



**SUPPORT TO INNOVATION AND ENTREPRENEURSHIP IN THE
INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR IN ZAMBIA**

FINANCING AND IMPLEMENTATION PROPOSAL

Submitted by

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Executive Summary

The Zambia Information and Communications Technology Authority (ZICTA) intends to initiate a programme aimed at unlocking the potential of ICT-related innovators, entrepreneurs, Micro, Small and Medium Enterprises (MSMEs) and start-ups in contributing to the growth and development of the ICT sector. This is planned to be achieved through strategic partnerships with existing actors to provide a support network and nurture a national innovation ecosystem, bringing together innovators, entrepreneurs, academia, financiers, policy makers, regulatory agencies and established companies.

The programme will be structured over the next five years (2016 -2020) and is expected to translate into increased job creation and wealth creation in the ICT sector especially among the youths. The programme will be implemented in three phases spread over the duration of the project. The first phase of the project will be implemented in the first two years and will seek to develop an eco-system conducive for innovation and entrepreneurship. This phase will have activities such as short term workshops focused on business development services for existing and prospective innovators, support to research and development in information and communication technology at tertiary institutions, as well as linkages between innovators and the private sector through mentorship opportunities. The subsequent phases will focus on nurturing and developing the identified innovators and entrepreneurs into viable businesses.

The estimated cost of the initiative is ZMW12.6 million (approximately USD1.8 million) spread over the entire duration of the project. The largest proportion of the cost will be incurred in the second phase of the programme when physical incubation facilities will be deployed. However, the benefits of the initiative are expected to be far reaching beyond the ICT sector. This initiative is expected to assist in transforming the country into a knowledge based society with important ramifications on job creation, wealth creation, competitiveness, productivity improvement and economic growth.

I.0. Description of the Project to Support Innovation and Entrepreneurship in the ICT Sector

The proposed initiative aims at unlocking the potential of Information and Communication Technology (ICT) - related innovators, entrepreneurs, Micro, Small and Medium Enterprises (MSMEs) and start-ups in contributing to the growth and development of the ICT sector. Particularly, the initiative is expected to have a meaningful impact on wealth creation and job creation in the ICT sector. This is planned to be achieved through strategic partnerships with existing actors to provide a support network and nurture a national innovation ecosystem, bringing together innovators, entrepreneurs, academia, financiers, policy makers, regulatory agencies, and established companies.

The Information and Communication Technologies Act of 2009 gives the Zambia Information and Communication Technology Authority (ZICTA) a mandate to encourage local and foreign investment in the ICT sector. The Act also mandates the Authority to promote research, development and the use of new and appropriate technologies in the sector and to promote the manufacture and production of relevant apparatus.

In order to respond to this important mandate, ZICTA intends to structure a programme of initiatives over the next five years (2016-2020) that will support innovation and entrepreneurship in the ICT sector. This will be achieved through a business incubator programme, a series of initiatives designed to offer support to early-stage and start-up businesses in the ICT sector. The overarching goal will be to stimulate innovation and foster the development and prosperity of start-up and early-stage entrepreneurial companies in the ICT sector.

