



Agricultural Business Incubator: Tzaneen, Limpopo

Business Plan



Celebrate **Development** Diversity.



Disclaimer: This report has been prepared by Urban-Econ Development Economists (Pty) LTD, trading as Urban-Econ, and is issued to the Client. Readers are responsible for assessing the relevance and accuracy of the content of this report. The author will not be liable for any loss, damage, cost or expense incurred or arising by reason of any person using or relying on information in this report

Contents

Section 1: Introduction	4
1.1. Purpose and Scope	4
1.2. Locational Analysis.....	4
1.3. Report Outline.....	5
Section 2: Business Incubation Overview	6
2.1. Introduction	6
2.2. Incubation Services.....	6
2.3. South African Incubation Industry.....	6
Section 3: Market Overview	9
3.1. Introduction	9
3.2. Legislation and Regulations	9
3.3. Market Indicators.....	10
3.3.1. Supply Chain Opportunity (Financing).....	10
3.3.2. Supply Chain Opportunities (Training)	12
3.3.3. Incubation Opportunity.....	13
3.4. Key Competencies	16
3.4.1. Agricultural-focused.....	16
3.4.2. Versatility of Commodities	16
3.4.3. Centre of Agricultural Innovation	17
Section 4: Operational Plan	19
4.1. Introduction	19
4.2. Incubation Clients Selection	19
4.3. Business Development	20
4.4. Funding.....	21
4.5. Incubation Facility.....	22
4.6. Graduation and Exiting.....	22
4.7. Business Location	23
4.8. Organisational Structure	23
4.9. Input Requirements.....	24
4.10. Equipment Requirements.....	24
Section 5: Financial Analysis	25
5.1. Introduction	25
5.2. Capital Expenditures.....	25
5.3. Operational Expenditure	28

5.4. Financing	29
Section 6: Risk Analysis	31
5.1. Risk Identification and Mitigation.....	31
5.2. SWOT Analysis.....	31
Section 7: Conclusion	33

TABLES

Table 2.1: Agricultural Incubators in South Africa	7
Table 3.1: Market Supply.....	14
Table 4.1: Equipment Requirements	24
Table 5.1: Capital Expenditures.....	25
Table 5.2: Operation Assumptions	28
Table 5.3: Operational Expenditures.....	29
Table 6.1: Business Risk Analysis	31

FIGURES

Figure 2.1: Geographical Distribution of Incubators in South Africa	7
Figure 3.1: Level of Farming.....	13
Figure 3.2: Commodities	13
Figure 3.3: Required Inputs	14
Figure 3.4: Required Assets	15
Figure 3.5: Required Services and Training.....	16

MAPS

Map 1.1: Greater Tzaneen Local Municipality Location	4
--	---

DIAGRAMS

Diagram 2.1: Services Offered by Incubators.....	6
Diagram 3.1: Key Commodities and Hectares under Production.....	17
Diagram 3.2: Livestock Farmers in the GTM	17
Diagram 4.1: Components of Operational Plan	19
Diagram 4.2: Tzaneen Incubator Management Divisions	23
Diagram 6.1: SWOT Analysis	32

Section 1: Introduction

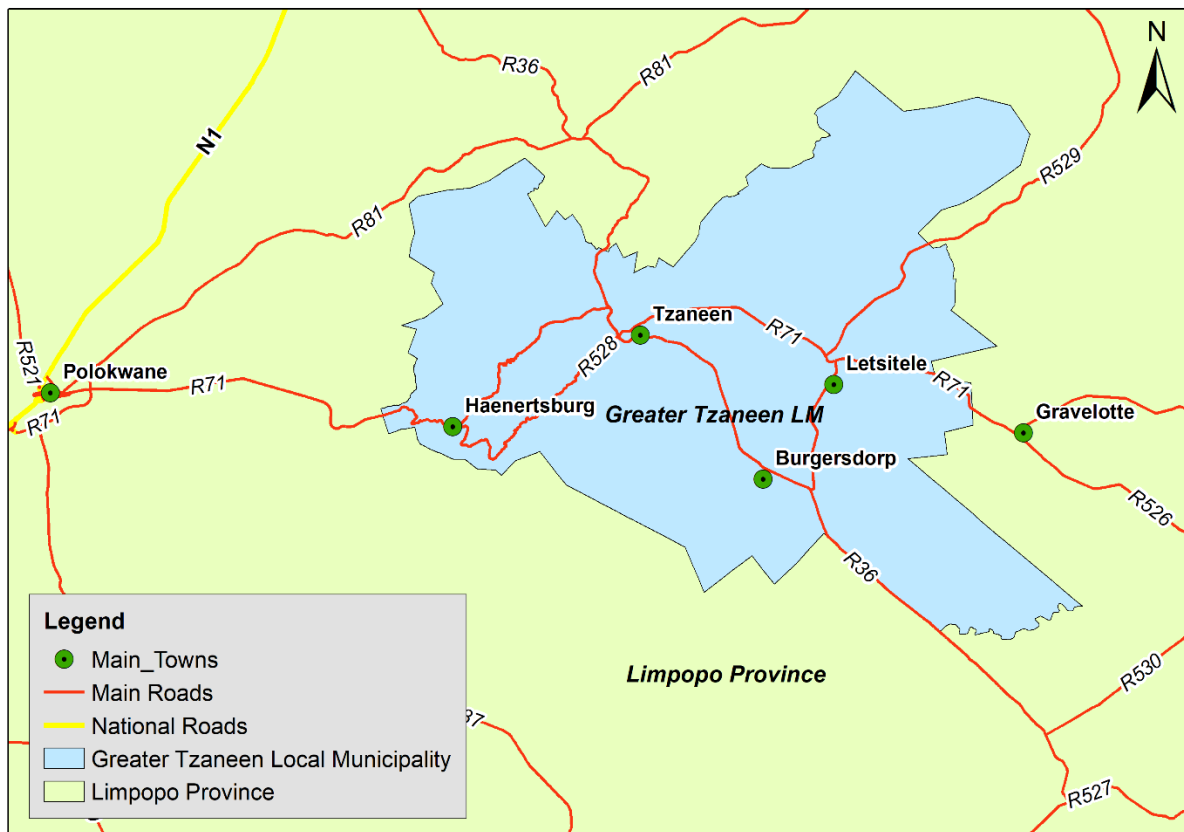
1.1. Purpose and Scope

Urban-Econ Development Economists was appointed to conduct a feasibility study for an Agricultural Business Incubator. It is understood by Urban-Econ that the development of the feasibility study is to assist with the decision making on the viability of the project and possible development thereof. The project will consist of an Incubator with a focus on agricultural production within the Greater Tzaneen Local Municipality (GTM).

1.2. Locational Analysis

The Tzaneen agricultural incubator aims to cater for all smallholder and small commercial farmers located within the entire GTM. The GTM is illustrated in the map below.

Map 1.1: Greater Tzaneen Local Municipality Location



Source: ArcGIS ArcMap 10.2.2 (2017)

The GTM is located within the Limpopo province and includes the town of Tzaneen. Other smaller towns situated within the GTM are Haenertsburg, Letsitele and Burgersdorp, while a number of rural villages are located within the surrounding areas of Tzaneen. Access within and through the GTM is good due to a number of regional roads running through the GTM and connecting with surrounding towns and cities, such as Polokwane, Gravelotte and Hoedspruit.

1.3. Report Outline

The remainder of the report will be structured under the following sections:

- ▶ **Section 2: Business Incubation Overview**
This section includes a broad understanding of the aim and objectives of business incubation in general, as well as an overview of business incubation in Southern Africa.
- ▶ **Section 3: Market Overview**
Provides a general overview of the agricultural incubation market in South Africa and Tzaneen; identifies the supply chain opportunities, as well as the potential incubation clients; and analyses the relevant legislation, regulations and standards applicable to the incubation industry.
- ▶ **Section 4: Operational Plan**
Provides an operational plan for the Tzaneen Incubator, which includes its various services, location, as well as input and equipment requirements.
- ▶ **Section 5: Financial Analysis**
Determine the financial feasibility of the project by assessing the required capital for equipment and infrastructure for the project as well as the monthly operational expenditure costs.
- ▶ **Section 6: Risk Analysis**
Analyses the potential business risks and possible mitigation procedures, and includes a SWOT Analysis of the project to indicate its strengths, weaknesses, opportunities and threats.
- ▶ **Section 7: Conclusion and Recommendations**
Conclusions are drawn and recommendations are made based on the findings of the Business Case.

