's market size already puts it at a competitive disadvantage. Global Competitiveness Report ranks Jamaica's market size at 112 (out of 137), with an assigned score of 2.4 (see Global Competitiveness Index diagram below); the lowest score of all the 12 pillars on which competitiveness is assessed. To be truly competitive, local firms must pursue opportunities in the global market. However, this will require a massive shift in strategy and innovation to improve its productivity to catch up to its more developed trading partners. Large incumbent firms who already enjoy monopolistic privileges in their industries, may not be motivated to invest in innovation, especially, if such strategic moves will stretch their capacity and force them out of their comfort zone. The complacency of incumbents is not a phenomena unique Jamaica. But it's a luxury Jamaica cannot afford if it is to realize its full potential. Innovation is normally a response to competition. Hence, new competition must be introduced to the market, hence the need for the formation of new firms with the capacity to compete. Without the capital to compete with well-established firms, new ventures must rely on innovation and technology to efficiently disrupt industry norms and gain successful entry. However, given the relative small size of the local market, these new firms must be geared towards competing in a global marketplace. Jamaica's small market size (which implies manageability); combine with its diversity, awareness of western culture and proximity to much larger markets, could be leveraged as a market to test and pilot new business models, products and services. Thus, transforming its competitive disadvantage into an advantage, when viewed



from the lens of a globally focus innovative entrepreneur.



Figure 5: Global Competitiveness Index 2017-2018, Jamaica

The competitiveness report also highlighted a few other problematic factors impacting the ease of doing business. Interestingly these factors are consistent with the feedback from the empathic listening exercise. Those factors include; access to financing, inadequately educated workforce, tax rates and tax regulation, and insufficient capacity to innovate.

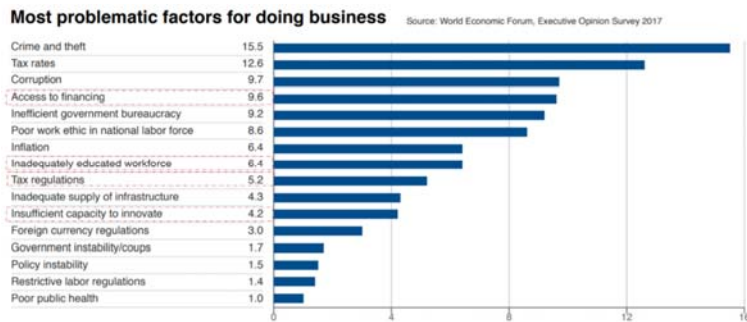


Figure 6: Global Competitiveness Index 2017-2018, Jamaica

## 6.1 Value Chain Analysis

Several uncoordinated initiatives that are not designed or coordinated to have a strategic impact on the generation of innovation and competitiveness. As such, the interventions use various practices and curricula, not necessary designed for distinct segments, or stages of the business development process or technical needs. Hence the need for a standardized curriculum. This assessment highlights the need for a business development agenda that supports entrepreneurs through the various stages of the business development lifecycle.



Figure 7: Jamaica Innovation Ecosystem Value Chain

**Commercialization Chasm:** The absence of Design Thinking as an input into the Research & Development process results in some solutions not relevant to market needs. This contributes to an Innovation Gap due to the failure to commercialize R&D being generated from academia and scientific research institutions, partly because the research produce does not respond to desirable market needs. Secondly, there are no establish system to capture desirable and viable research outputs and convert them to feasible innovations. The limited input of evidence-based R&D results limits the level of innovation incorporated in the product development and business model generated by entrepreneurs. Even if the entrepreneurs have an interest in pursuing innovative solutions, they lack the financial resources to pursue research and innovation, which could exhaust the resource personal investment before a viable innovation is derived.

The financing landscape highlights that there are limited funding options for firms at innovative stage of the process, indeed, consistent with the observed risk adverse financial culture, most of the financing options available are targeted at firms further up the business development lifecycle. Currently, the primary sources of funding for innovation include, self-financing and funding from friends and family. There is limited grant funding available from programs such as; DBJ IGNITE program and the I-Support crowd funding platform. The IGNITE program can only serve a limited number of innovation, and as tends to prefer later stage firms. The I-Support platform has low level of awareness and had no ventures listed under the enterprise section of the site. Such limited levels of innovation funding are not sufficient to stimulate the quantity of new ventures needed to enter the “funnel” through which a deal commercially viable ventures can flow.

Commented [ND16]: .

