

MICTI ICT Incubator Evaluation Report October 2005

“From War Heroes
to Business Heroes”



CONDUCTED BY

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f o r a n d o n b e h a l f o f



SUBMISSION DATE: 11TH OCTOBER 2005

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EXECUTIVE SUMMARY

The purpose of this report is to provide input into phase 2 of the MICTI Incubator in Mozambique.

In summary MICTI Incubator should:

- Develop an industry/technology matrix, the population of which should guide the next incubant selection process;
- Develop a bridging programme between the University and the Incubator (section 4 of the report details the curriculum and outcomes that should be delivered by the programme);
- Select incubants from post graduate students who have completed their studies;
- Insist that potential incubants must have an industry sponsor who will provide a bridge into their chosen industry and technology sector;
- Review their phase 2 selection criteria against the selection criteria detailed in section 3 of the report;
- Separate the MICTI Incubator from the proposed Science Park;
- Take steps to ensure that the Incubator remains in the University or, failing which, in Maputo;
- Maintain and further develop the administrative and marketing skills of the Incubator staff;
- Keep DDJ Law and Webcom in the incubator; and
- Investigate the introduction of a MICTI fund through which funds can be made available to the incubants.

I n t r o d u c t i o n

The MICTI ICT Incubator is one of three components that make up the Mozambique Information and Communication Technology Institute (MICTI). Since inception of the Incubator, five companies have been incubated. One of the donor funders supporting the Incubator is the International Development Research Centre (IDRC). The IDRC requires an evaluation of, and where appropriate, input into the next phase of the Incubator.

The International Development Research Centre (IDRC) has retained the services of Sean Temlett to carry out an evaluation of the MICTI ICT Incubator located at CIUEM – Informatics Centre, Campus Universitario Principal, Maputo, Mozambique.

Please see Appendix 1 for an introduction to Sean Temlett.

S t r u c t u r e o f t h e R e p o r t

In accordance with the terms of reference contained in contract # 109917 the report is divided into 4 sections:

1. A list of any the issues that may need to be addressed at the beginning of the next phase of the Incubator project.
2. An evaluation report, highlighting the present MICTI Incubator against best practice;
3. An analysis of the current skills gap amongst incubants and a documented curriculum that will serve as a requirement definition for training service providers; and
4. Identification and documentation of additional selection criteria which should be integrated into the existing incubant selection process.

A c k n o w l e d g e m e n t s

The following people are acknowledged for their time and input:

- Heloise Emdon, IDRC, for guiding the research and conducting periodic progress and quality reviews;
- Eng. Jamo Macanze, MICTI incubator for facilitating and hosting the field research;
- Eng. Constantino Sotomane, Mozambique ICT Institute, Programme leader;
- Eng. Americo Muchanga, Centre for Informatics, University Eduardo Mondlane (CIUEM);
- Olli Sotamaa, Embassy of Finland;
- Jussi Hinkkanen, United Nations Development Programme;
- Delfim de Deus Junior, Founder, DDJ Law;
- Leonardo Xerinda, Founder, Webcom; and
- Humberto Mabote, Founder, Real Soccer.

SECTION 1: A LIST OF ANY THE ISSUES THAT MAY NEED TO BE ADDRESSED AT THE BEGINNING OF THE NEXT PHASE OF THE INCUBATOR PROJECT.**O v e r v i e w**

During the completion of this assignment several themes were discovered which will impact phase 2 of the MICTI Incubator. In this first section I deal with these themes and where appropriate, I make recommendations to IDRC and the MICTI team.

This section develops the following themes:

- *The need for business heroes*
- *The triple helix of government, university and incubator*
- *Technology/Industry matrix*
- *The bridge between University and Incubator (bridging the skills gap)*
- *The bridge between Incubator and Industry (bridging the network gap)*
- *MICTI as master brand*
- *Access to capital*
- *MICTI capacity building (physical space and skills)*
- *A review of the five phase 1 incubants*
- *Impact of the Science Park*

F r o m W a r h e r o e s t o B u s i n e s s h e r o e s

It is only 10 years since the United Nations withdrew its peacekeeping forces after monitoring the country's transition from civil war to the beginnings of a multiparty republic. Today it is clear that Mozambique is open for business. This is most evident in the attitudes of the Mozambican people who display a keen desire to build entrepreneurial capacity and enterprise. The Mozambican economy recorded economic growth of 7% last year and imported R5bn from South Africa

alone. Mozambique represents South Africa's second-largest African market.

These trade flows not only provide strong motivation for companies to strengthen commercial ties but also encourage the establishment of a permanent presence through fixed investment in the Mozambican economy. There has been a simultaneous explosion of media and telecommunications infrastructure, exposing the people of Mozambique to free market capitalism and entrepreneurial thinking. This was evidenced to me during the field research through my observation of foreign business peoples' interactions with the Mozambican people. My impression was that for many South Africans it seems easier to do business in Mozambique than in South Africa. I tested this by asking several South African staying at my hotel what they thought of business opportunities in Mozambique. Several remarked that the Mozambicans were eager to be economically attractive to investors and business partners.