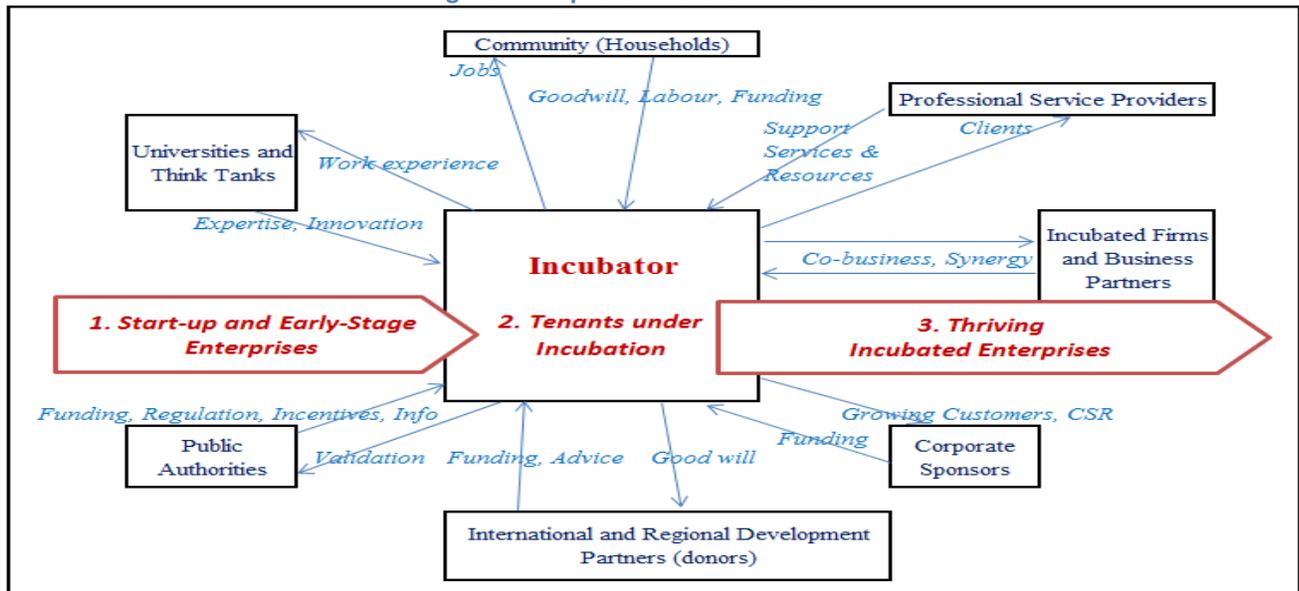
The Incubation Model proposed for Zambia is expected to create a one-stop shop for an array of business support services and resources. These business support services and resources include but are not limited to:

- a) Support with *business basics* (set-up and governance, business strategic planning, bookkeeping and accounting, human resource management, management team identification, comprehensive business training programs etc)
- b) Access to *information* (market intelligence, technology commercialization, etc)
- c) Assistance with *intellectual property management* (protecting ideas and innovations)

- d) *Marketing support* (advertising skills, presentation skills, international expansion in goods and services imports and exports, etc)
- e) *Networking and strategic partnership support* (investors, venture capital, advisory boards and mentors, academia, successful peers, etc)
- f) *Access to affordable office space and accessories* (internet, phone, fax, etc)
- g) *Support to accounting, audit and financial management services*
- h) *Support with access to finance* (bank loans, loan funds, guarantee programmes, etc)
- i) *Human resource development* (links to higher education resources, short-term training arrangements, comprehensive business training programmes, knowledge-attitude (mindset)-practice changes, etc)
- j) *Performance tracking support* (monitoring and evaluation, other performance analysis)
- k) *Support with regulatory compliance* (legal, taxes, insurance, licenses, etc)

These services and resources will be brought together and systematically organized, delivered and tracked. However, in the first instance, every effort will be made to create a supportive ecosystem that stimulates innovation and entrepreneurship in ICTs. The pictorial illustration for the Incubation Model is presented in Figure I:

Figure I: Proposed Incubator Model



Source: authors' original construction

2.0. Rationale for Supporting Innovation and Entrepreneurship in ICTs

The critical role played by Micro, Small and Medium Enterprises (MSMEs) in contributing to productivity growth and driving job creation in Low-Income Countries (LICs) is a well-established fact. MSMEs account for the largest number of firms and employ a substantial share of the labour-force. They also present an option for broadening the tax-base and promoting competitiveness in these economies. At the same time, a sizeable number of large firms today started as small business entities. Nonetheless, MSMEs in LICs face various constraints that explain much of their dismal productivity performance.

Among the notable challenges that hinder the development of MSMEs in Zambia's ICT sector are inadequate infrastructure and business premises, access to markets, compliance to technical standards, access to appropriate technology and other business development services. Many of these weaknesses or gaps at the firm level can be mitigated or addressed by the establishment of an incubation programme.