## 6.2 Current Strategic Canvas

The amalgamation of the current strategic position of the services offered to support innovative entrepreneurs is captured in the strategic canvas below. Of note is that there is no one service provider with a comprehensive business model that addresses all the critical success factors required to facilitate successful growth of innovation driven entrepreneurship. Overall, the ecosystem currently offers mediocre services in the areas of capacity building and mentorship. There is an emerging interest in co-working spaces with most incubation and acceleration programs offering some form of physical co-working spaces. There is already one privately lead co-working service in New Kingston and two more are planned for the corporate area to be launched before June 2018. However, none of these co-working facilities offer prototyping facility for a specific industries or area of focus. The X-Lab is a pilot program which offers prototyping support for digital engineers. The SRC also offers prototyping support for agro-process and personal care product development. However, none offers a co-working space combined with prototyping facility currently. As highlighted, in mapping most of the initiatives are public sector leads. There are few private sector initiatives but not operating at scale, or include a comprehensive platform, the public, private and academic collaboration, which is critical to success. Also, absence from the landscape through one service provider are: programs strategically designed to create an innovation culture which is critical to success; a sustainable innovation fund with specially designed financing tools to support R&D and innovation; and an IP commercialization platform.

Commented [ND17]: What would this look like?

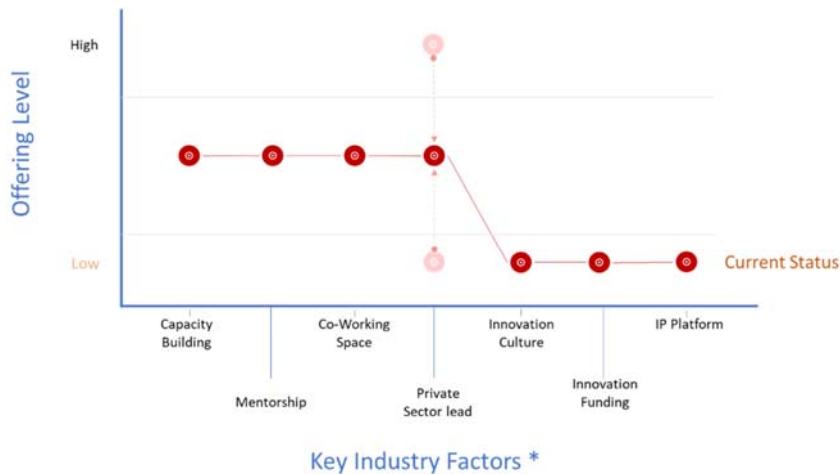


Figure 8: Jamaica Innovation Ecosystem Strategy Canvas

### 6.3 Challenges & Opportunities



Below are the opportunities emerging from the challenges defined.

*Figure 9: Key Challenges & Opportunities resulting from the empathic listening exercise*

#### 6.3.1 Entrepreneurial Movement towards an Innovation Culture

Whereas incremental change can be achieved by tinkering with the symptoms of the inertia to growth, exponential growth can only be achieved with a radical shift in mindset and attitude;

both of which are informed by the cultural paradigm which frames our reality. Thus, real change must start with a change in culture; or the part of our culture which impedes our innovation and capacity for innovative action. The priority for any strategic response to the challenges restricting innovative entrepreneurship must be a well-designed and executed change management plan to catalyse a culture of innovation and dynamic entrepreneurship.

A multipronged approach which combines short and long-term initiatives, must be executed simultaneously to build the momentum needed to catalyse the acceleration towards the cultural paradigm required to shift the mindset of current and future generations of innovators and entrepreneurs.

Given Jamaica latent entrepreneurial spirit and the feedback from the empathic listening exercise, the most effective anchor for a culture shift would be the promotion of a more sophisticated level of entrepreneurship that can be used as a vehicle for economic empowerment.

According to Prof. Beckles, (2018) UWI, the region has gone through two phases of democracy and all indicators are pointed towards a third wave of democratization which could propel the region to its next level of inclusive evolution. The first phase was the “social democratization” associated with emancipation from slavery. The second phase was characterized by the political democracy which resulted in independence from colonialism. Although significant, these waves have not resulted in significant growth in the region. In fact, the exclusion for “the majority” of the population from the economic core, could be deemed the main constraint to growth. Glimpse of the latent potential of a talented majority is evident in world beating performance in sports, music and the creative industries. These are areas of excellence, in which the country has become renowned, but without intentional support from the government. These outstanding achievements are primarily attributable to the raw talent and applied self-discipline of exceptional individual seeking economic and personal empowerment. Can you imagine what the economic and social impact could be, if a well-designed and supported effort to unleash the full creative and innovative capacity of the majority was successfully executed at scale?

The assessment reveals a growing number of well-educated and globally exposed entrepreneurs who are hungry to respond to a higher mission. The growing levels of youth disenchantment (making them prime candidates for criminal gangs) and increase apathy towards the political system (evidence by decline levels of voter turn-out and registration); are concerning trends. However, a compelling mission could be used as a rallying cry to harness world-class entrepreneurs. The time is right for third wave of our evolution, which is the “democratization of access to economic empowerment”. This could be achieved through the establishment of a dynamic entrepreneurship and innovation ecosystem which is inclusive to all with the talent and

will to be innovative. The exponential decline in marginal cost of technologies has significantly reduced the cost of starting a business in digital economy. By providing the tools and assistance to support innovative work, the barriers to entry to globally markets are significantly reduced. For this reason, states with a higher level of innovation (measured by registered patents) have lower levels of inequality and higher levels of GDP per capita<sup>11</sup>.