Entrepreneurs are regarded with esteem and respect, which bodes well for the development of self-starters who see starting new enterprise as an alternative to traditional forms of employment. There is consensus between government, university and industry that small and medium enterprise must be developed, leveraging and supporting large institutional projects such as the Maputo Port, the \$2,2bn Mozal Aluminium smelter and the Maputo corridor.

T h e T r i p l e H e l i x

Best practice indicates that successful incubation rests on a three-stranded helix, the triple helix of Government, University and Industry. The synchronised effort of these three players is associated with sound

incubation and successful commercialisation of intellectual property through small and medium sized enterprises. It is useful to look at all three in the current MICTI context.

Government

There is no doubt that the Mozambican government is supportive of the MICTI ICT Incubator. However, it is also clear that the Mozambican government is under pressure to fund more basic services such as civil engineering projects related to infrastructure. Therefore, it is my opinion that without the financial support of donor funders, the MICTI project would not be sustainable. In fact, it is my conclusion that the IDRC in particular continue in its role which is largely fulfilling the obligations of the Mozambican government. The roles and functions that need to be fulfilled include:

1. Funding
 - a. Operating costs
 - b. Growth capital for incubants
2. Overseeing academic and industry co-development
3. Identify and investigate technology and industry themes against which the MICTI Incubator should be populated.

University

The MICTI incubator is well placed within the University grounds and structures. It appears that the incubator is well supported by the Centre for Informatics within the University. The most productive university-industry incubators facilitate continued relationships between professors and former students. I did not see any signs of professor/former student relationships through the incubator. It was

my sense that the process does not make provision for former professorial relationships.

Best practice literature points to the development of an entrepreneurial academic model. Later, under the heading “Building bridges into the University” I scope out an academic programme that may add to the entrepreneurial bridge between the traditional academic model and the MICTI Incubator.

Best practice would also see the University form an alliance with a neighbouring institution to foster an exchange of entrepreneurial academic models. My recommendation is that the University explore opportunities with institutions such as Wits Business School to exchange ideas. It was out of the scope of this report, but the University should also consider whether their current curricula foster new product development and entrepreneurial activity. Finally, has the University considered itself an entrepreneur, taking on new missions especially in times of crisis?

For example, when communications systems broke down in Zambia in the last decade, the Computer Centre at the University of Zambia extended the University’s internal network across the country, leading to the formation of ZAMNET, an independent internet service provider (ISP).

There is a need to expand the awareness across other faculties depending on the themes that are going to underpin the future selection of incubants. I will dwell on this later. My view is that the relationship, effort and energy from the University is good and this fits with so called best practice.

Industry

It is my opinion that industry is under-represented in the MICTI Incubator. Whilst I was informed that industry representatives sat on the evaluation and selection panel, I feel this is inadequate. There are several benefits that need to be sought from industry leaders:

1. Financial support for the operations and specific financial support for the companies that are incubated under their guidance and direction. Later, under the section on building bridges into industry, I go into more detail in this regard;
2. Opening doors for incubants to do business within their sectors;
3. Allocation of experienced managers to provide industry guidance to incubants; and
4. Allocation of time by the CEO to provide general counsel on a regular basis.

In summary, it is worth looking back at the origins of incubators. There are three groups whose interests are entwined in the triple helix:

1. Inventors seeking to develop their ideas;
2. Corporations seeking to spin-off technologies not directly related to their core competencies; and
3. Universities seeking to contribute to the development of their regions.

S e c t o r a l t h e m e s

Most international incubators focus on science and technology, as these two thrusts are thought to drive innovation and development. However, the application of science and technology to carefully chosen commercial or industrial themes is required in the context of developing nations. The aim is to align science and technology with

the commercial requirements and gaps within the developing country. For example, whilst conducting the review, I asked development officers from ambassadorial and development organisations what themes they were pursuing. The consensus was that the following industry themes should be the focus of the MICTI Incubator:

1. Agriculture and Forestry
2. Cellular telephony, telecommunications and new media;
3. Education, health and rural development; and
4. Tourism

The pursuit of science and technology must be aligned or targeted towards industrial themes where the application of ICT will yield sustainable economic enterprise given the idiosyncrasies of the local context.

Prior to the commencement of phase 2, thought should be given to which industry themes the ICT should be aligned to. The MICTI Incubator adds value by facilitating synergies between companies along related technology or industry themes. The resultant matrix (see an example below) should map out the types of businesses the MICTI Incubator should try to attract and develop.

	Industry themes			
Technology themes	Tourism	Agriculture and Forestry	ICT and Cellular telecoms	Health and Education
Cellular GSM				
Internet				
Open source				
Software development				

The Bridge between University and Incubator (Bridging the Skills Gap)

Universities in sub-Saharan Africa lag their American and European counterparts when it comes to entrepreneurial application of traditional knowledge. However, there are ways of bridging the entrepreneurial skills gaps between the University and the Incubator. The ideal solution is the development of a cross-faculty elective in entrepreneurship. This elective can be pedagogically designed to provide the skills required to be a successful incubant in the MICTI Incubator. Some recommendations for the elective are as follows:

- *Enrolment should be reserved for students who will complete their post graduate theses before or during the elective. It is important that successful applicants are not trying to balance post-graduate studies and new business activities;*
- *The elective should run for approximately 6 months and should cover all the skills areas detailed in part 2 of this report;*
- *Where possible, phase 1 incubants should attend the programme and they should assist in the programme design;*
- *Relevant case studies and guest lecturers should be sought to make the elective contextually rich and relevant;*
- *Part of the elective should be conducted in neighbouring South Africa which has a well-developed economy. There are numerous SA business models that could be imitated in the MICTI Incubator;*
- *To pass the elective, the delegate must prepare and present a legitimate business plan. These business plans form the foundation for enrolment into the MICTI Incubator;*

This elective in Entrepreneurship and New Venturing will provide a natural bridge between various academic faculties and the MICTI Incubator. The elective will also serve to bring additional revenues to the MICTI Incubator.