Section 2: Business Incubation Overview

2.1. Introduction

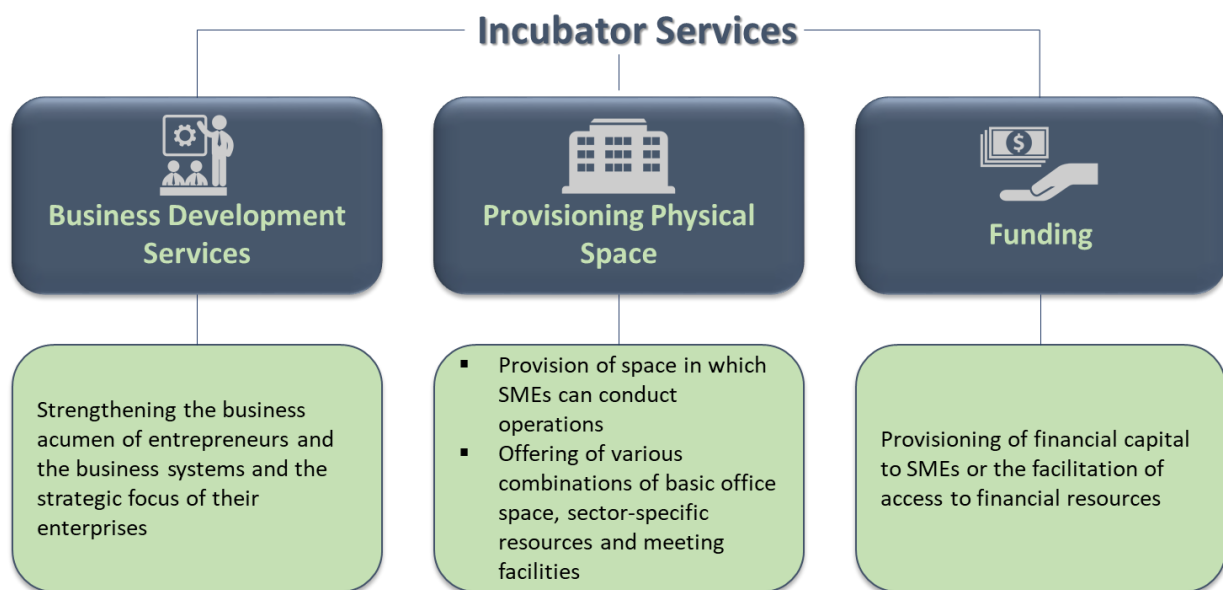
This section includes a broad understanding of the aim and objectives of business incubation in general, as well as an overview of business incubation in Southern Africa. This section further looks at agriculture specific incubation trends within the country.

2.2. Incubation Services

Business incubators are physical or virtual facilities with the main objective to support the development of early stage Small and Medium Sized Enterprises (SMEs). Business incubators thus focus on SMEs primarily in the early stages of growth, while offering services that aims at strengthening the capacity of SMEs in order to be able to operate on their own.

The following diagram illustrates the primary services offered by incubators.

Diagram 2.1: Services Offered by Incubators



Source: DTI, 2014

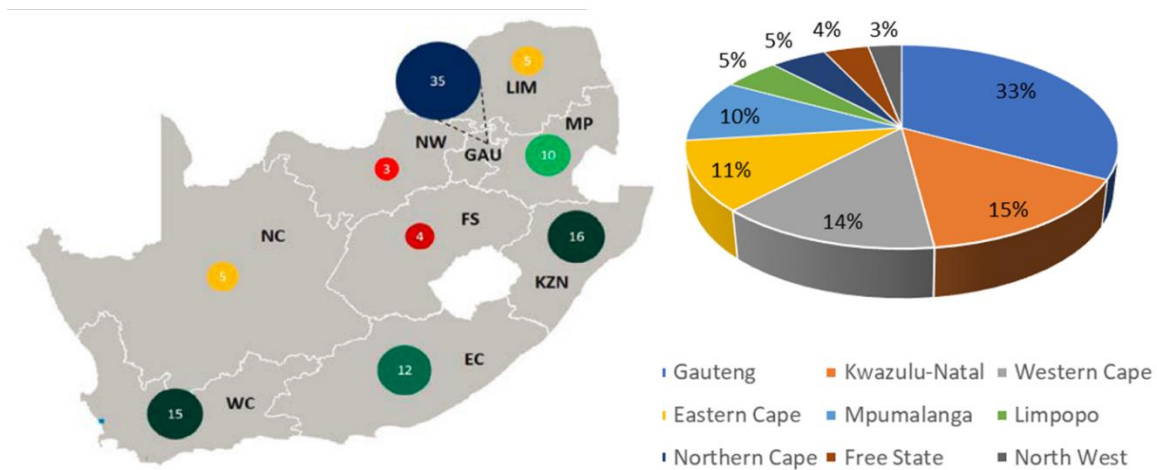
Services by incubators are typically delivered in the following two manners:

- ▶ **Programme delivery:** SMEs receive a pre-defined set of services delivered in a particular sequence.
- ▶ **Product delivery:** SMEs access individual services as they see fit and if charged for the service, they pay based on the length and extensiveness of the service provided.

2.3. South African Incubation Industry

The figure below indicates the approximate distribution of incubators in South Africa by provincial location.

Figure 2.1: Geographical Distribution of Incubators in South Africa



Source: Adapted from DTI, 2014

It is evident that a number of provinces are low on incubators with totals of less than five incubators per province. The Limpopo Province in which the proposed vegetable incubator is to be established is one of these provinces, with only five incubators in total, indicating a need within the province.

The following table indicates a list of the non-exhaustive agricultural incubators in South Africa.

Table 2.1: Agricultural Incubators in South Africa

Incubator	Province of Location	Key Contributing stakeholder
African Rose Enterprise Development	Gauteng	Private
Essential Oils Business Incubator	Gauteng	SEDA
Serafields Pty Ltd	Gauteng	ISP
Beniocourt Pty Ltd	Gauteng	ISP
Mpumalanga Agri-skills Development and Training	Mpumalanga	SEDA
Sugar Cane Incubator	Mpumalanga	SEDA
Eskom – MASDT Incubator	Mpumalanga	ISP
Alfred Nzo Agro Manufacturing	Eastern Cape	SEDA
Eastern Cape Castor Incubator	Eastern Cape	ISP
eMonti AgriBEE Incubator	Eastern Cape	ISP
Agri Mega	Western Cape	ISP
BioAgritek Investment	Northern Cape	ISP
Demispark	Northern Cape	ISP
Droogfontein Incubation Farm	Northern Cape	ISP
Natal Maize	Kwazulu-Natal	ISP

Source: DTI, 2014

It is evident from the table that there are currently no non-exhaustive agricultural incubators located within the Limpopo Province, indicating a clear gap within the province, and as a result within the GTM as well.

Section 3: Market Overview

3.1. Introduction

This Section will provide a general overview of the agricultural incubation market in South Africa and specifically within the GTM. The overview will be utilised to identify supply chain opportunities, as well as the potential incubation clients within the GTM. Relevant legislation, regulations and standards applicable to the incubation industry will also be analysed.

3.2. Legislation and Regulations

Policies and legislation serve as a guide to ensure that development takes place according to- and in line with relevant national, provincial, district and local legislation. The following policies and legislation have been identified as relevant to agriculture and the development of the Tzaneen Agricultural Incubator:

National:

- New Growth Path
- National Development Plan
- Industrial Policy Action Plan
- Agricultural Policy Action Plan
- Department of Agriculture, Forestry and Fisheries Agro-processing Strategy.
- Strategic Plan for the Department of Agriculture, Forestry and Fisheries.
- National Policy Framework on the Development of small and medium agro-processing enterprise in the RSA.
- Strategy for the development of small and medium agro-processing enterprises in the RSA.
- Department of Agriculture, Forestry and Fisheries: Integrated Growth and Development.
- Department of Rural Development and Land Reform: Comprehensive Rural Development Programme.

Provincial:

- Limpopo Spatial Development Framework
- Mpumalanga Economic Growth and Development Path
- Mpumalanga Vision 2030: Strategic Implementation Framework

District:

- Nkangala District Spatial Development Framework
- Nkangala Integrated Development Plan Review

Local:

- Greater Tzaneen Local Municipality Spatial Development Framework
- Greater Tzaneen Local Municipality Integrated Development Plan

Sector Specific:

Local markets are also governed by a series of other policies that are put in place for various reasons. The most important of these Acts is the **Agricultural Product Standards Act, 1990** which sets out to establish a set of norms and standards related to the sale, labelling, storage and packaging of vegetables throughout South Africa. This indicates that all vegetables sold in South

Africa must comply with the regulations set out in the norms. The vegetable containers must be labelled correctly with the name of the cultivar, pack house code, grade, weight and number of units must be displayed on the packaging. The act also details the juice content in drinks and how they should be labelled. Finally, the Act also outlines offences and penalties.