### 6.3.2 Advance Business Support

Several capacity building and support services are offered by the government, NGO and private organisations, which indicate a willingness to address the challenges expressed by the entrepreneurs. However, these programs are not relevant to the emerging class of innovative entrepreneurs who operate primarily in the digital economy. Even non-digital entrepreneurs have strong tendency to leverage advance technology in developing their products and business model. Therefore, to improve the efficacy of these capacity programs, the capacity building curriculum for local entrepreneurs, needs revamping to include best practices in; strategy, innovation and business development. This curriculum should then be standardized across the landscape, to improve the consistency of the investable deal flow. This one change could radically reduce the length of the due diligence process. A mechanism must also be put in place to keep the curriculum current and relevant to evolving needs of the entrepreneurs and investors. The business support platform would include a shared service platform that provides support for non-core activities which are still critical to successful business development. Examples of these services include: accounting and tax management; human capital development and administration (including pay role support); industry and market research; co-working space with prototyping facilities, and access to open Enterprise Management Systems software offered as a service.

**Commented [ND18]:** Is this curriculum separate from the equity financing curriculum?

**Commented [ND19]:** SVL

**Commented [ND20]:** JBDC? This sounds like a paid service

### 6.3.3 Mentorship

Most attempts at establishing mentorship have not been successfully maintained. As such, the mentorship model needs to be redesigned to support innovative entrepreneurs. Such a program should respond to the needs of innovative entrepreneurs for access to expertise, global network and investments. An incentive mechanism must be included in the model to encourage a sustained relationship between the entrepreneur and mentors.

### 6.3.4 Intellectual Property Commercialization.

In response to the challenges in applying R&D to the innovation process and ultimately unlocking the economic value of the pool of IP resources left undeveloped, a comprehensive platform is required for the commercialization of IP. The platform will have the capability to:

- Mine for existing unutilized IPs with commercial potential

**Commented [ND21]:** This is TTO. I don't think it has the capabilities described below though

<sup>11</sup> HBR Study – Lessons from Americas Golden Age of Innovation

- Have smart contract capability to track the evolution of R&D throughout the innovation process, so that credit can be assigned and awarded to all persons involved in developing the body of knowledge and or innovation
- Allow of the trading of IPs
- Standardized system of valuing the IP
- Protection of the IP
- Automation of IP transaction to include the production of standard documentation for contracting and agreements
- Promotion of local IPs on the international market for sale or partnership

The IP system would be supported by a comprehensive training program to increase awareness amongst stakeholders and building local expertise in IP valuation and management.

### 6.3.5 Innovation Fund

Given the limited funding available to financing R&D and Innovation, a specially designed financing facility is required. The Fund should be sustainable to attract investment from private, corporate venture funds and or impact investors. This facility could complement the Development Bank of Jamaica IGNITE facility which is a grant funding program design to support innovation. The Innovation Fund would provide pre-seed and seed financing for innovative entrepreneurs seeking to complete their R&D and/or trying to establish a “proof of concept”. The Fund would support entrepreneurs through several financing innovations which could include a combination of, or hybrid adaptation of: royalty-based financing, early innovation recoverable funding, convertible notes, early stage equity investment, etc. All the financial instruments design by the Fund will seek to achieve at least a return of capital.

### 6.3.6 Collaboration Platform

Microeconomic competitiveness is normally built around clusters. A cluster is a set of interrelated firms that are mutually supportive even in the face of competitive forces. The absence of effective clusters has impacted the development a sustainable entrepreneurship and innovation ecosystem as evidenced by the various disparate innovation initiatives currently being undertaken without a unified strategic intent to create sustainable impact. In response to this challenge, it is proposed that the collaborative platform be established that uses information and communication technology to link the critical stakeholders within the ecosystem. From this initiative, a governance structure would emerge to direct the strategic outcome of the ecosystem. The governance arrangement would ensure the full engagement of the relevant private sector, public sector and academic players. At the firm level, the platform would create a blueprint for startup entrepreneurs who can navigate the various services in the

ecosystem, which would be coordinated and equipped to provide support throughout the entrepreneurship lifecycle.



## 7 STRATEGIC PLAN

### 7.1 Design Principles

This strategic plan was developed based on the principles of the “blue ocean” strategy framework. The design frame work is based on IDEOs “human centered design thinking process. In preparing the strategy, inspiration was drawn from: Google X Labs, NESTA, MAGIC, Singularity University. The strategy was also informed by case studies on how Taiwan is Reinventing its National Culture from Manufacturing Efficiency to Innovation and IP. Professor Michael Porter (HBS) insights on the “Competitiveness of a Nation” was also reference.