The Bridge between the MICTI Incubator and Industry (Bridging the Network Gap)

There is inadequate networking between the MICTI Incubator and the broader industry sectors it wishes to serve. There are a few ways in which this can be improved:

- *The phase 2 applicants must have an industry sponsor who agrees to be part of the company's advisory board. The roles and responsibilities of the advisory board members must be clarified and agreed with the sponsor. This process is adapted from the post-graduate research programme whereby a student must normally approach and secure a qualified supervisor who will supervise their research before they can submit a research proposal for consideration. The supervisor plays an important role in ensuring the quality of research. Similarly, an industry sponsor should improve the quality of the phase 2 applications to join the MICTI Incubator;*
- *The management at MICTI Incubator needs to make more visible contact with the industry experts within the technology and industry themes they choose to focus on.*

M I C T I I n c u b a t o r a s B r a n d - B u i l d e r

At present, the phase 2 incubants suffer from inadequate marketing and brand development. One of the key learnings is that the MICTI Incubator must invest in marketing capabilities. There are a few ways in which this can be done:

- *MICTI Incubator should form a partnership with the University faculties that teach marketing, design, commercial art and advertising. These faculties should be encouraged to “adopt” phase 2 incubants. As part of their practical assessment, these students should be asked to develop and design the brand imagery and creative design for advertising and communications;*
- *MICTI Incubator management should be exposed to marketing management courses so that they can guide the market development, market strategy and market planning phases of the business;*
- *One of the phase 2 incubants should be a marketing company. This company could then provide marketing consulting services and brand development capabilities to the other incubants in the MICTI Incubator. Much like DDJ Law Online and Webcom have done and hopefully will continue to do.*

A c c e s s t o C a p i t a l

One of the phase 1 incubants is ready for the injection of growth capital into the business. The MICTI Incubator should have growth capital available to make an investment into these successful incubants. There are a number of points which MICTI Incubator may wish to consider:

- *The MICTI Incubator should have an investment fund of its own for this purpose. The availability of funds serves as a significant motivator for incubants to move beyond the start-up phase into the growth phase;*
- *The MICT Incubator fund should be a “matching” fund, where MICTI may only invest half the required capital. The MICTI fund will always co-invest with another investor. This serves to reduce the risk that the fund may be exposed to;*
- *The MICTI Incubator cannot rely on the UNDP process for funding. It seems to be flawed in that external investors have been contracted to disburse the funds. Their revenue is based upon the interest they earn on the money and therefore there is no incentive to place the funds and thereby lose their interest income. This observation is based upon a conversation with Jussi Hinkkanen at UNDP;*
- *Financial returns from the MICTI fund can be reinvested into the fund for placement with future incubants.*

C a p a c i t y a t t h e M I C T I I n c u b a t o r

The MICTI Incubator has the physical capacity to introduce another five businesses into the Incubator. The physical infrastructure is good and the management of the Incubator under Eng. Jamo Macanze is good. I would make the following observations:

- *The services of Eng. Jamo Macanze should be retained as he is the main driver of MICTI Incubator. I found him to be both competent and pleasant to work with.*
- *The physical layout should be organised so that the working area is more open-plan. The Incubator manager should evaluate the HABITAZ model currently operated by Wits Business School*

alumni in Johannesburg. They use the concept of hot desks, shared areas and open plan offices to maximise the physical space utilisation. I can arrange a site visit if this is of interest.

→ *The proximity of The MICTI Incubator to the University is a significant positive factor and the Incubator should not be moved to the proposed Science Park.*



The management capacity could be enhanced by the following skills development areas:

→ *Management Accounting practices.* These practices are lacking. At a minimum, they should include

monthly reports;

financial reports;

the provision of budgets and financial statements; and

the Incubator manager should have monthly board meetings for which a full management pack should be

prepared. There were no signs that management accounting was properly managed.

- *Market development, marketing planning and sales management.* The MICTI management should invest in the development of these skills so that they can provide meaningful market and marketing support;
- *Risk management.* The MICTI management should be more active in quantifying and managing the risks that the businesses face. EBay, one of the most successful internet start-ups have a weekly meeting at which the top 10 risks are identified and action plans are agreed for the next week; and
- *In summary.* I recommend that the Incubator manager have a weekly risk management meeting with each incubant and a monthly board meeting at which the marketing plans and budgets and the management accounts are reviewed.

A R e v i e w o f t h e f i v e P h a s e 1 i n c u b a n t s

InforMovel and e-novar

These two businesses did not succeed. Neither of the business owners were available to meet with me nor have I been unable to review their business plans.