The various other acts and policies which also apply to the vegetable industry that need to be taken into consideration:

- Draft Plant Health (Phytosanitary) Bill 2014
- Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 Of 1947)
- National Water Act, 1998 (Act No.36 Of 1998)
- The Food Safety Management System FSSC 22000 Certification
- Hazard Analysis and Critical Control Points (HACCP)
- Marketing of Agricultural Products Act, 1968 (Act No. 59 Of 1968)
- Conservation of Agricultural Resources Act, 1983 (Act No. 43 Of 1983)
- Plant Breeders' Right Act, 1976 (Act No. 15 Of 1976)
- Agricultural Credit Act, 1966 (Act No. 28 Of 1966)
- Agricultural Development Fund Act, 1993 (Act No. 175 Of 1993)

Other general legislation that are applicable for the operation and management of the pack house include:

- Basic Conditions of Employment Act, 1983 (Act No. 3 Of 1983)
- Municipal By-Laws and Regulations, (*where relevant*)
- Consumer Protection Act

3.3. Market Indicators

3.3.1. Supply Chain Opportunity (Financing)

A number of private and state-run initiatives exist that can assist in expanding the incubation support available in South Africa. This can be done either by providing finance or advice.

The following government support is available:

Incubation Support Programme (ISP)

The ISP co-funds the establishment of new incubators in partnership with the private sector. The ISP supports for up to three years and provides up to R10 million per financial year. The ISP is an initiative of the Department of Trade and Industry (DTI) and a sub-programme of the Enterprise Investment Programme (EIP).

The ISP aims at fostering partnerships between big businesses and SMEs as it encourages big businesses to assist SMEs with skills transfer, enterprise development, supplier development and marketing (DTI, 2014).

Limpopo Economic Development Agency (LEDA)

LEDA is established in terms of the Limpopo Development Corporation Act, Act No.5 of 1994, as amended. It complies with the Public Finance Management Act (PFMA) as a Schedule 3D Agency. LEDA supports SMEs in the Limpopo Province through financing; business development support; as well as training (LEDA, 2017).



Various other government initiatives also exist that can be used to assist in accessing funding for either the proposed incubator or its incubatees. The list of additional government support is included as an Annexure to this document.

SEDA Technology Programme (STP)

The STP is a programme of the DTI with the key objective to stimulate economic growth and development through a focus on technology-based business incubation.



The STP provides technology-transfer services to SMEs and offers financial assistance in the form of a non-repayable grant of up to R600 000 for programmes that ensure technology transfer to SMEs, particularly women-owned SMEs (DTI, 2014).

Small Enterprise Finance Agency (SEFA)

SEFA provides direct loans ranging from R50 000 to R5 million to SMEs. SEFA also provide facilities to intermediaries, joint ventures and partnerships to encourage on-lending to these SMEs and co-operatives.



SEFA aims at ensuring the establishment and growth of SMEs, while contributing towards job creation and the alleviation of poverty.

The following private support is available:

Angel Investors

Angel investors invest in promising SMEs and usually provide advice and assistance with networking. A number of agricultural angel investors are located within Tzaneen and can be identified through the Angel Investment Network of South Africa online through www.investmentnetwork.co.za.

Venture Capital Funds

Venture Capital Funds are invested into early-stage, high potential SMEs and are usually invested in exchange for equity (DTI, 2014). The following South African examples for companies providing venture capital funds exist:

- 4Di Capital
- Intel Capital
- Knife Capital
- eVentures Africa Fund
- GroVest Venture Capital

Private Equity Firms

Private equity firms invest in a variety of high-potential firms in exchange for equity (DTI, 2014). Various private equity firms are located within South Africa as well as a few potential firms in Tzaneen:

- Ethos Private Equity
- Acorn Equity
- Horizon Equity
- Laima Trading and Industrial Investments
- Rezco

Banks

Banks provide a range of financial products and services to a variety of firms and individuals, including SMEs. Specific banks that serve SMEs include ABSA, First National Bank and Nedbank.

3.3.2. Supply Chain Opportunities (Training)

Apart from receiving financial support, the incubator will require supply chain support from local accredited training companies that can provide agricultural training programmes and courses to the incubates. Companies situated within Tzaneen that provide agricultural training, include the following:

Nkuhlwana Trainers & Projects

Nkuhlwana focus on training community members in business related areas such as project management, financial management, construction activities, including training and assistance in the technical related projects (Nkuhlwana, 2017).

Riverwalk Training

Riverwalk training is an accredited agricultural training company registered with Agriseta that provide the following qualifications (Agriseta, 2017):

- National Certificate in Plant Production
- National Certificate in Fruit Packing and Grading Processes
- National Certificate in Fruit Packaging and Grading Processes (NQF 3)

Additional approved unit standard courses include fruit grading, as well as tractor operation.

Other

Other possible agri-businesses and companies that are not necessarily accredited training institutions, but can potentially provide short courses or information sessions to the incubates include:

- NTK Tzaneen – Implements, equipment and inputs
- Lowveld Agro Chem – Biological products, pesticides and herbicides
- Hall & Sons Langbult – Avocado Farming
- ZZ2 – Tomato Farming
- Letaba Citrus Fruit Processors – Citrus Farming
- African Realty Trust (LCP) – Various fruits (for juicing)

3.3.3. Incubation Opportunity

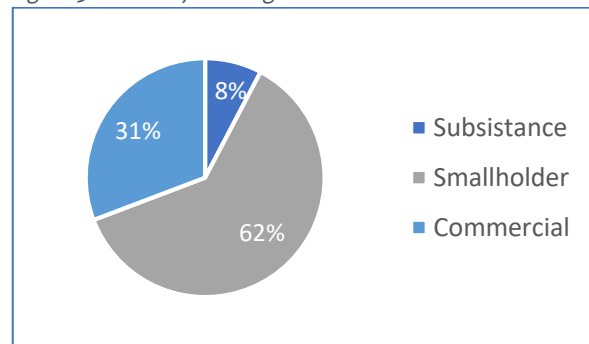
In order to determine the incubation opportunity, it is necessary to indicate the level of farming of the farmers within the GTM, as well as the key commodities of these farmers. Data collection on the farming situation in Greater Tzaneen was conducted in a form of questionnaires completed by 39 respondents to serve as an illustration of the current state of farming within the GTM. The questionnaire aimed at gathering information on the following:

- Level of farming
- Types of livestock or crops produced
- Market that the farmer is currently supplying its produce
- Assistance or support received
- Any infrastructure or assistance that is required by the farmers in the area

Level of Farming:

Most farmers in the area are smallholder farmers who are either individual farmers or in a co-operative. The survey indicates that 31% of the surveyed respondents are commercial farmers and only 8% are subsistence farmers. This indicates that the industry is growing and also indicates a need to support and train farmers through the incubation programme to ensure growth to successful commercial farmers.

Figure 3.1: Level of Farming



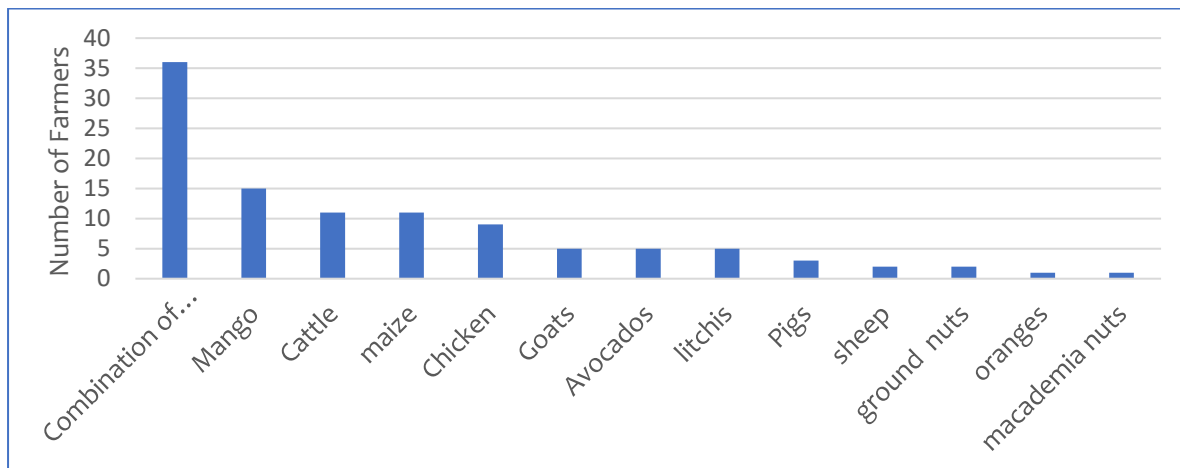
Source: Urban-Econ farmer survey, 2017

Commodities:

It is common for farmers not to specialise on one commodity but farm in various products such as a combination of vegetables rather than specialising in cucumber only. It is also common for farmers to combine crop with livestock farming.