The following Design Principles inform the strategic framework which follows:

- **Compelling & Bold Purpose**; recognizing that **meaning matters**.
- **“Culture eats strategy and systems from breakfast”**. Focus on creating an **Innovation Culture**, the absence of which will inhibit sustain success.
- **Focus on the user**. The strategy will focus on small emerging niche of innovative entrepreneurs. There are many other support arrangements for the general MSMEs universe.
- **Be a platform**, float all boats: The strategy is for the creation of a single service provider that offers the full suite of services to enable the entire innovation ecosystem. The successful execution of this strategy will have multiplier effect on the entire ecosystem and other market segments
- **Being Open and inclusive** is the key to our winning strategy, as we understand that ideas can come from anywhere.
- **Think big, start small**: this is a bold and comprehensive value proposition, but will be broken down into small steps and executed with the full knowledge that failure is a part of the process; hence it’s imperative that we act, launch early, iterate, learn and direct our evolution towards success.

## 7.2 Strategy Characteristics

### 7.2.1 Tagline:

The cultural movement for the strategic campaign will be anchored around the dream of creating equal access to the financing, networks and support that open the path to economic empower. In short; the Democratization of Economic Empowerment

### 7.2.2 Strategic focus:

The strategy will focus on serving Innovative Entrepreneur with the potential to achieve sales growth of 20x; employ 20+ employees and effectively compete in a global marketplace, in the first 2 years from launch. This type of high-impact entrepreneurs stands out in almost all aspects: they grow faster, create more jobs, contribute more to society and transform industries than their peers. Hence, these outliers deserve special attention from development practitioners and policy makers pursuing economic growth.

**Commented [ND22]:** I like that this is in here! 20X growth!

**Commented [ND23]:** Not just Jamaica!

**Commented [ND24]:** In other words we're not looking for average!

### 7.2.3 Strategic divergence

The strategy proposed the creation of a professional service firm to offer a comprehensive suite of value innovation to serve a new and emerging market segment currently ignored or underserved by the propositions offered by disparate players in a fragmented ecosystem.

### 7.2.4 Strategic vision:

By 2020, Jamaica will be among the top three entrepreneurial and innovation hubs in the Caribbean and Central America.

**Commented [ND25]:** Ambitious! So where are we ranked now?

### 7.2.5 Strategic goal:

To democratize access to economic empowerment for the majority.

### 7.2.6 Strategic mission:

To establish a high impact entrepreneurial and innovation hub which catalyzes the exponential growth of globally competitive and innovation driven entrepreneurs.

**Commented [ND26]:** Is this "hub" referring to the ecosystem as a whole?

## 7.3 Strategic Framework

The strategic framework below highlights the key elements of the strategic inputs required to develop a viable and sustainable innovation ecosystem in Jamaica.

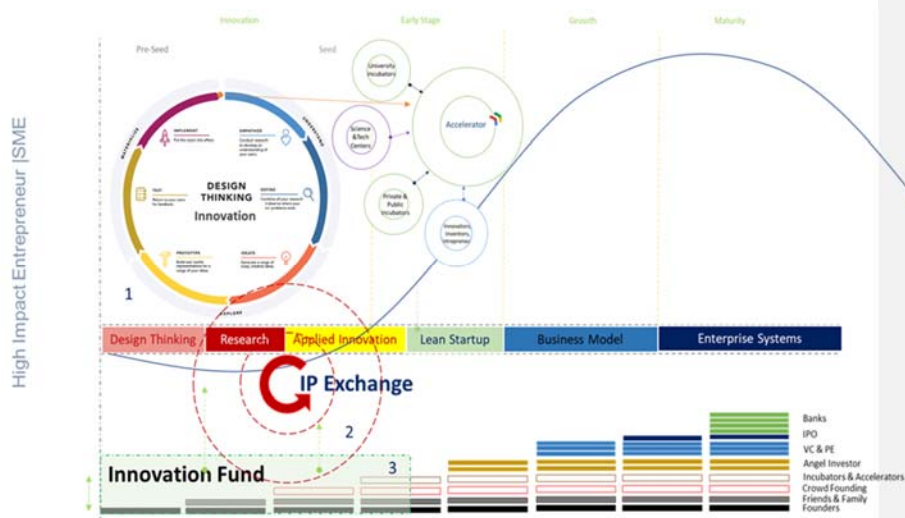


Figure 10: Proposed Innovation Ecosystem Value Chain

Key Elements of the proposed strategic framework would include:

### 7.3.1 Innovation fund

Setting up an Innovation Fund, which would be used to finance research and innovation during the early stages of the business development lifecycle when the business has no revenue of customers.

### 7.3.2 IP Commercialization platform

Establishing an Intellectual Property (IP) Commercialization platform to facilitate the capture, registration, promotion and monetization intellectual property assets.