Real Soccer

I spent the most time with this company. In particular I met with Humberto Mabote on two occasions and with Arcelio Zucula on one occasion. It is my opinion that the original business plan/concept for real Soccer was flawed. There are too few web enabled people in Mozambique to make a web media business profitable. In addition, the electric banking infrastructure is not developed enough to support browser side revenue collection.

It is interesting to note that there are only 100,000 Mozambican domain websites on the world-wide web.

In contrast, there are over 1 million cell phone subscribers, and the base is growing daily. There are more business opportunities in this industry that in the web browser media and advertising area. In consultation with the founders of Real Soccer it became apparent that they did not see a business in the original browser-based media space.

However, they did want to stay in the marketing and technology arenas. It appears that the business will now be repositioned in the electronic marketing space, initially focused on tactical SMS based events, migrating to full service database marketing and electronic communications services.

The founder is presently working on a revised business plan and conceptual model. The Incubator manager is investigating the use of The MICTI Incubator mail server as the technology backbone for the SMS service envisaged.

DDJ Law Online

Technically, this business should not have made it into the incubator. However, now that it is there, I would not like them to leave. The reason is that they provide meaningful advisory services for the other incubants. Their location within the incubator should be extended as long as they support the registration and incorporation of the new and existing incubants.

The founder of DDJ Law Online, Delfim de Deus Junior, is very impressive and serves as a good yardstick against which to evaluate the quality of future entrepreneurs. He has domain expertise within the field of intellectual property and he has an excellent track record. DDJ Law has another office in Maputo which they could graduate to; however, it seems to be in both parties' interests to have DDJ law Online within the MICTI Incubator.

Webcom

Leonardo Xerina graduated with a geology degree. The original business concept was to develop a search engine for local content. This evolved into a web development and web hosting business. He presently employs two people on a full-time basis and three people on a part-time basis. They make use of open source development tools and they leverage the University licensing arrangements to keep their costs very low. They are presently looking to form a partnership with another company as they feel that the space at MICTI is too small for them (Hot desking would solve this problem – see the Habitaz model at www.habitaz.co.za). Personally I would like to see them stay in the Incubator. My reasons are as follows; they bring a positive energy to the incubator; they support the web servers and technical environments; and they provide web development services for the other incubants.

They presently host for 3 companies. This is a key product/service they offer. Their ability to grow the number of hosted clients will have a major impact on the value of the business. This business is ready for growth capital.

Summary of Phase 1 Incubants

The MICTI Incubator has done remarkably well in its first phase. Two of the five incubants have been successful and have proceeded to the growth phase. One of the incubants is changing its business model and two of the incubants have fallen away. By all standards this is a very good start.

Impact of the Science Park

MICTI has three projects: technology education programmes, the MICTI Incubator and the Science Park. It is my opinion that the Science Park is not good for the Incubator. The proposed location for the Science Park conflicts with the proximity to the University which works for the Incubator. The proximity to downtown Maputo also works for the Incubator and this convenient location may be lost if the Incubator is moved to the proposed Science Park.

Secondly I believe that the planning for the Science Park is draining resources from the MICTI Incubator. Further support of the MICTI Incubator by the IDRC should be based on the de-linking of the Incubator from the Science park project.

Furthermore, the success of phase two will be largely based on the focused attention of MICTI management and operational staff. The extent to which the existing resources are split between the Science Park Project and the MICTI Incubator will reduce the chances of phase 2 succeeding. It is therefore my opinion that the Science Park is the greatest source of risk for phase 2 of the MICTI Incubator.

SECTION 2: AN EVALUATION REPORT, HIGHLIGHTING THE PRESENT MICTI INCUBATOR AGAINST BEST PRACTICE

Several sources of incubator “best practice” have been researched and the table in Appendix 2 lays out the performance of the MICTI Incubator against these practices. The assessment is not meant to be a critique of the MICTI Incubator, which performs admirably given the context of Mozambique and the economic and development challenges it faces. Rather, this is meant as a guide for future decision-making within MICTI and between MICTI and its supporters such as the IDRC.

Fortunately the literature and current experience of incubators in the Southern African context is developing quite quickly and this provides some sort of benchmark against which we can evaluate the MICTI Incubator. Based on the table contained in Appendix 2, the following observations can be made.

The MICTI Incubator is advised to investigate the industry and technology themes that make the most sense in the Mozambican context. In this regard I recommend that the IDRC facilitate an investigation and subsequent workshop which will identify the thematic matrix that will guide the population of the Incubator in phase 2.

Only graduate students who have completed their studies should be considered eligible for the Incubator. Issues were detected where students were attempting to balance the rigours of completing a post graduate research thesis and setting up their companies. Exceptions may have to be made however where the nature of the business and the research problem being investigated have a meaningful overlap.

The Incubant selection criteria must strike a balance between the concept of the business and the “fit” with the entrepreneur. The success of new ventures is significantly enhanced when there is “fit” between the founder and the concept. To determine this, the selection process must find a balance between the focus on the business concept and the attributes of the entrepreneur. I recommend that a set of questions be designed that will assist the selection panel in their evaluation of the relationship between the aptitude and motivation of the entrepreneur and the business concept.

The choice of selection panel members is an important factor in phase 2. It was beyond the scope of this report to evaluate the present selection panel. I recommend that the IDRC and MICTI work together to select a panel that represents the industry sector/technology themes and has the ability to determine the “fit” between the concept and the entrepreneur.