The primary commodities produced by surveyed farmers are vegetables followed by mango and cattle. The Figure below indicates the breakdown of produce in the area based on the number of farmers producing the commodity.

Figure 3.2: Commodities



Source: Urban-Econ farmer survey, 2017

The breakdown of vegetables indicates that the key vegetables in the area are:

- Butternut
- Green pepper
- Chilli pepper
- Tomato

Other vegetables include spinach, cabbage, cucumber, green beans and baby marrow. It is important to consider that these results are only based on the surveyed farmers. This provides an indication to what commodities the incubator can possibly cater for when considering smallholder and small commercial farmers.

Market:

Greater Tzaneen local farmers sell their produce to local individuals, local businesses (including schools, creches) as well as national markets. National markets refer to Johannesburg markets, Pretoria and other fresh produce markets. The market supply is indicated in the table below.

Table 3.1: Market Supply

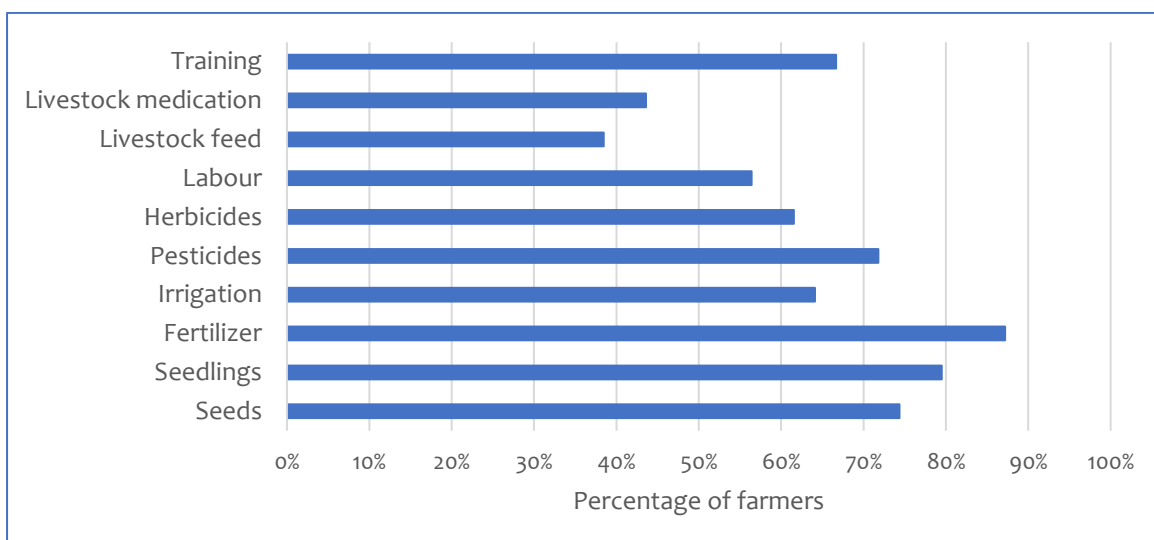
Market	Number of farmers	Percentage of farmers supplying to the market
Local individuals	23	59%
Local businesses	18	46%
Own consumption	8	18%
National Markets	18	46%

Source: Urban-Econ Farmer Survey, 2017

Required Inputs:

The farmers indicated the main inputs that they require in order to ensure operation of their farms, which are in some cases difficult to come by for starting farmers. The figure below indicates the required inputs needed by the farmers.

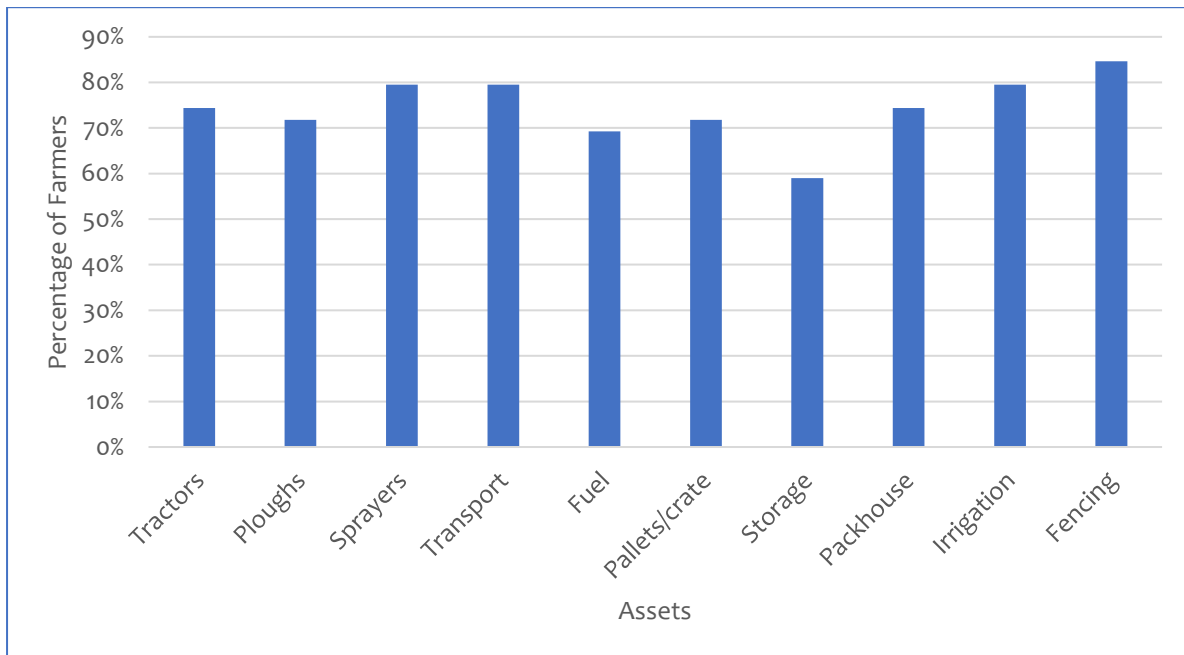
Figure 3.3: Required Inputs



Source: Urban-Econ Farmer Survey, 2017

Assets, including machinery are also one of the key inputs required in agriculture. The breakdown of required assets is indicated in the figure below.

Figure 3.4: Required Assets



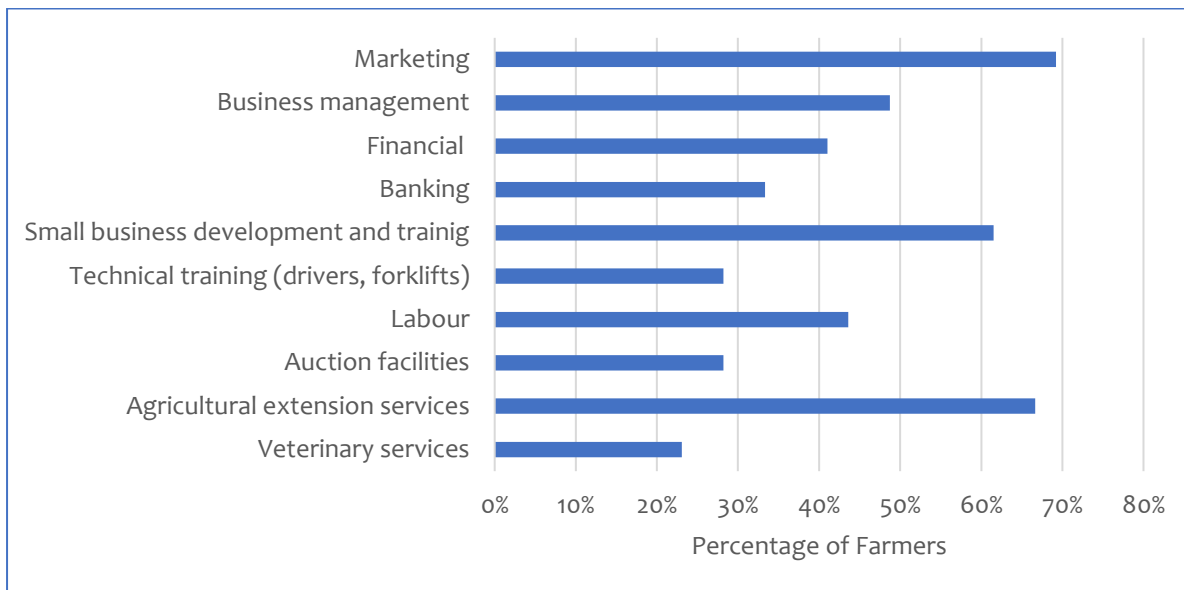
Source: Urban-Econ Farmer Survey, 2017

Fencing, sprayers, tractors and transport are critical needs identified by the farmers. Vegetables require a lot of water and have a short shelf life, hence the identified need for water availability and storage, preferably a cold storage facility. Farmers are also in need of a facility to sort, clean, store and pack vegetables and the inclusion of a pack house at the incubator will address this need to all potential incubates.