### 7.3.3 Integrated Innovation

Creating an integrated business support platform which supports Incubation and Acceleration of high potential entrepreneurs with the capacity to scale globally. This would include an advance business development framework based on the human centred designed principles adopted to stimulate innovation. Given the need for a business development agenda relevant to each stage of the business development lifecycle, the following Innovation Process has been defined:

- *Design Thinking to define market relevant solutions that are desirable, viable and feasible;*
- *Research and development to develop innovations of inventions relevant to those solutions;*
- *Test those innovations in the real market conditions; and*
- *Apply the lean startup methodologies to minimize market risk while developing viable business models that are scalable.*

This innovation process would be a key input in developing a standardized curriculum for business support for innovative entrepreneurship.

### 7.3.4 Acceleration

Introducing an advance acceleration program which integrates the entire innovation process and business development value chain with the specific objective of facilitating the emergence of globally competitive enterprises. The accelerator program would employ the latest developments in strategy and innovation to position the emerging businesses in “blue ocean” market segments where unmet demands are yet to be noticed by competitive rivals. Key features of the program will be on the optimum integration of cutting edge technologies in all aspect of the business model; and the leverage of global expertise, resources and networks to generate world class enterprises.

### 7.3.5 Adaptive financing

There is an optional element of introducing a new financing model that provides adaptive financing for SME at various stages of the business development cycle. This model provides a smooth path of transition for companies scaling from the innovation phase (early stage). Also, it would provide innovations in financing which leverage some of the success from the innovation process; for example, the design and introduction of IP financing options. If offered as a part of the business model, it could also act as a hedge against the riskier form of financing instruments offered through the innovation fund and thus balancing out the risk profile of the overall portfolio.



## 7.4 Strategic Canvas

The follow strategy canvas highlights the strategic positioning of the proposed Entrepreneurship and Innovation Hub which will orchestrate a full suite of services to serve innovative entrepreneurs. Of note is the creation of offers to address the IP commercialization chasm through the Innovation Fund and an IP commercialization platform. A new model of mentorship program will be designed to include local corporate executives and professionals, members of the diaspora and international entrepreneurs. The focus of the capacity building program is the enhancement and standardization of an advance business development curriculum and the introduction of a shared service platform to support none core technical activities. The E&I hub will provide co-working space combined with prototyping facilities to support product development in specific areas of focus.

### Innovation Ecosystem Strategy Canvas

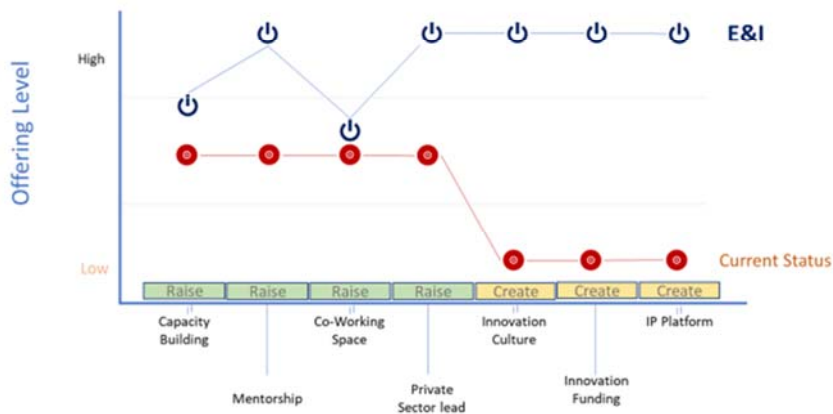


Figure 11: Proposed Entrepreneurship & Innovation Strategy Canvas

## 7.5 Strategic Options

Three (3) strategic options generated for consideration.

### 7.5.1 In-direct approach

This approach seeks to leverage existing capacity innovation initiatives and support institutions. Hence the E&I hub would focus its value proposition bridging the IP commercialization chasm through the establishment of the Innovation Fund and IP commercialization platform called an IP Exchange.

This would be most cost-effective approach. However, it would be difficult to control the narrative around the culture change through intermediaries, thus compromising the effectiveness of creating the shift in culture required for overall impact

### 7.5.2 Direct approach

This approach requires an investment to build out a comprehensive business model that the full innovation capacities outlined in the strategic canvas. The E&I Hub would establish its own facility to pilot and develop its innovation processes.

Full control of the change management process required to create a cultural shift through an entrepreneurship movement. However, this strategic positioning could be competitive move against existing initiatives, thus raising possible obstacles to much needed collaboration to create the “cluster “effect.