In places where business incubation has been popularly applied— such as in the United States of America (USA) where an estimated 1,200 plus business incubators reportedly exist (<http://www.sohoos.com/2012/07/business-incubators>) – it has been observed that the successful completion of incubation programs increases the likelihood of the graduating start-up and early-stage firms staying in business in the long term (Molnar, 1997¹). The National Business Incubator Association (NBIA) reports that in 2005 alone, North American incubator programs assisted more than 27,000 companies that provided employment for more than 100,000 workers and generated annual revenues of a total of US\$17 billion (Knopp, 2006²).

South Africa, Kenya and Egypt are prominent examples in Africa where Incubation in the ICT sector has been widely adopted. In these countries, support to early stage entrepreneurs and startups in the ICT sector is embedded in the national policies. Particularly, South Africa currently aims to support over 250 incubators by direct funding through the department of trade

¹ Molnar, L. A., D. R. Grimes, J. Edelstein, R. De Pietro, H. Sherman, D. Adkins and L. Tornatzky (1997) "Business Incubation Works". Athens, Ohio: *National Business Incubation Association*

²Knopp, L. (2006) State of the Business Incubation Industry. Athens, Ohio: *National Business Incubation Association*, 2007

and industry.³ Similarly, the Kenyan Government launched a USD1.6 million programme to support technology incubators in 2013.

In Zambia, the Information and Communications Technology (ICT) sector is still in its nascent stages with the majority of indigenous players operating as Micro, Small and Medium Enterprises (MSMEs) mainly as wholesale or retail traders. In addition, the sector's contribution to national output has remained below 2% despite notable progress attained in improving the business environment. This performance reflects low earnings from the sector emanating from limited growth in businesses and insufficient new entrants on the market.

The Zambia Business Survey conducted in 2007 reveals that most MSMEs in Zambia venture into business to supplement other income while very few enterprises are established with a motive to try out new business ideas. This has limited the country's potential to realize innovative business ideas into successful enterprises with a wide and unique product range. On the other hand, there are a number of tertiary institutions in Zambia offering ICT related training. However, most graduates from these institutions are neither absorbed into the labour market nor running their own businesses. Therefore, such an initiative could also assist in addressing the youth unemployment challenge faced by the country.

ICTs are generally acknowledged as enablers of growth and development. They thus facilitate growth and development in other sectors of the economy as well. In addition, there are a lot of ICT applications that can facilitate improvements in the provision of social services such as education and health. For instance, the option of e-learning services could ease the demand for more teachers in the country while mobile applications could also facilitate wider access to basic healthcare services by the public. Therefore, an initiative that supports innovation and entrepreneurship in ICTs is expected to have a meaningful impact on Zambia's evolution into a knowledge-based economy.

³ https://www.thedti.gov.za/financial_assistance/financial_incentive.jsp?id=54&subthemeid=8