Required Services:

The farmers indicated other services and skills that they require in order to ensure development and growth of their current farming businesses and activities. The figure below illustrate the required services as indicated by the surveyed farmers.

Figure 3.5: Required Services and Training



Source: Urban-Econ Farmer Survey, 2017

Marketing is identified as key training that is needed by 69% of the surveyed farmers, followed by training on small business development and training and agricultural extension services. Other training and services required are technical training, financial management and banking, labour and veterinary services.

The farmer surveys indicate that a definite need and opportunity exist within the current farming activities of the GTM for the development of an agricultural incubator to support, train and equip the local farmers and ensuring growth within the agricultural sector and in effect within the local economy.

3.4. Key Competencies

There are numerous key competencies that inform and ensure incubation success within the GTM which makes the area unique for successful agricultural incubation purposes compared to other regions. These competencies include the following:

3.4.1. Agricultural-focused

Agriculture is one of the key driving factors and contributors of the local economy within the GTM. Due to the fertile region and its tropical climate, the GTM boasts with some of the largest and most versatile commercial farming activities in the country. The economy of Tzaneen is dependent on its agricultural activities and it is therefore of utter importance to ensure a sustainable future in the agricultural sector of the GTM.

3.4.2. Versatility of Commodities

A wide range of tropical fruits and vegetables are produced in the Tzaneen area, notably citrus, mangoes, bananas, avocados, litchis, tomatoes, macadamia nuts, coffee, tea and timber. Approximately 40% of South Africa's avocados is produced in Tzaneen, as well as 40% of South Africa's mangoes and 20% of South Africa's banana. Through the large ZZ2 commercial farm,

Tzaneen produces 90% of the country’s tomatoes. In terms of forestry, Tzaneen ensures the largest production of pine and bluegum trees in the Limpopo Province with approximately 85% of total production in Limpopo.

The following diagram illustrate the variety of commodities and their respective hectares under production within the GTM.

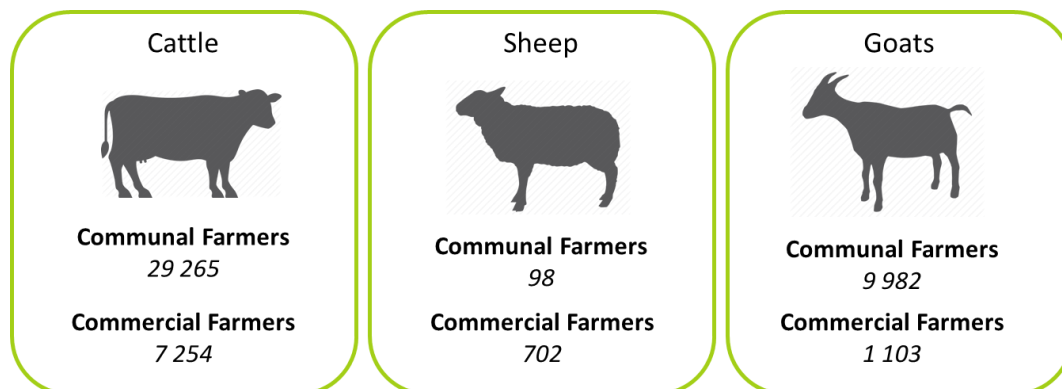
Diagram 3.1: Key Commodities and Hectares under Production



Source: LDARD, 2012

Apart from vegetables, fruit and forestry, the GTM also has a significant number of livestock farmers as indicated in the following diagram.

Diagram 3.2: Livestock Farmers in the GTM



Source: Agrifor Training and Business Development

The fact that the GTM region consist of wide varieties of agricultural activities indicates that a wide variety of agricultural opportunities exist, each with different required agricultural skill levels. The establishment of an agricultural incubator will thus ensure the sustainability of the various farming activities and commodities.

3.4.3. Centre of Agricultural Innovation

The agricultural sector of GTM is known for its innovative and ground-breaking farming opportunities that has been developed throughout the years. Examples of such opportunities that

contributes largely to the local economic growth, as well as setting the GTM agricultural sector apart from most others are:

- The Du Roi Laboratory in Letsitele produces over six million tissue-culture banana plants annually for sale to the Southern African and African market as well as to the Middle East and South and Central America.
- Tzaneen is a major growing area of Macadamias in South Africa.
- Peppadew International is a world-leading brand of a range of pickles and sauces made from a particular variety of sweet-peppers and are processed and within the GTM and exported to 26 countries around the world.
- Exciting new fruit cultivars produced within the GTM are the well-known Clemengold nectarines and Dragon fruit.

As one of an incubator's primary activities include the research of new and innovative practices, the inclusion an incubator focused on agricultural activities will contribute to the development of innovative agricultural practices within the GTM. It will also inform and educate upcoming commercial farmers on these ground-breaking activities in order to sustain it.

Section 4: Operational Plan

4.1. Introduction

The Tzaneen Incubator will be regarded as an incubator with a sector-specific focus as it will provide sector-specific services and resources, in this case the agricultural sector.

The Tzaneen Incubator will offer services primarily to small commercial farmers within the GTM. Like traditional business incubators, agricultural or farm incubator projects aim to help new and small commercial farm entrepreneurs establish and successfully operate their own businesses by providing specific resources and services that are difficult for startup entrepreneurs to access on their own.

The types of resources and services offered by farm incubator projects vary depending on geographic area, demographics, funding, and other factors. However, the overall goal of farm incubator projects is to minimise the barriers to entry for aspiring and beginning farmers (DTI, 2014).

The operation of the incubator is informed by existing successful South African incubators within the agricultural sector, such as the Timbali Technology Incubator in Nelspruit. The proposed operations of the Tzaneen incubator can be divided into the following categories which will be described in detail within this section:

Diagram 4.1: Components of Operational Plan



4.2. Incubation Clients Selection

The process of how incubatees are selected into the incubation programme plays a large role in an incubator's success. It is important to consider whether an SME can thrive in the marketplace and whether it fits in with the proposed incubator's services.

A successful approach to SME selection and SME entry into the incubator currently being practiced by other successful South African incubators and which can be adopted by the Tzaneen incubator include the following:

- (1) Potential clients complete a worksheet to evaluate their own experience and ability in critical areas relating to their business, such as:
 - production plans and targets;
 - farming operations and methods;

- sales;
 - financial planning; and
 - marketing
- (2) Potential clients must adhere to a list of criteria in order to be potentially selected for entry into the Tzaneen agricultural incubator. The selection criteria includes:
- ✓ Access to land (owned or rental)
 - ✓ Ability to service infrastructure costs
 - ✓ Full-time involvement and commitment to business.
 - ✓ Product and market accessibility
 - ✓ Sound track record and growth potential of the client and enterprise.
 - ✓ Ability to pay for future services via levies
 - ✓ Current production of any agricultural commodity within the GTM
 - ✓ Current selling of produce to market (preferably commercial – no subsistence)
 - ✓ Business must be a registered business

Clients are first accepted into the one-year pre-incubation programme where they are guided through a series of assessments, including needs analysis, land analysis as well as water and irrigation. The clients can decide to continue to the full incubation programme after pre-incubation has been completed. The full incubation programme is an intensive three year programme.

The process of client selection can start at the end of each year in order to accumulate for the upcoming year as some incubatees are graduating and exiting the programme towards the end of each year.

4.3. Business Development

Business development services include all services that aim at strengthening the business, the business's strategy as well as the incubatee or client's entrepreneurship. The incubator will include two main programmes, namely the Pre-Incubation Programme and the Full Incubation Programme.

During the pre-incubation programme, the clients receive the following services with regard to business development:

- A needs analysis as well as a land analysis conducted by the incubator on the client's farm.
- Basic training in production
- Assistance in applying for an initial loan.