Should MICTI choose to implement the bridging programme between the University and the Incubator, then one of the outcomes of the Programme may be an evaluation of the entrepreneurial flair and skills displayed by each participant. MICTI will be exposed to the programme participants for a fairly lengthy period, enabling MICTI to evaluate the strengths and weaknesses of the entrepreneur.

I differ with the best practice literature on one point. It is my opinion that the successful incubants from phase 1 should not be “graduated” out of the incubator. I deal with “graduation” strategies under the review of DDJ Law Online and Webcom.

I saw insufficient evidence of business advisors providing counsel to the incubants. My recommendation is that prospective applicants must

have at least one business advisor who has committed him/herself to counsel the business in the application. It would be preferable if this advisor held a senior position within the industry that the incubant plans to target. This may be difficult to achieve in the Mozambican context. Normally this would be an onerous task for the Incubator; however, my recommendation is that this is incumbent upon the applicant as part of their successful application to become an incubant. Furthermore, this strategy will underpin the Incubator-Industry Bridge that needs to be built. This theme will be developed further, below.

During phase 2, consideration should be given to constituting a MICTI fund which will be able to make direct investment into the “graduated” companies. This is dealt with in more detail under access to capital.

SECTION 3: AN ANALYSIS OF THE CURRENT SKILLS GAP AMONGST INCUBANTS AND A DOCUMENTED CURRICULUM THAT WILL SERVE AS A REQUIREMENTS DEFINITION FOR TRAINING SERVICE PROVIDERS

An analysis was conducted via interview into the potential skills gaps experienced during phase 1. The result is a matrix of skills areas and required outcomes for each skills area. This matrix is designed to be the basis for a curriculum to be developed which will bridge the skills gap between the present University curriculum and the MICTI Incubator. It is very difficult to say which of the modules are still applicable to the phase 1 incubants. My opinion is that the phase 1 incubants should be included in the training. These thoughts are developed further in the “Bridge between University and Incubator” section above.

Skills area	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7
<u>New business strategy</u>	Perform an industry analysis	Appreciate the impact of competitive intensity	Find market space where competitors are absent	Understand and utilise the power of existing players (Judo strategy)	Utilise value or business model innovation to create market gaps	Utilise market space innovation to achieve differentiation	
<u>New market penetration strategy</u>	Prepare and present a marketing plan	Perform an industry analysis	Prepare a product development plan	Set and implement value-based pricing policies	Develop a communication plan	Set budgets and controls	Select and manage external suppliers
<u>Market growth strategy</u>	Identify future customers	Identify products, people, customers and partners	Link the growth strategy to the financial strategy	Identify potential partners for joint venture and/or partial sale	Conduct a growth versus development diagnosis and understand vulnerabilities	Organisation design for growth and development (team design)	Integrate vulnerabilities into the risk management report

M I C T I I C T I N C U B A T O R E V A L U A T I O N R E P O R T

FILE # 1 0 3 4 0 4 - 0 0 2 C O N T R A C T # 1 0 9 9 1 7

<u>Channel development</u>	Market segmentation	Distribution and channel strategy	Select product push or product pull strategy	Create a channel architecture	Channel conflict management	Direct distribution models	Identify and contract channel partners
<u>Sales and sales management</u>	Key account management	Joint sales initiatives and agency agreements	Sales management, strategies and controls				
<u>Product and brand development</u>	Product development schedules	Product family, segmentation and pricing	Product name and brand architecture	Third party distribution agreements	Co-branding policies and plans		
<u>Finance</u>	Economics of annuity income	Scalability of high fixed cost infrastructure	Financial modelling	Income statements	Balance sheets	Cash flow statements	Ratio analysis and company valuations
<u>Loan Finance</u>	Identify sources of loan capital	Donor, grant and government funding mechanisms	Accessing bank finance				
<u>Equity finance</u>	Identify sources of equity finance	Selection of appropriate investors	Techniques for capital raising	Valuation pitfalls when raising capital	Deal making techniques and tools	Post deal relations	Harvest and exit strategies
<u>Management accounting</u>	Prepare budgets	Select and measure performance ratios	Prepare and present monthly operations reports	Prepare and present monthly management accounts	Measure and understand sustainable growth rate		

MICTI ICT INCUBATOR EVALUATION REPORT

FILE # 103404 - 002 CONTRACT # 109917

<u>People management</u>	Performance management	Structure of employment contracts to align performance and pay					
<u>Business planning</u>	Modular approach to business planning	Protection of intellectual property	Overall schedule	Risk identification, prioritisation and mitigation	Organisation development and design	Phased implementation and capital allocation	
<u>Project planning</u>	Absorb project management principles into the new business	Prepare and implement a project plan	Schedule and timeline management	Risk management and creation of risk reporting tools			
<u>Duties of company officials</u>	Clarify roles and responsibilities of directors	Selection and development of advisory board members	Implementation of good governance practices				

SECTION 4: IDENTIFICATION AND DOCUMENTATION OF ADDITIONAL SELECTION CRITERIA WHICH SHOULD BE INTEGRATED INTO THE EXISTING INCUBANT SELECTION PROCESS

I was unable to adequately research the original selection criteria used to select the phase 1 incubants. I have therefore generated a detailed set of criteria which could be adapted by MICTI for the phase 2 selection criteria. Some of these criteria may already be in use and I apologise for any duplication.