The startup cost would be much higher than the lean option and require much greater efforts to operationalize. This approach goes counter to the principle of “Thinking Big, but starting small”

### 7.5.3 Catalyst approach

Consistent with the principle of being a “platform to raise all boats” a third approach combines elements of the first two approaches. In this approach, the focus would be on building out core competence in managing the Innovation Fund and IP commercialization platform. However, it would also focus on developing and executing an entrepreneurial movement designed to promote an innovation culture. To facilitate this, small cohorts of high potential entrepreneurs will be recruited and put through a hybrid incubation/acceleration program with the added intent to make them protagonist for an innovative entrepreneurship movement. Graduates from the program will form the nucleus of an “entrepreneurship club”<sup>12</sup> that will be the primary communication channel for the cultural shift campaign. Movements towards a tipping point is

---

<sup>12</sup> Concept note to be designed

best orchestrated through small passionate groups of like-minded protagonists with a common belief<sup>13</sup>.

This strategy will also require the strengthening of the existing innovation initiatives which will become partners of the E&I hub. The top entrepreneurs from these partner programs will be recruited to be apart the program offered by the E&I Hub's and will serve as protagonists for the entrepreneurial movement.

This option allows for a lean start-up, with a platform for scaling through partnerships. It also allows the greatest level of control over managing the cultural shift.

There is a strong technology focus emerging from the early considerations regarding the thematic focus of the Innovation Hub. Although subject to further analysis, the following sectors of focus has emerged as those in which Jamaica could develop competitive advantages:

- Financial Technology
- Renewable Energy Technology
- Agricultural Technology
- Health Technologies

**Commented [ND27]:** It seems like this is a new institution that needs to be developed....

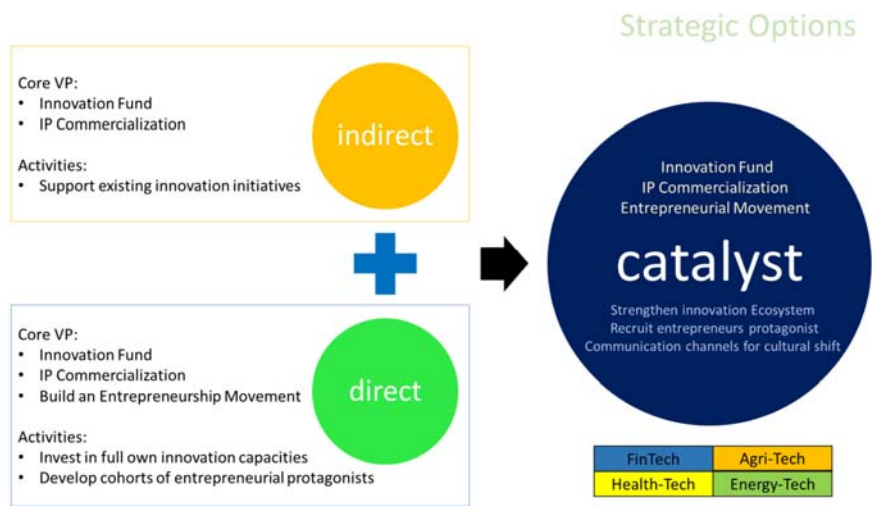


Figure 12: E&I Strategic Options

<sup>13</sup> Paraphrased from "The Tipping Point" by Malcolm Gladwell



## 8 BUSINESS MODEL & IMPLEMENTATION

### 8.1 Business Model Canvas

The proposed business model for the E&I Hub is highlighted below.

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Private Investors Public Sector Academia Development Partners Innovation programs Diaspora	IP Management Capacity Building Fund Management Mentorship programing <a href="#">Change management</a> <b>Key Resources</b> Funding Business Service Providers IP Commercialization	Innovation Funding IP Commercialization Advance Capacity Building (including shared services) <a href="#">Entrepreneurial movement!</a> <a href="#">Prototyping/Design Labs</a>	Personal engagement Mentorship Program <b>Channels</b> Innovation programs Pitch Competitions: NBMC Website <a href="#">Social Media Platform</a> <a href="#">Entrepreneur Club</a>	High potential entrepreneurs Skilled professionals with latent entrepreneurial desires
<b>Cost Structure</b> On-going change management cost Knowledge & Expertise acquisition Overheads		<b>Financing Model</b> Public/Private Investments (Corporate Venturing) Early Stage financing Advisory Services Co-working revenue streams		

Figure 13: Proposed E&I Business Model Canvas

## 8.2 Funding Strategy

It is proposed that a special purpose vehicle be established that can accept both public and private investments to finance the Innovation Fund and the administration of the E&I Hub. Funds would be sourced from: The Government of Jamaica (the lead anchor investor), international development partners, corporate venture program and the private sector.

The Fund would be used to finance innovation initiatives and enterprises using a range of cutting edge reimbursable financing tools designed to meet the needs of innovative entrepreneurs appropriate to their stage of development. A mix of performance based reimbursable and non-reimbursable grants is also proposed to support pre-seed research at the university labs and other science and research facilities. Conceptually the Fund is designed to be sustainable in the medium to long-term by making bold small investment across portfolio of ventures, with the expectation that at least 30% of the portfolio can deliver 10x return or higher.