During the full incubation programme, the clients receive the following business development services:

Mentorship

The clients interact daily with the incubator staff and are assigned to specific staff members which provides mentorship to the clients. Mentorship can be focused on the client's specific commodities, level of current farming and how to increase, farming methods, as well as market-related topics.



Training:

Training programmes will be organised and facilitated by an appointed incubator training officer. All training will take place at the incubator facility as either practical training on demonstration plots or theoretical training in classroom format at the facility. Training will include various subjects and topics, such as:

- Production planning
- Business planning
- Agricultural processes
- Bulk purchasing
- Herbicide and Pesticide selection and application
- Fertilizer selection and uses
- Financial analysis
- Branding
- Marketing



Various governmental and private stakeholders have the opportunity to be incorporated within the training programme to ensure that incubatees receive informed, practical training that relates to the current agricultural industry and market. Potential stakeholders are identified in Section 3 of this report as supply chain opportunities.

Market Intelligence

Market intelligence and support is important as it assist farmers in selecting the varieties or cultivars as well as determine the commodity production schedules in accordance with market demand and prices. Additionally, clients can provide produce to the incubator's personal brand and through the sales and marketing staff be enabled to build their own direct customer relationships with private business entities.



4.4. Funding

Funding as service offering by the incubator includes the provision of actual financial capital to the clients, or the facilitation of access to financial resources. The Tzaneen incubator can include the following service offerings in relation to funding:

Pre-Incubation Programme
Facilitation and assistance for initial loans by a key stakeholder of the incubator. The value of this initial loan will vary based on the individual's needs but can average around R 50 000. This loan is specifically offered to assist the farmer in the buying of plants/seedlings and other inputs as well as land improvement.
Full Incubation Programme
Key stakeholders that provide funds to the incubatees transfer the funds to the incubator's trust account, and then is managed on behalf of the client by the incubator. At current successful South African incubators, clients typically generated between R8 000 and R60 000 in sales per month during the first year of incubation.
Incubation clients interact daily with the incubator staff and receive a monthly stipend of R2 000 per month from the incubator.

Incubatees pay a monthly levy of 12% of sales to the incubator.

Source: Adapted from InfoDev Agribusiness (2014)

4.5. Incubation Facility

The provisioning of physical space and resources by the incubator includes facilities in which the clients can conduct operations, office space, meeting facilities and certain required farming resources.

During the pre-incubation programme, the clients receive the following in terms of space and resources:

- Access to meeting facilities
- Access to training facilities
- Equipped office space for administration purposes
- Access to inputs such as seeds/seedling, fertilizer, pesticides and herbicides.

During the full incubation programme, the clients receive the following in terms of space and resources:

- The farmer can be assigned additional sites at the incubator or, if off-site they are assisted in planning their own farming sites.
- Access to meeting facilities and equipped office space.
- Inputs such as seeds/seedling, fertilizer, pesticides and herbicides.
- The incubator can include a pack house where quality check and packaging of the incubatees' produce is done.
- A Science Research Park, giving farmers the opportunity to expand their businesses within the incubator facility, where they have access to clusters and technology to research new practices on fertilizer programs, updated IT systems, spraying programmes, techniques for pre/post-handling, as well as product selection.

The overall on-site facilities that the incubator requires, therefore, includes the following:

- | | |
|--|--|
| ✔ Incubator administration office | ✔ Conference hall (250-person capacity) |
| ✔ Incubatee office space | ✔ Pack house |
| ✔ Storage facilities | ✔ Incubator workshop |
| ✔ Classrooms (50 people per classroom) | ✔ Canteen area and ablution facilities |
| ✔ Research facility | ✔ Farming production sites/
Greenhouses |

4.6. Graduation and Exiting

Once the incubatees have reached the end of their incubation programmes, there are certain criteria that should be adhered to before the incubatees can graduate from the pre-incubation programme as well as the full incubation programme.

Pre-Incubation Programme

At the end of the pre-incubation programme, clients can either exit the programme or aim at advancing to the full incubation programme. Advancement is based on interest and readiness for

the intensive program, as well as receipt of an initial loan from a key stakeholder assisted through the pre-incubation programme (InfoDev Agribusiness, 2014).

Full Incubation Programme

To graduate and exit from the full incubation programme, incubatees must:

- exhibit top-notch technical skills;
- indicate exceptional business acumen;
- possess a desire to graduate; and
- consist of an acceptable business plan for post-graduation activities.

4.7. Business Location

Need to be informed on a specific proposed site by the Municipality.

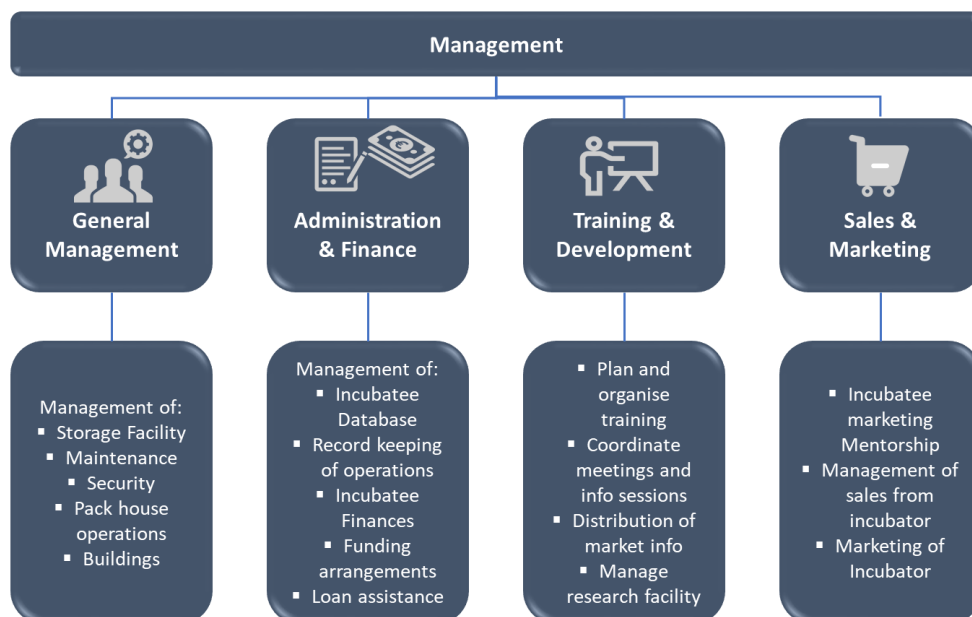
4.8. Organisational Structure

The organisational structure refers to the incubator’s overall set-up, such as various work divisions, ownership and management structures, as well as staffing.

The Tzaneen Agricultural Incubator is to be a Section 21 company (non-profit-organisation), owned primarily by key supply chain companies and overseen by a board of directors made up of representatives from contributing organisations. It is suggested that ownership be distributed among the DTI, LEDA and SEDA as the primary board of directors. Other potential supply chain companies, both governmental and private as indicated in Section 3 can also be included in the board of directors based on their level of support.

The employment structure can be categorised into different management structures pertaining to the various activities of the incubator. The diagram below illustrates the management divisions of the incubator as well as the respective divisional responsibilities.

Diagram 4.2: Tzaneen Incubator Management Divisions



4.9. Input Requirements

In order for successful operation to start at the incubator, certain inputs are required. These inputs are considered variable and are usually needed at regular intervals, such as monthly or annually. The inputs required are indicated in the table below.

Input Requirements	
Staff	Partnering Stakeholders
Water	Electricity
Fuel (for machinery and transport)	Pesticides
Herbicides	Fertiliser
Livestock Feeds	Seeds/ Seedlings
Training Manuals	Harvesting bags and crates

4.10. Equipment Requirements

To enable the effective operation of the Tzaneen Incubator, it will be necessary to purchase various equipment that will be required. The equipment can be distributed into three main categories, namely infrastructure, apparatus or immovable assets and machinery or moveable assets.

Table 4.1: Equipment Requirements

Infrastructure	Immoveable Assets	Moveable Assets (Machinery)
Warehouse	Office Furniture (Desks & Chairs)	Farming trucks (1 tonne)
Storage facilities	Computers	Produce transport truck
Administration Offices	Printers and telefax equipment	Hand jacks
Incubatee Office Space	Irrigation system	Forklifts
Class Rooms	Pallets	Bus/ Minibus
Conference Hall	Conveyor rollers or belts	Tractors
Workshop	Cold Room (Mechanical Refrigeration)	Ploughs
Canteen and Ablutions	Pallets	
Security Fencing	Weighing scales	
Borehole	Sorting tables	
	Conveyor rollers	

Section 5: Financial Analysis

5.1. Introduction

This Section will determine the financial feasibility of the project by assessing the required capital for equipment and infrastructure for the project as well as the monthly operational expenditure costs. The financial feasibility section is intended to provide information in order to assist the decision makers in determining the viability of the project as a successful incubator to provide and serve the GTM.

