



# **DTI Transition**

## **Status Report June 2013**

### **Dairy Training Institute (DTI)**

#### **Naivasha**

**SNV Netherlands Development Organisation**  
**Kenya Market-led Development Programme (KMDP)**  
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## **ACKNOWLEDGEMENTS**

This report is the outcome of a close collaborative effort between SNV Netherlands Development Organisation (SNV), the Ministry of Livestock Development (MoLD), the Dairy Training Institute in Naivasha (DTI) and DTI Steering Committee.

Part of the information in this report was derived from a diagnostics review of DTI and a Labour-market Needs Assessment, carried out by PKF Consulting.

As per the request and recommendations of the MoLD, DTI and DTI Steering Committee, SNV deployed an external consultant, Mr Jurjen Draaijer, to revise and enhance the diagnostics review into this Status Report.

We acknowledge the time and expertise of the DTI team, the Ministry of Livestock Development officials, and the Chairman of DTI's Steering Committee for their contribution to this final report.

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## ACRONYMS

AHITI	Animal Health and Industry Training Institutions
AI	Artificial Insemination
AIE	Authority to Incur Expenditure
ASK	Agricultural Shows of Kenya
ATC	Agricultural Training Centre
BDC	Business Development Centre
CBO	Community Based Organization
CDM	Certificate in Dairy Management
DFO	District Finance Officer
DST	Dairy Science and Technology
DTI	Dairy Training Institute
EAAPP	East African Agricultural Productivity Program
EADD	East Africa Dairy Development (program)
EGU	Egerton University
FAO	Food and Agriculture Organization of the United Nations
FPEAK	Fresh Producers Association of Kenya
GDP	Gross Domestic Product
GoK	Government of Kenya
HELB	Higher Education Loans Board
ICPAK	Institute of Certified Public Accountants of Kenya
IFAD	International Fund for Agricultural Development
IFRS	International Financial Reporting Standards
ILRI	International Livestock Research Institute
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KARI	Kenya Agricultural Research Institute
KDB	Kenya Dairy Board
KEBS	Kenya Bureau of Standards
KES	Kenyan Shillings
KMDP	Kenya Market-Led Dairy Programme
LNA	Labour-Market Needs Assessment
LPO	Local Purchase Order
LRC	Livestock Recording Centre
MDG	Millennium Development Goal
MOA	Ministry of Agriculture
MOH	Ministry of Health
MOHEST	Ministry of Higher Education and Technology
MoLD	Ministry of Livestock Development
NGO	Non-Governmental Organisation
NKCC	New Kenya Cooperative Creameries Ltd
PCPB	Pest Control Products Board
PS	Permanent Secretary
PSC	Public Service Commission
RDCoE	Regional Dairy Centre of Excellence
RMC	Risk Management Coordinator
RVIST	Rift Valley Institute of Science and Technology
SACCO	Savings and Credit Cooperatives
SAGA	Semi-Autonomous Government Agency
SNV	SNV Netherlands Development Organization

TIVETA	Technical and Vocational Education and Training Authority
TSC	Teacher Service Commission
TVET	Technical Vocational Education and Training
UNEP	United Nations Environmental Program
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UoN	University of Nairobi
USAID	United States Agency for International Development
VVPC	Veterinary Vaccine Production Centre

## EXECUTIVE SUMMARY

The Dairy Training Institute (DTI) in Naivasha, Kenya was founded in 1963 as a dairy training school and has been supported by several organisations in the past including UNICEF and FAO.

DTI is operating as a department of the Ministry of Livestock Development and offers practical, hands-on training in Dairy Science and Technology for students in the East Africa region.

DTI is currently engaged in the transformation from a Government institution to a Semi-Autonomous Government Agency (SAGA), which will enable DTI to operate more independently and attuned to the needs of – the largely private sector driven – dairy industry.

A diagnostics review of DTI and the donor environment revealed the following. The operational review (2.1) shows that DTI is offering two long-term courses for around 140 students and a series of short-term technical courses on demand. Most of the training is done in-house, but the training facilities and other infrastructure, including student and staff accommodation, laboratories and training grounds, are all outdated and in poor state and condition.