3.0. Implementation Strategy

3.1. Duration of the Project

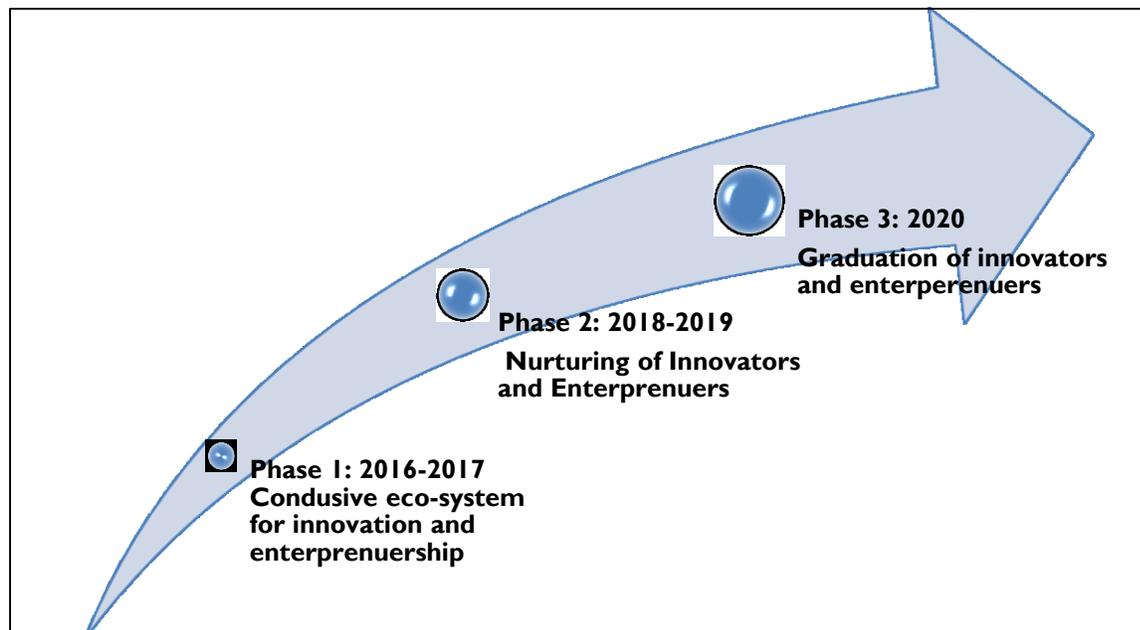
The proposed incubation programme is planned to be implemented over a five year period (2016-2020) segmented into three phases. The first phase will be aimed at stimulating innovation and entrepreneurship in ICTs by creating a conducive ecosystem for innovation and entrepreneurship. This phase is expected to have a duration of two years (2016-2017) and will encompass activities such as identification and mapping of innovators and entrepreneurs in the ICT sector; short term seminars and workshops focused on business development services for prospective and existing innovators and entrepreneurs; identification of innovators and linkage with mentors from the private sector; and support to research and development in ICTs at tertiary learning institutions. The first phase of the programme will primarily seek to identify existing innovators and stimulate interest that will generate a pool of innovators and entrepreneurs for the programme.

The second phase of the programme will focus on nurturing the pool of innovators and entrepreneurs that would have been identified in the first phase of the project. Particularly, this phase will attempt to provide services that could support early stage innovators or entrepreneurs to thrive. Consideration will be made to have physical infrastructure that could provide basic business services such as office space, internet services, telephone and fax services. In addition, mentorship arrangements with the private sector as well as intermediate short term seminars/workshops focusing on business development and technical support will be arranged for incubation members. Where possible, participation in local, regional or international innovation symposiums will be facilitated. Some incentive programmes such as innovation competitions will also be considered. By the fourth year, it is envisaged that some of the participants in the innovation programmes may register some success with off takers through supply contracts on their innovations, outright purchases or support services to established enterprises.

The third phase of the programme which is expected to be attained in the fifth year (2020) will focus on internal synergies between new members of the programme and existing participants on the programme. The existing participants on the programme could also contribute toward

the running of the programme while offering some mentorship to new entrants. There will also be scope for cross provision of services within the programme among participants.

Figure 2: Implementation Phases of the Programme



3.2. Target Group

The programme will target all early stage and prospective innovators and entrepreneurs in the ICT sector. However on account of capacity, priority will be given to youths and projects that are likely to have a social contribution to society such as towards education and health. In addition, a gender dimension to the selection of participants on the programme will also be pursued.

3.3. Risk Assessment and Mitigation Measures

A number of risks are likely to be associated with a programme of such nature. It is for this reason that mitigation measures to increase the probability of success will equally be established. Some of the risks anticipated on this programme and their associated mitigation measures are highlighted below:

- i) **Identification of Innovators and Entrepreneurs in the ICT sector**

ICT skills and knowledge is still in its nascent stages in Zambia. Currently only one ICT incubator exists in the country with a limited membership. While the three public universities in Zambia offer ICT related training complemented by other private tertiary institutions, most graduates from these institutions opt to seek formal employment as opposed to engaging in entrepreneurship or innovation activities. These challenges are likely to limit the number of possible candidates for the incubation programme.