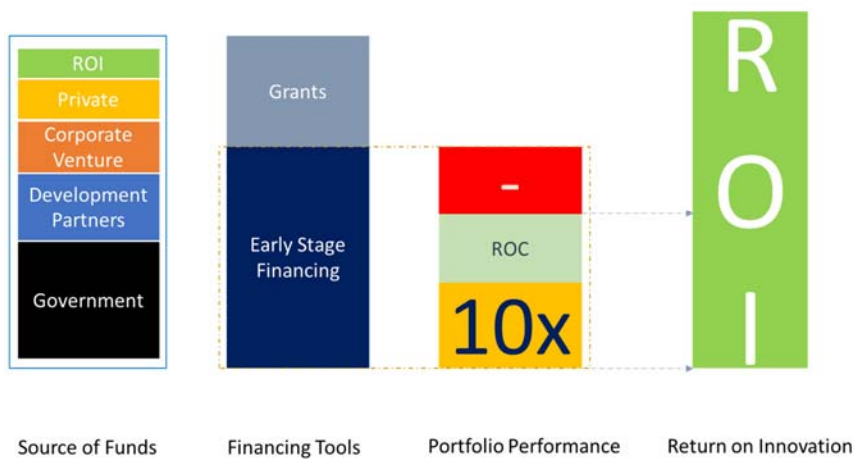


Figure 14: Innovation Funding Overview

### 8.3 Implementation Plan

A 3 years execution calendar for the establishment and launch of the E&I hub is highlighted in the table below. A more detail calendar can be reviewed at Annex B

#### 8.3.1 Indicative execution calendar

Components and Activities	Year 1												Year 2												Year 3											
	ME	FE	MA	ME	MA	MI	MI	MI	MI	MI	MI	MI	ME	FE	MA	ME	MA	MI	MI	MI	MI	MI	MI	ME	FE	MA	ME	MA	MI	MI	MI	MI	MI	MI	MI	
<b>Learning &amp; Partnerships</b>	[Yellow blocks]																																			
Activity 1.1 Knowledge exchange with emerging Innovation Nations	[Yellow]																																			
Activity 1.2 Innovation Specialization Capacity Building	[Yellow]																																			
Activity 1.2 Formalize partnership with global innovation ecosystems	[Yellow]																																			
<b>Innovation Fund</b>	[Blue blocks]												[Blue blocks]												[Blue blocks]											
Activity 2.1 Design Innovation Fund, inclusive of Corporate Venture	[Blue]												[Blue]												[Blue]											
Activity 2.2 Fund Raising	[Blue]												[Blue]												[Blue]											
Activity 2.3 Investment Funding	[Blue]												[Blue]												[Blue]											
<b>Phase 1 Execution</b>	[Green blocks]																																			
Activity 3.1 Research & Strategic Analysis of Thematic Focus	[Green]																																			
Activity 3.1 Design Online Shared Services & Engagement Platform	[Green]																																			
Activity 3.3 Mentorship Program - Design & Development	[Green]																																			
Activity 3.4 IP Exchange - Design & Development	[Green]																																			
Activity 3.5 Design Pilot Program and establish Measures of Success	[Green]																																			
Activity 3.6 Execute Pilot Program	[Green]																																			
<b>Phase 2 Execution</b>													[Dark Green blocks]												[Dark Green blocks]											
Activity 4.1 Review & Refine business model for scalability													[Dark Green]												[Dark Green]											
Activity 4.2 Harmonize Business Development Agenda													[Dark Green]												[Dark Green]											
Activity 4.3 Establish Co-Working Space & Prototyping Sandboxes													[Dark Green]												[Dark Green]											
Activity 4.4 Innovation Lab Programs													[Dark Green]												[Dark Green]											
Activity 4.5 Accelerator Program													[Dark Green]												[Dark Green]											
<b>Entrepreneurship Movement &amp; Change Management</b>	[Light Blue blocks]												[Light Blue blocks]												[Light Blue blocks]											
Activity 5.1 Change Management Strategy & Campaign	[Light Blue]												[Light Blue]												[Light Blue]											
Activity 5.2 Establish Multiple Communication Channels	[Light Blue]												[Light Blue]												[Light Blue]											
Activity 5.3 Research & Publications	[Light Blue]												[Light Blue]												[Light Blue]											
Activity 5.4 Entrepreneurship Mission and Communication	[Light Blue]												[Light Blue]												[Light Blue]											
Activity 5.5 Entrepreneurship Club	[Light Blue]												[Light Blue]												[Light Blue]											
Activity 5.6 Pitch Competition and Entrepreneurship Events	[Light Blue]												[Light Blue]												[Light Blue]											
<b>Monitoring, Evaluation &amp; Continuous Learning</b>	[Grey blocks]												[Grey blocks]												[Grey blocks]											
Activity 6.1 Theory of Change and Logic Model	[Grey]												[Grey]												[Grey]											
Activity 6.2 Impact Measure Approach & Methodology	[Grey]												[Grey]												[Grey]											
Activity 6.3 Monitoring & Tracking tools/system	[Grey]												[Grey]												[Grey]											
Activity 6.4 Pivots and Scope management	[Grey]												[Grey]												[Grey]											
<b>Project Management</b>	[Dark Grey blocks]												[Dark Grey blocks]												[Dark Grey blocks]											
Activity 7.1 Project Management Office	[Dark Grey]												[Dark Grey]												[Dark Grey]											
Activity 7.2 PMO Overheads	[Dark Grey]												[Dark Grey]												[Dark Grey]											
Activity 7.3 Program Support	[Dark Grey]												[Dark Grey]												[Dark Grey]											