I have divided the criteria into four categories: Market criteria, Economic criteria, Management criteria and Fit with the MICTI Incubator.

MARKET OPPORTUNITY CRITERIA

<p>A Market need exists</p> <ul style="list-style-type: none"> → <i>Big, hungry customers</i> → <i>Fulfills a need</i> → <i>Value added for customer</i> 	<p>Customers are reachable and receptive as evidenced by the response to initial proposition. Ideally, customer has been secured pending successful start-up of the business. A clear customer need exists. The need is explained clearly and rationally. Customers are less price sensitive because... The value to the client is immediate and continues for a lengthy period.</p>
<p>The market structure inhibits competitive intensity</p> <ul style="list-style-type: none"> → <i>A few large players</i> → <i>Big gaps</i> 	<p>The market opportunity is new and innovative, provides significant first-mover advantage. The market is dominated by a few large players. The market must not be fragmented amongst numerous small players as this increases the competitive intensity of the market. Ideally the market is dominated by a few large players who have left large gaps that can be exploited.</p>
<p>Market size</p> <ul style="list-style-type: none"> → <i>Large, but not too large</i> 	<p>The overall market should be large but not too large. In South Africa I would say between R50m and R1bn. Beyond a certain size, the risk increases.</p>
<p>Market growth rate</p>	<p>The first and second year turnover is lower than the incremental growth in real money terms. Ideally market growth 1,5 – 2x Year 1 turnover in real terms</p>
<p>Market share</p>	<p>Dominant market share is achievable (2x nearest competitor). Within 5-years the business will be the market leader within their target market. If necessary, redefine the market so that dominance is achievable.</p>

ECONOMIC CRITERIA

<p>Quantity of earnings</p> <ul style="list-style-type: none"> → <i>Good gross profit margins</i> → <i>Good net profit margins</i> 	<p>Good gross profit margins in the region of 35-75%. Ideally the margin should be based on a % of the value added to the customer NOT on a cost-plus basis.</p> <p>Good net profit margins reflect that the cost structure of the business is parsimonious.</p> <p>Enough money to be made so that market related salaries and dividends can be paid.</p>
<p>Quality of earnings</p> <ul style="list-style-type: none"> → <i>Annuity revenue streams</i> → <i>Stability</i> 	<p>A significant % of turnover occurs regardless of new sales and is based on costs which were expended in prior years. Ideally the business model builds an asset base which is depreciated whilst continuing to generate new revenue streams which rise with inflation.</p> <p>Stable revenues based on long-term contracts and high customer loyalty.</p>
<p>Funding characteristics</p> <ul style="list-style-type: none"> → <i>Working capital requirements</i> → <i>Time to cash positive</i> → <i>Time to accounting break even</i> 	<p>It is not possible to provide meaningful guidelines or rules of thumb. Each situation is unique. Ideally the successful applicant will have demonstrated a deep understanding of the economic characteristics of the business. This includes how much money is needed, when it is needed, how long it will take to become cash positive, and how long it will take to reach accounting breakeven.</p>
<p>Asset Intensity</p> <ul style="list-style-type: none"> → <i>Leverage of fixed assets</i> → <i>Fundable assets</i> 	<p>Again, there are no meaningful guidelines or rules of thumb. Ideally the successful applicant will show an appreciation for the leverage of fixed costs and the scalability (rapid growth) potential that flows from high fixed cost operations.</p> <p>The best assets are those that banks will finance!</p>
<p>Working capital management</p> <ul style="list-style-type: none"> → <i>Debtor and creditor management</i> → <i>Stock control</i> 	<p>The realisation that suppliers will want to be paid COD and creditors will try and pay as late as possible. This gives rise to a drain on working capital.</p> <p>Stock is a major drain on capital. Ideally the successful applicant will leverage suppliers' balance sheets by purchasing stock on consignment. This enhances the sustainable growth rate of the business.</p>
<p>Earnings multiples</p> <ul style="list-style-type: none"> → <i>High earnings multiple</i> 	<p>The business is positioned in a sector with high earnings multiples.</p> <p>The business is well positioned in its sector so that it will become strategically valuable and provide an acquisition target for the large existing players.</p>
<p>Exits opportunities</p> <ul style="list-style-type: none"> → <i>Multiple</i> → <i>Obvious</i> 	<p>The business lends itself to multiple exit opportunities.</p> <p>These include trade sale to a competitor and/or an initial private offering. Ideally the business offers the founder and co-investors several opportunities to exit at high price: earnings multiples.</p>