5.2. Capital Expenditures

The capital expenditure (CAPEX) of the Tzaneen Incubator includes all the initial costing required in order to ensure that the incubator is ready to start with operations. The CAPEX includes all infrastructure (buildings as well as bulk services); all the equipment required at the different facilities, such as the warehouse, green houses, workshop, offices and training facilities; and the moveable assets such as transport vehicles and other implements.

For the purpose of finalizing the financials, it is assumed that the potential site where the incubator facility is to be established, will have a potential size of approximately 30 000m² (3 ha), as this is accepted as a common size for agricultural incubators in South Africa.

Table 5.1: Capital Expenditures

Capital Expenditure	Specification	Cost per Unit	Quantity	Total Cost (Excl. VAT)	Total Cost (Incl. VAT)
Incubator Costing					14%
Infrastructure					
Warehouse	One warehouse (Pack house) of 200m ²	R4,892	200	R978,400	R1,115,376
Storage facilities	Four small storerooms (30m ² each)	R3,500	120	R420,000	R478,800
Administration Building (Offices)	One Incubator Admin office (50 m ²)	R4,892	50	R244,600	R278,844
Incubatee Office Space	One large open office space for clients (100 m ²)	R4,892	100	R489,200	R557,688
Class Rooms	Three classrooms (100m ² each)	R7,852	300	R2,355,600	R2,685,384
Conference Hall	One large conference hall (300m ²)	R4,892	300	R1,467,600	R1,673,064
Workshop	One workshop of 30 m ²	R3,500	30	R105,000	R119,700

Capital Expenditure	Specification	Cost per Unit	Quantity	Total Cost (Excl. VAT)	Total Cost (Incl. VAT)
Canteen and Ablution facilities	Canteen area: 100 m ² & Ablutions: 50m ²	R4,892	150	R733,800	R836,532
Outside Security Fencing (per m)	Site Parameter: 600m (Area is 30 000m ²)	R1,975	800	R1,580,000	R1,801,200
Borehole		R40,000	1	R40,000	R45,600
TOTAL INFRASTRUCTURE				R8,414,200	R9,592,188
Equipment: Warehouse/ Pack House					
Vegetable Washer	Barrel vegetable washing machine	R10,740	1	R10,740	R12,244
Pack House Feeding Line (Conveyor)	10 meter conveying system	R44,000	1	R44,000	R50,160
Air-drying racks	Four tier steel rack for air-drying/ drip-drying	R1,000	3	R3,000	R3,420
Pallet jack (Hand jack)	Capacity of 2000kg	R2,500	3	R7,500	R8,550
Forklift		R448,695	3	R1,346,085	R1,534,537
Crates		R166	100	R16,600	R18,924
Sorting Tables		R2,500	3	R7,500	R8,550
TOTAL PACK HOUSE				R1,435,425	R1,636,385
Equipment: Green Houses					
Grow Tunnel	6 meters (width) x 24 meters (length)	R44,000	3	R132,000	R150,480
Drip Irrigation	Drip lines and drippers	R42,000	1	R42,000	R47,880
Water Tank	10 000 liter water storage tank	R11,937	2	R23,874	R27,216
Extraction fan	4 inch; 107 m ³ /hr	R598,000	3	R1,794,000	R2,045,160
Air & Odour Control (Weather Control)	Agricultural CO ₂ + RH + T Transmitter & Controller	R5,800	3	R17,400	R19,836
Temperature & Humidity Control	ST 1000 Temp Controller	R710	3	R2,130	R2,428
TOTAL GREEN HOUSES				R2,011,404	R2,293,001
Moveable Assets					
Light Duty Vehicle (Bakkie)	1 ton diesel single cab (operated by staff)	R358,860	3	R1,076,580	R1,227,301
Tractor (Heavy duty)	4x4 80-93 Kw	R860,499	3	R2,581,497	R2,942,907
Tractor (Light duty)	4x4 40-53 Kw	R303,140	3	R909,420	R1,036,739

Capital Expenditure	Specification	Cost per Unit	Quantity	Total Cost (Excl. VAT)	Total Cost (Incl. VAT)
Harrow	Hydraulic 20 Disc Harrow 26'	R210,000	3	R630,000	R718,200
Ripper	3 Tine Ripper	R20,800	3	R62,400	R71,136
Disc Plough	4 Disc Plough	R48,000	3	R144,000	R164,160
Ridger	Single Row Ridger	R18,500	2	R37,000	R42,180
Mounted Fertiliser spreader	Single disc (250 L)	R5,568	2	R11,136	R12,695
Mounted Boom sprayer (6m to 10m)	Max 400 L Tank Capacity	R29,970	2	R59,940	R68,332
Truck	8 ton single differential with dropsides	R670,000	2	R1,340,000	R1,527,600
TOTAL MOVEABLE ASSETS				R6,851,973	R7,811,249
Equipment: Workshop					
Work station	Wall Chest, Locker, Tool Cabinet, Work Bench	R26,995	1	R26,995	R30,774.30
Tool kit	Tool cabinet with mechanic tool kit	R14,495	1	R14,495	R16,524.30
Service trolley	3 tier service trolley	R795	3	R2,385	R2,718.90
Oil management equipment	Mobile oil dispensing kit	R9,495	1	R9,495	R10,824.30
washing equipment	90L compact parts washer with trolley	R2,395	2	R4,790	R5,460.60
Jack/fixture and lubrication equipment	11 ton long reach trolley jack	R15,995	1	R15,995	R18,234.30
Fuel Pump	Diesel transfer pump	R5,795	1	R5,795	R6,606.30
Fuel storage tank	Petrotank SA (± 50 000 litres)	R75,000	1	R75,000	R85,500.00
Service equipment	Paded mechanics creeper	R395	5	R1,975	R2,251.50
Cleaners	High Pressure cleaners	R6,895	1	R6,895	R7,860.30
TOTAL WORKSHOP EQUIPMENT				R163,820	R186,754.80
Office Equipment					
Office Desk	Prestige work desk	R1,999	5	R9,995	R11,394
Office chair	Kodakoda capri midback chair	R800	50	R40,000	R45,600
Reception chairs	Riskstalker chair	R300	6	R1,800	R2,052
Filing Cabinet	Steel 4 drawer filing cabinet	R1,899	5	R9,495	R10,824
Computer	Laptop	R10,000	15	R150,000	R171,000

Capital Expenditure	Specification	Cost per Unit	Quantity	Total Cost (Excl. VAT)	Total Cost (Incl. VAT)
Conference chairs	Heavy duty plastic flexi chair	R99	50	R4,950	R5,643
Conference tables	Oak rectangular training desk	R899	5	R4,950	R5,643
TOTAL OFFICE EQUIPMENT				R221,190	R252,157
TOTAL CAPEX					R21,771,734

The total capital expenditure is **R 21 771 734** for the incubator to be operational. The costing depicts the total costing required for the incubator to be operational with the assumption that no machinery or implements are currently available. The total capital expenditure, together with the operational expenditure, should be the first financial priority for the project when considering funding opportunities and possible grants.

5.3. Operational Expenditure

Operational expenditure is the amount spent in order to ensure that the business stays operational. This includes wages, inputs, basic services, and transport. The following assumptions inform the operational expenditures and are based on intensive research and current case studies:

Table 5.2: Operation Assumptions

Fertiliser Price per ha per year	R 14 286
Pesticides Price per ha per year	R 35 714
Minimum Wage	R 3 500
Manager Wages	R 7 000
Number of Managers (different divisions)	5
Number of other full-time employees	10
Stipends per Incubatee per month	R 2000
Price to design and print one training manual	R100

The following table presents the expected annual operational expenditure for the Tzaneen Incubator, as well as the projected amount for the following ten years.