Figure 15: Indicative E&I Execution Calendar

### 8.3.2 Indicative budget

The indicative budget below represents the financing required to establish and run E&I Hub for the first three years. It includes:

- US\$6.5M for the Innovation Fund; and
- US\$1.2M for the execution of Phase 1 of the build out of an innovation ecosystem, inclusive of:
  - Setting up an online shared service and engagement platform,
  - Developing a mentorship program with support from global networks; and
  - Launching an Intellectual Property Exchange platform.

Components and Activities	Estimate (+/- 25%)	LOE	Total
<b>Learning &amp; Partnerships</b>			
			\$ 435,000
Activity 1.1 Knowledge exchange with emerging Innovation Nations	15,000	3	\$ 45,000
Activity 1.2 Innovation Specialization Capacity Building	80,000	3	\$ 240,000
Activity 1.2 Formalize partnership with global innovation ecosystems	25,000	6	\$ 150,000
<b>Innovation Fund</b>			
			\$ 6,675,000
Activity 2.1 Design Innovation Fund; inclusive of Corporate Venture	50,000	2	\$ 100,000
Activity 2.2 Fund Raising	75,000	1	\$ 75,000
Activity 2.3 Investment Funding	6,500,000	1	\$ 6,500,000
<b>Phase 1 Execution</b>			
			\$ 1,225,000
Activity 3.1 Research & Strategic Analysis of Thematic Focus	25,000	3	\$ 75,000
Activity 3.1 Design Online Shared Services & Engagement Platform	150,000	1	\$ 150,000
Activity 3.3 Mentorship Program - Design & Development	150,000	1	\$ 150,000
Activity 3.4 IP Exchange - Design & Development	350,000	1	\$ 350,000
Activity 3.5 Design Pilot Program and establish Measures of Success	50,000	1	\$ 50,000
Activity 3.6 Execute Pilot Program	450,000	1	\$ 450,000
<b>Phase 2 Execution</b>			
			\$ 1,985,000
Activity 4.1 Review & Refine business model for scalability	10,000	1	\$ 10,000
Activity 4.2 Harmonize Business Development Agenda	75,000	1	\$ 75,000
Activity 4.3 Establish Co-Working Space & Prototyping Sandboxes	1,500,000	1	\$ 1,500,000
Activity 4.4 Innovation Lab Programs	100,000	3	\$ 300,000
Activity 4.5 Accelerator Program	100,000	1	\$ 100,000
<b>Entrepreneurship Movement &amp; Change Management</b>			
			\$ 315,000
Activity 5.1 Change Management Strategy & Campaign	15,000	1	\$ 15,000
Activity 5.2 Establish Multiple Communication Channels	10,000	5	\$ 50,000
Activity 5.3 Research & Publications	50,000	1	\$ 50,000
Activity 5.4 Entrepreneurship Mission and Communication	25,000	1	\$ 25,000
Activity 5.5 Entrepreneurship Club	100,000	1	\$ 100,000
Activity 5.6 Pitch Competition and Entrepreneurship Events	25,000	3	\$ 75,000
<b>Monitoring, Evaluation &amp; Continuous Learning</b>			
			\$ 55,000
Activity 6.1 Theory of Change and Logic Model	5,000	1	\$ 5,000
Activity 6.2 Impact Measure Approach & Methodology	5,000	1	\$ 5,000
Activity 6.3 Monitoring & Tracking tools/system	15,000	1	\$ 15,000
Activity 6.4 Pivots and Scope management	5,000	6	\$ 30,000
<b>Project Management</b>			
			\$ 810,000
Activity 7.1 Project Management Office	15,000	36	\$ 540,000
Activity 7.2 PMO Overheads	5,000	36	\$ 180,000
Activity 7.3 Program Support	2,500	36	\$ 90,000
<b>Total</b>			<b>\$ 11,500,000</b>

Figure 16: Indicative E&I Budget