As a mitigation measure, the first phase of the incubation programme will primarily be aimed at stimulating interest in innovation and entrepreneurship in the ICT sector. This will be done through short term training workshops/seminars where prospective candidates will be coached on how to develop their ideas or nurture their startups. In addition, ZICTA will seek strategic partnerships with interest groups such as tertiary institutions offering ICT training, existing ICT incubators, private and public institutions supporting innovation as well as any interest groups with an interest in stimulating innovation in ICTs. These efforts will be made to improve the ecosystem that could facilitate the emergence of a pool of innovators and entrepreneurs in the ICT sector.

ii) Administrative Burden on the Authority

ZICTA's core mandate is economic and technical regulation of the ICT sector. While the Authority has a mandate to stimulate and support innovation in the ICT sector, the administrative burden of running such a programme could be a risk to its success.

In order to mitigate this risk, ZICTA will enter into strategic partnerships with other institutions to support the programme. In addition, a mentorship programme with support from the private sector will be developed that will draw on external expertise. In the second phase of the project, a dedicated resource may be identified to coordinate the project. In the final phase of the programme, ZICTA will assume a coordinating role with some oversight on the programme which is expected to be further limited in subsequent years as the programme becomes sustainable.

iii) Cost of Physical Infrastructure

One of the biggest costs to the operation of a physical incubator is the cost of the building. This cost may present as a huge recurrent expenditure if the property is rented or a huge

fixed cost if the property is bought or built. The high cost of such infrastructure is an important risk to the success of the incubation programme.

To mitigate this risk, the proposed programme will only provide virtual services in the first phase of the project. This will allow for the project coordinators to mobilize support from partners that could provide a building. This will also assist in avoiding huge recurrent expenditure once the physical incubation programme is established in the second phase of the project.

4.0. Resource Requirement

The total resource requirement for the project is estimated at ZMW12.6 million (approximately USD 1.8 million) spread over the entire duration of the project. The costs are spread over three phases and include activities to support mentorship, short term training workshops/seminars focusing on business development services, support to research and development in ICTs at tertiary learning institutions and physical infrastructure in the third year of the project among other costs. A summary of the costs over the duration of the project is summarized in table 1 below:

Figure 3: Resources Required for the Incubation Programme ‘ZMW’; 2016 - 2020

	2016	2017	2018	2019	2020	
Phase I	Short term Seminars / Workshops	120,000	120,000	120,000	150,000	150,000
	Mentorship – incentives for the mentors	1000,000	100,000	1000,000	150,000	150,000
	Participation in local innovation symposium	200,000	200,000	200,000	250,000	250,000
	Support to ICT Research and Development at Tertiary Institutions	100,000	100,000	100,000	150,000	150,000
	Capacity Building for incubator management	200,000	200,000	200,000		
	participation in international /Regional Innovation symposiums	-	-	250,000	3000,000	150,000
	-		120,000	150,000	150,000	

Phase II	Short term Seminars/Workshops					
	Establish physical incubation center	-	-	2000,000		
	Coordinators' expenses			150,000	150,000	150,000
	Innovation Competitions	-		250,000	250,000	250,000
Phase III	internal linkage and spillover effects	-	-	-	-	-
	Peering with other Incubators in the region/international	-	-	-		250,000
TOTAL		1,620,000	720,000	4,390,000	4,250,000	1,650,000

5.0. Evaluation Mechanism

The Monitoring and Evaluation function on the project will be undertaken by the project secretariat at ZICTA. This will particularly involve tracking the performance of the project against the set targets in the project implementation plan. Emphasis will be on cost management, outcomes of the interventions proposed, quality of programmes introduced, timeliness of planned activities and relevance to incubation participants. There will also be a deliberate effort to track the effectiveness of the linkages with other stakeholders such as academia and the private sector. Ultimately, the outcome indicators to be tracked will focus on the level of job creation and wealth generated from the programme.

Monitoring reports are expected to be prepared every quarter and shared with all the financiers of the project. An evaluation exercise is also expected to be undertaken at the end of each phase of the project. It is recommended that the financing of subsequent phases of the project should be tied to the evaluation reports of the preceding phases. Cooperating partners and development finance institutions are also free to recommend their own monitoring and evaluation reporting tools on the project.