Table 5.3: Operational Expenditures

Operational Expenses	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Salaries	R840,000	R894,600	R952,749	R1,014,678	R1,080,632	R1,150,873	R1,225,680	R1,305,349	R1,390,196	R1,480,559
Electricity (R3000 per month)	R36,000	R38,340	R40,832	R43,486	R46,313	R49,323	R52,529	R55,944	R59,580	R63,453
Transport	R24,000	R25,560	R27,221	R28,991	R30,875	R32,882	R35,019	R37,296	R39,720	R42,302
Telephone Expenses	R12,000	R12,780	R13,611	R14,495	R15,438	R16,441	R17,510	R18,648	R19,860	R21,151
Stationary	R1,000	R1,065	R1,134	R1,208	R1,286	R1,370	R1,459	R1,554	R1,655	R1,763
Marketing	R10,000	R10,650	R11,342	R12,079	R12,865	R13,701	R14,591	R15,540	R16,550	R17,626
Internet	R9,600	R10,224	R10,889	R11,596	R12,350	R13,153	R14,008	R14,918	R15,888	R16,921
Training Manuals (200 booklets)	R20,000	R21,300	R22,685	R24,159	R25,729	R27,402	R29,183	R31,080	R33,100	R35,251
Seeds and Seedlings	R15,000	R15,975	R17,013	R18,119	R19,297	R20,551	R21,887	R23,310	R24,825	R26,439
Pesticides	R35,714	R38,036	R40,508	R43,141	R45,945	R48,932	R52,112	R55,500	R59,107	R62,949
Fertiliser	R14,286	R15,214	R16,203	R17,256	R18,378	R19,573	R20,845	R22,200	R23,643	R25,180
Incubatee Stipends	R1,200,000	R1,278,000	R1,361,070	R1,449,540	R1,543,760	R1,644,104	R1,750,971	R1,864,784	R1,985,995	R2,115,084
Total Expenses	R2,217,600	R2,361,744	R2,515,257	R2,678,749	R2,852,868	R3,038,304	R3,235,794	R3,446,121	R3,670,118	R3,908,676

The total operational costs amount to approximately R 2 217 600 required in order to ensure the incubator to be operational in year one. The operational expenditure is expected to grow to approximately R3 908 676 in year ten.

5.4. Financing

The incubator will rely on partnerships with governmental as well as private supply chain companies. The incubator will require key long-term partnerships with one or two main stakeholders to start the development and operations of the incubators. As mentioned in Section 3, various potential stakeholders exist on national and local level. Potential main governmental stakeholders are:

- LEDA
- DTI
- SEDA

Other stakeholders include:

- SEFA
- DAFF
- ARC
- Nkuhlwana Trainers & Projects
- Riverwalk Training
- Local commercial farmers and agro-processors

Section 6: Risk Analysis

5.1. Risk Identification and Mitigation

Business risks are circumstances or factors that can have a negative impact on the operations or profitability of a business venture. Although business risks can never be entirely eliminated, being aware of what these risks are and where they come from can help to better manage their effect and steer a course to the business's success. Risk and uncertainty in the market manifest themselves through a number of attributes, which includes price fluctuations, quantity, quality, supply, timing and opportunistic behavior in case of arranged marketing.

Four possible risk categories can be identified, which includes production risks, financial risks, marketing risks and human resource risks. These risks can affect both the incubator and its staff, as well as the incubates. The following table indicates the various risks as well as potential feasible mitigation strategies.

Table 6.1: Business Risk Analysis

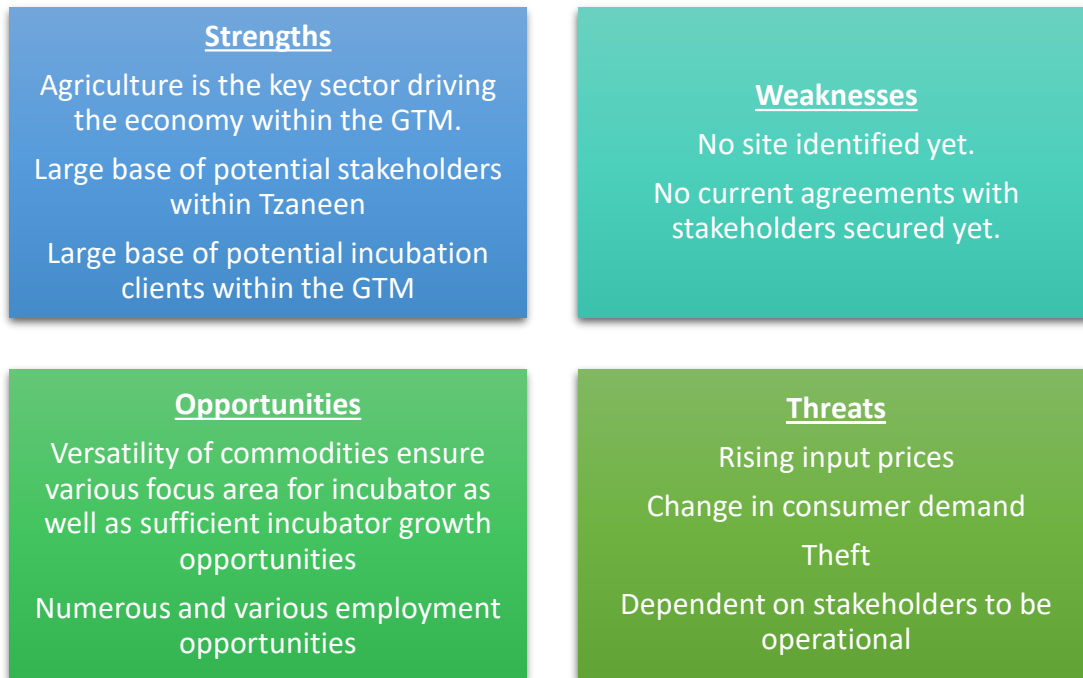
Risk Type	Contingency Plan
Production Risks	
Electricity failures	Back-up power supply, such as generator or solar.
Shortage of input supply due to unforeseen circumstances.	Ensure contact with multiple input suppliers from various regions.
Theft	<ul style="list-style-type: none"> ▪ Insurance of equipment and implements ▪ Physical security services
Financial Risks	
Increase in costs of inputs	Buy in bulk and stay informed with prices
Low prices of output and fluctuating prices	Price hedging
Insufficient capital to meet expected obligations	<ul style="list-style-type: none"> ▪ Informed monitoring of finances and budgeting ▪ Financial record keeping
Marketing Risks	
Decrease in local consumer demand	The project will ensure market through multiple channels and beyond the local market
Human Resource Risks	
Protests of employees	Ensure that employees are paid minimum wages and above and provide performance incentives.

5.2. SWOT Analysis

This Section contains an analysis of the strengths, weaknesses, opportunities and threats to the development. Strengths and weaknesses are typically internal factors of a development, whereas opportunities and threats are typically external factors that can likely be taken advantage of (opportunities), or have a negative effect on the development (threats).

The following diagram illustrates the identified strengths, weaknesses, opportunities and threats of the proposed Tzaneen Incubator.

Diagram 6.1: SWOT Analysis



The development's strengths and weaknesses are within the business and can be promoted or enhanced through adjustments and decisions within the business. Opportunities and threats are influenced by factors that are external to the business and can not necessarily be transformed via internal decisions or changes made within the business.

SWOT Analysis will be updated once site information is available.

Section 7: Conclusion

Urban-Econ Development Economists was appointed to conduct a feasibility study for an Agricultural Business Incubator. The project will consist of an Incubator with a focus on agricultural production within the Greater Tzaneen Local Municipality (GTM) and aims to cater for all smallholder and small commercial farmers located within the entire GTM. It is evident from the findings in the report that there are currently no non-exhaustive agricultural incubators located within the Limpopo Province, indicating a clear gap within the province, and as a result within the GTM as well.

A number of private and state-run initiatives exist that can assist in expanding the incubation support available in South Africa. This can be done either by providing finance or advice. Apart from receiving financial support, the incubator will require supply chain support from local accredited training companies that can provide agricultural training programmes and courses to the incubates. Various potential governmental and private support within the local area have been identified.

The farmer surveys that were conducted indicate that a definite need and opportunity exist within the current farming activities of the GTM for the development of an agricultural incubator to support, train and equip the local farmers and ensuring growth within the agricultural sector.

The Tzaneen Agricultural Incubator is to be a Section 21 company (non-profit-organisation), owned primarily by key supply chain companies and overseen by a board of directors made up of representatives from contributing organisations. It is suggested that ownership be distributed among the DTI, LEDA and SEDA as the primary board of directors.

The total capital expenditure is **R 21 771 734** for the incubator to be operational. The total operational costs amount to approximately **R 2 217 600** required in order to ensure the incubator to be operational in year one. The operational expenditure is expected to grow to approximately R3 908 676 in year ten. The total capital expenditure, together with the operational expenditure, should be the first financial priority for the project when considering funding opportunities and possible grants.

Based on the findings of the report, it is concluded that the development of an agricultural incubator within the Greater Tzaneen Local Municipality is considered feasible and greatly beneficial for the local community as well as the local economy.