The institute also offers conference facilities and a new facility is currently being constructed through IFAD funding.

DTI has a farm with around 1,360 acres including cattle and other livestock, and has an out-of-date mini dairy processing unit.

The legal and organizational review (2.2 and 2.3) show that transformation to SAGA status, would greatly benefit DTI. As a SAGA it will for example be able to develop its own course portfolio and curricula based on the needs of the market, apply market conform course fees, receive directly funding from donors and the private sector, develop other profit centres to generate finance for investments and operations, and put in place human resource policies for staff composition and management that are performance-based and market-driven.

The financial review (2.4) demonstrates that the current revenue streams are not sufficient to run the institute effectively, let alone to do major investments in new infrastructure and development of (potential) profit centres like the farm.

Most of the annual revenue comes from MoLD. Under SAGA status government contributions will not immediately stop, however DTI will need to increase student fees, income from short courses and consultancies, and seek for additional funding and income streams from stakeholders in the dairy industry, including the private sector and development partners/donors.

The commercial review (2.5) is largely based on the dairy Labour-market Needs Assessment study. It shows that demand for skilled labour is high across the dairy value chain. Currently there is not a lot of competition from other vocational or higher level training centres or institutes.

A review of the donor environment (2.6) reveals that there is a lot of interest from the donor community and other international institutions in the Kenya dairy sector. This also applies to DTI, although within the EAAPP program KARI Naivasha has so far been identified as the main recipient of funding.

The potential for DTI to operate more commercially and be successful in providing technically skilled labour for the dairy sectors is high. The institute however needs to undergo a fundamental transformation as regards to legal structure, management and governance structure, buildings and practical training equipment and infrastructure, course portfolio, rates and marketing strategy, revenue streams and profit centres.

To facilitate this process, it is recommended to engage a qualified consultant(s) and expert in setting up and managing dairy training institutes, to prepare a business and investment plan for a "new" DTI that is operating under SAGA status.



## CHAPTER 1 INTRODUCTION

Dairy is the single largest agricultural sub-sector in Kenya, and the development goals as outlined in Vision 2030 have identified agriculture in general and dairy in specific as key drivers for economic growth. To realize this growth there is need to transform the predominant informal milk production and trade into a commercially oriented and competitive industry.

There is need to develop appropriate human resources with requisite skills to accelerate the development of the dairy industry, from production level, collection and bulking, transporting and processing, to marketing and distribution. The Dairy Master Plan, the draft Dairy Industry Policy (DIP) and the corresponding Dairy Bill acknowledge the shortcomings in human resources and the need for quality training.

The Dairy Training Institute (DTI) in Naivasha has a national (and even regional) mandate and is the only practical dairy training institute in the country. DTI offers practical training of one and two year pre-service certificates in Dairy Management and Dairy Science and Technology, as well as shorter practical courses on demand, covering animal husbandry, quality control, value addition & technology transfer, business development & entrepreneurship and marketing.

In order to respond to the market needs, the Ministry of Livestock Development prepared in 2012 a strategic plan for transformation of DTI. As part of this process, the Ministry initiated the process of changing DTI into a Semi-Autonomous Government Agency (SAGA), in order to provide a legal framework for efficient running and management of training programmes carried out by the institute. The objective is transform DTI into a sustainable commercially-oriented and industry-driven training institute, which meets the needs of the dairy industry. A Cabinet Memo for attainment of SAGA status was signed in March 2013 by the Permanent Secretary and the Minister for Livestock.

To facilitate this transition process, SNV Netherlands Development Organisation and NUFFICE NICHE Kenya/127 partners, commissioned a dairy sector Labour-Market Needs Assessment and a DTI diagnostics review study.

This Status Report builds upon both studies or documents and serves as an input for the preparation of a business and investment plan for a "new" DTI, which will amongst others be used as a value proposition for potential investors in DTI from the public and the private sector.