MANAGEMENT CRITERIA

<p>Quality team → <i>All stars</i> → <i>Team players</i> → <i>Available</i> → <i>Committed</i></p>	<p>The management team is loaded with star performers who have a track record and who are able to work within a team approach. All members of the founding team are available and are committed if the application is successful. The selection committee must meet all team members.</p>
<p>Domain expertise</p>	<p>The lead entrepreneur or business owner must demonstrate expertise in the area of business. Ideally he/she should be a recognised point of reference by players in the industry.</p>
<p>Honesty and integrity</p>	<p>Successful applicants should have impeccable academic and work references. The lead entrepreneur should demonstrate high ethical and moral standards.</p>
<p>Emotional intelligence → <i>Non defensive</i> → <i>Good listener</i> → <i>Team player</i> → <i>Flexibility</i></p>	<p>The lead entrepreneur should demonstrate an ability to handle criticism and advice without becoming defensive. Successful applicants should be approachable and their participation in the incubator should add value to all the incubants. A team player. Able to adjust and adapt to the market forces.</p>
<p>Contacts and networks → <i>Mobilise people</i> → <i>Find partners</i></p>	<p>The lead entrepreneur and the founding team must have a good network. They must demonstrate an ability to mobilise people especially staff and partners who will accelerate the growth of the business and minimise the risks.</p>
<p>Energy and commitment → <i>Highly focused</i> → <i>High energy</i></p>	<p>Successful applicants should demonstrate commitment and focus on the business. Ideally they should have completed their post graduate research theses. Bright eyes and an action orientation suggest high energy levels. They need to have a buzz about them.</p>

STRATEGIC FIT WITH THE MICTI INCUBATOR

<p>Technology theme</p>	<p>Fits within the chosen technology themes.</p>
<p>Industry theme</p>	<p>Fits within the chosen industry themes.</p>
<p>Compliments the Incubator</p>	<p>The successful applicant adds to the overall portfolio effect of the incubator. Some synergy exists between the successful applicant and the existing incubants. The new team offer sought after expertise to the other businesses.</p>

Appendix 1

INTRODUCTION TO SEAN TEMLETT

SEAN TEMLETT

Sean Temlett is a lecturer in Marketing Strategy and Entrepreneurship at the Wits Business School, University of the Witwatersrand, Johannesburg, South Africa. Wits Business School has been rated as Africa's top business school for the past 6 years. Sean was lecturer of the year in 2004.

Sean has conducted and supervised post-graduate research into the practices of business incubators in the Southern Africa context. Sean is the architect of numerous innovative business models and he has started and sold several enterprises in South Africa.

Sean holds a Masters degree in Business Administration from the University of Witwatersrand and he is researching the alignment of strategy and culture through the discovery of business genetics.

Sean is the originator and director of the Programme in New Venture Creation (NVC) at Wits Business School. This programme has been utilised by the University of Oslo Grunderskolen to develop young graduates in the area of entrepreneurship. In 2005 NVC was recognised by Grunderskolen as their most successful entrepreneurship programme.

Members of the South African Incubator co-ordination body GODISA have endorsed the Programme and Sean has been appointed to host the Acorn Technology Incubator Management Advancement Programme in 2005. Acorn Technologies is South Africa's pre-eminent biotechnology incubator based in Cape Town.

Appendix 2

AN EVALUATION REPORT, HIGHLIGHTING
THE PRESENT MICTI INCUBATOR AGAINST
BEST PRACTICE

AN EVALUATION REPORT, HIGHLIGHTING THE PRESENT MICTI INCUBATOR AGAINST BEST PRACTICE

SELECTION

FACTOR	IMPACT	MICTI PERFORMANCE
Consistency	<p>The selection process is consistently understood and applied.</p> <p>→ <i>Consistency facilitates understanding and acceptance of the selection process.</i></p>	<p>The selection process for the first five incubants was not consistently applied. The requirements of online/internet underpinning were not applied, allowing a law firm into the incubator.</p> <p><i>Action: Once selection criteria are agreed they must be applied consistently.</i></p>
Alignment with chosen Industry themes	<p>The selection criteria are aligned with the chosen industry themes.</p> <p>→ <i>Alignment facilitates synchronisation of incubator activity with broader economic realities and commercial needs</i></p>	<p>The MICTI Incubator should research and adopt 2-3 industry themes within which the technology themes will be applied (see table on page 9, above).</p>
Alignment with chosen Technology themes	<p>The selection criteria are aligned with the chosen technology themes.</p> <p>→ <i>Alignment facilitates synchronisation of incubator activity with the ICT curriculum of the University</i></p> <p>→ <i>Best practice is based upon the University remaining current in terms of ICT curriculum development and knowledge transfer</i></p>	<p>The MICTI incubator utilised technology themes in its initial selection process. The predominant theme was the internet and specifically browser –based products and services.</p> <p>It is necessary for the Incubator to redefine the technology themes that it wishes to advance. Consideration should be given to complementary themes such as :</p> <p>→ <i>GSM</i></p> <p>→ <i>Distributed processing</i></p> <p>→ <i>Open source</i></p>
Reduce conflict with graduate studies	<p>→ <i>Starting a new business from scratch demands focussed energy and concentration. There are very few individuals talented and disciplined enough to complete their post-graduate thesis and start a new business. Selection of individuals who have completed the</i></p>	<p>The selection criteria were pre-disposed to current post graduate students, some of whom had yet to finish their studies. This is a major weakness and has retarded growth. The phase 2 selection process must screen applicants so that those who have completed their studies or who are about to complete them are successful.</p>