## **CHAPTER 2   DIAGNOSTICS REVIEW**

### **Background of DTI**

The Dairy Training Institute (DTI) was founded in 1963 as a dairy training school and has since operated as a government institution providing trained personnel for the dairy industry. The institute was established with assistance from United Nations Children's Fund (UNICEF) under the milk conservation programme to provide trained personnel to promote and strengthen small-scale farmer milk production, processing and marketing in the rural areas. From 1963 to 1991, DTI was the regional Dairy Development and Training Centre for the English speaking countries in East and Central Africa under the Food and Agriculture Organization (FAO). DTI offered short tailor-made courses and a Rural Dairy Management course lasting three months.

Currently, DTI is offering practical oriented, hands on training in Dairy Science Technology and Management in the East African region. DTI is located on a 1,360 acre piece of land in Naivasha district of Nakuru County, 100 kilometres North West of Nairobi off the Nairobi-Nakuru highway. DTI has been under the management of the Ministry of Livestock since its establishment, and there is no specific legal framework establishing or guiding the operations of DTI. To this extent, DTI is entirely dependent on the parent Ministry for direction and funding.

DTI offers a wide array of short-term courses and pre-service certificates in Dairy Management and Dairy Science & Technology of one and two years. In addition, the institute runs a farm and operates a dairy plant, primarily for training purposes. Further DTI also offers Business Development and Consultancy Services and is engaged in collaborative research.

DTI's legal structure as a department in the Ministry of Livestock Development implies that it relies solely on the central government for funding and decision-making, leading to a stagnant growth of the institution's infrastructure, staff development, and curriculum development. Since the structural adjustments in 1992, the government has had to cut down on expenditure affecting many government agencies and training institutions, and this has affected DTI as well. It is very likely that the scenario may worsen when the government withdraws subsidy for training within the sector. It is therefore imperative that the institution adapts to the changing situation to avoid the risk of closing down or collapse.

## 2.1 Legal and Regulatory Review

The first steps towards commercialization of DTI that have been initiated are aimed at the transformation of DTI into a Semi-Autonomous Government Agency (SAGA). The perceived benefits of DTI's transformation into a SAGA are the following:

- a) Mobilization of resources: The transformation will automatically give the institution an incentive to collect additional financial resources as DTI will have the authority to utilize the resources themselves. Possible funding sources would be the private sector, County government, the constituency development fund, TVET Authority, central government and development partners/donors.
- b) Specialization and efficiency: It is envisaged that the creation of an autonomous DTI will promote efficiency in its operations, especially if the oversight of the Board is effective and through use of performance contracts that will ensure that the leadership delivers according to the signed contract.
- c) Better skilled manpower: A "new" DTI will have the ability to install major changes in its human resource department, where the focus will be to attract and retain strong skilled manpower in management, human resource management, curriculum development and training, through better terms and conditions of service and performance contracts.

### Current and Future Status

Currently, there is no legal framework establishing and guiding the operations of DTI, other than DTI being a department under the Ministry of Livestock Development. DTI relies on the Ministry for direction, budget support and staffing.

DTI is one of the four government institutions under MoLD mandated to provide training, the other institutions include the three animal health training institutions at Kabete, Ndomba, and Nyahururu and the Meat Training Institute in Athi River.

After the transformation of DTI, there will be two different legal frameworks that will govern the institution. In its intended semi-autonomous status (SAGA), DTI may have to wear two hats. One being a SAGA governed by the Parastatals law, and the second as a middle level training college under the TVET Act.

### State Corporation Act

As a SAGA, DTI will be guided by the State Corporation's Act, which regulates the formation of state corporations and specifically guides the formation of boards that manage the institutions as well as the control of finances. Strict adherence to the set provisions will go a long way into helping DTI set up a commercialization plan and consequently implement it.

## **The TVET Bill**

Educational reforms in Kenya have led to the Technical Vocational Education and Training (TVET) bill, focusing on skills development programs for youth and adults to satisfy the needs of the national economy. The bill will have implications for all training institutes in the country, including DTI. The bill is defined as "an Act of parliament to provide for the establishment of a technical and vocational education and training system; to provide for governance; and management of institutions offering technical and vocational education and training: to provide for coordinated assessment, examinations and certification: to institute a mechanism for promoting access and equity in training; to assure standards, quality and relevance; to provide and for purposes incidental thereto of connected therewith<sup>1</sup>".