	<i>post-graduate thesis will enhance the success of the incubator.</i>	
Select individuals who are likely to succeed	<p>The selection of individual business leaders should focus on three things:</p> <ul style="list-style-type: none"> → <i>Domain knowledge. The student must understand and appreciate the nuances of their selected industry and technology</i> → <i>Track record. The student must have a track record of setting and achieving personal, academic and business objectives</i> → <i>Rapport. The student must be capable of establishing rapport (trusted and liked).</i> 	<p>MICTI Incubator could make use of instruments that indicate the entrepreneurial propensity of the applicants. Structured interviews could be used to indicate track record and domain knowledge. It is important that the adjudicators are experts in their field.</p>
Select business ideas that are likely to succeed	<p>The selection of business ideas/opportunities should focus on several things:</p> <ul style="list-style-type: none"> → <i>Competitive intensity. The higher the competitive intensity of the industry or sector that the company is in, the less chance there is of medium term success.</i> → <i>Market attractiveness. The target market must be large, growing, and reachable and attracted to the company offering.</i> → <i>Proof of concept. Successful applicants should either have started the enterprise on a small scale or the business should be up and running in another market.</i> 	<p>The MICTI Incubator should develop a selection process and panel that can evaluate business ideas according to the criteria listed.</p> <p>A further capability is the ability to determine the fit between the applicant and the business concept.</p>

SUBSIDISED SPACE

Subsidised space available for limited periods of time	<p>Subsidised space increases the likelihood of success in two ways:</p> <ul style="list-style-type: none"> → The network effect. Having like-minded start-ups in the same location serves to motivate and 	<p>MICTI Incubator has performed well in this area. The businesses share offices and space. This serves to motivate and encourage them, whilst keeping the costs down.</p>
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	<p>encourage incubants.</p> <p>→ Reduction of costs.</p>	<p>I differ with the best practice literature on one point. It is my opinion that the successful incubants from phase 1 should not be “graduated” out of the incubator. I deal with “graduation” strategies under the review of DDJ Law Online and Webcom (see page18, above).</p>
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SHARED SERVICES

<p>Provision of shared services</p>	<p>Shared services increase the likelihood of success in two ways:</p> <p>→ Appropriate investment in infrastructure and services at lowest cost.</p> <p>→ The shared services are outsourced, enabling the businesses to focus on commercialisation of products and markets.</p>	<p>MICTI Incubator has performed well in this area. The incubator provides good support services which are shared by all the incubants.</p> <p>It is commendable that two of the incubants now provide shared services to their “sister” companies. Webcom assists with browser and web based technology and development whilst DDJ Law Online provides legal and registration services to the incubants. For this reason amongst others I would not “graduate” them out of the incubator.</p>
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MENTORING

<p>Allocation of experienced advisors or mentors</p>	<p>Start-up companies and new entrepreneurs benefit from wise and experienced counsel. Business advisors play a meaningful role in the following areas:</p> <p>→ Market development. Once products and services have been tested, a business advisor is the best person to introduce the company to prospective clients.</p> <p>→ Reputation. The reputation of the advisor rubs off onto the new business, providing access</p>	<p>I saw insufficient evidence of business advisors providing counsel to the incubants. This may be difficult to achieve in the Mozambican context.</p> <p>My recommendation is that prospective applicants must have at least one business advisor who has committed him/herself to counsel the business in the application.</p> <p>It would be preferable if this advisor held a senior position within the industry that the incubant plans to target.</p>
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	<p>to capital and other scarce resources.</p> <p>→ Risk identification and management. Business advisors have experience in identifying risks which may sink the company.</p>	
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NETWORKING

<p>Introduction to potential clients</p>	<p>The incubator provides a platform for marketing the incubants. There are several ways in which this can be done:</p> <p>→ Showcasing the incubants to suppliers of the University and government.</p> <p>→ Industry specific talks and conferences that position the MICTI incubants as respected suppliers of products and services within their chosen industry and technology themes.</p>	<p>To date, the incubator seems appropriately focused on internal systems and delivery of basic infrastructure and shared services.</p> <p>There is capacity to market the Incubator within targeted industries. This will be dealt with in greater detail in the section on bridge building between the Incubator and Industry (network gap).</p>
<p>Introduction to potential partners and investors</p>	<p>Incubators provide an opportunity for potential partners (HP, Microsoft, Sun Microsystems, Deloitte, KPMG, Oracle, SAP, Siemens, Nokia Eriksson) to become preferred partners.</p> <p>There are examples of preferred partners forming joint product or market development agreements with incubators. These form the foundation for substantial incubator businesses.</p>	<p>I saw insufficient evidence of business partners providing counsel to the incubants. This aspect of best practice was noticeably absent from the MICTI incubator.</p> <p>During phase 2, consideration should be given to developing partner relations with complimentary companies who will seed appropriate projects within the selected industry and technology themes.</p>

BUSINESS FUNDING

<p>Direct financing of new technology firms that graduate</p>	<p>The incubator is a potentially low cost mechanism for distributing equity based venture capital to successful incubants.</p> <p>The incubator has the capacity and necessary governance structures to make small investments in their “graduating” businesses.</p>	<p>The incubator has made some attempts to facilitate venture capital investment into their incubants who are ready to receive growth capital. However, cumbersome third party requirements have precluded any investment from taking place.</p> <p>During phase 2, consideration should be given to constituting a MICTI fund which will be able to make direct investment into the “graduated” companies. This is dealt with in more detail under access to capital.</p>
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