The guiding principles of the bill state that training shall be available to all qualified Kenyans without discrimination and that all appropriate mechanisms will be instituted to promote access, equity, quality and relevance in training to ensure adequate human capital for economic, social and political development. The training programmes will also be designed to operate within a framework that leads to lifelong education and training, which facilitates innovativeness and creativity and complementary education for those receiving technical and vocational training in the form of "on the job training".

The Technical and Vocational Education and Training Authority (TIVETA) was set up to play a regulatory role with the mandate that includes the following functions:

- To regulate and coordinate training under the Act
- Accredite and inspect TVET programs and courses
- To establish minimum criteria for admission to institutions and programs in order to promote access, equity and gender parity
- To recognise and equate qualifications awarded in local institutions on foreign TVET institutions in accordance with the standards and guidelines
- Collect, examine and publish information relating to training
- Inspect, licence, register and accredit training institutions
- Register and licence trainers
- Advise on the development of schemes of service for trainers
- Mobilise resources for training
- Promote private sector investment and participation in training
- Maintain a register of all institutions accredited under this Act

The TVET bill has put in place strict requirements for licensing, registration and accreditation of trainers. Article 17 chapter (1) of the bill states that no person

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<sup>1</sup> The TVET Bill 2012 as enacted in parliament

or institution shall offer training in Kenya unless it has been accredited, licensed and registered under the Act.

No program or course of training shall be mounted in an institution without prior approval by the Board and any academic award or qualification issued by an institution not yet accredited, registered and licensed in accordance with the Act. Any person/institution that contravenes this requirement is liable to a fine of KES 1 million or jail term for three years.

The transformation process is driven by a multi-stakeholder steering committee composed of members from the government, the private sector and the development agencies involved in various activities along the dairy value chain. A Labour-market Needs Assessment (LNA) in the dairy sector preceded the development of the commercialization roadmap. Among other objectives, the LNA was intended to identify the skills and competencies required by the dairy sector, the extent to which the DTI curricula met these needs, the employability of graduates from the institution and recommendations for improvement of DTI to meet industry needs. In this regard, the LNA provided valuable lessons for transforming DTI into a competitive training institution for the dairy sector.

## **2.2 Operational Review and Mandate**

DTI's current core business revolves around providing training courses and certification for dairy value chain actors. Most of the training is done in-house. Apart from classrooms, student dormitories, dining and kitchen facilities, lecturers staff houses, administration blocks and a library, to assist in the practical training a non-commercial dairy farm, a mini-dairy plant and laboratories have been established at DTI's compound. Annex 1 provides a lay out of all infrastructure at site and the farm boundaries and access road.

Within the training program two distinct areas can be defined (a) Dairy Management (DM) and (b) Dairy Science and Technology (DST)

The academic departments are responsible for the delivery of trainings for regular certificate courses as well as short courses. The curricula of both certificate courses are attached as Annex 2.

The short courses are demand-driven and designed on a need-basis. These courses are conducted for specific target groups such as industry players and sponsored projects or programs. Currently, the short tailor-made courses at DTI include the following:

- Hygienic milk handling and processing
- Milk testing and quality assurance
- Milk and milk products marketing
- Feed formulation and milling technology

- Business development
- AI upgrading course
- Good Managing Practices (GMP)
- Modern dairy management

The short courses take a maximum of three weeks when conducted outside the institutions and 1-2 weeks when conducted within the institution. The short courses are charged based on direct costs such as training materials, facilitation fees, transport, hall hire, accommodation and meals.

The academic year of DTI runs from August up to April of the following year with breaks in December and between May and July. There are two semesters and each semester lasts 16 weeks with the first one running from August to November and the second one starting in January and ending in April.

During the break from May and July the students usually go for practical attachments and this is also the period when selection of new admissions is done. The attachments last around 8 weeks. Graduation at the institute is conducted every September. The institute's student population in year 2012 was 144, the highest in DTI's history.

### **Admission of Students (2008-2012)**

The table below shows the admission of students in the period from 2008 to 2012. The Certificate in Dairy Science and Technology (DST) course attracted a higher admission rate in four consecutive years as compared to the Certificate in Dairy Management (CDM) with the exception of 2012 enrolments.

**Table 1. Student Enrolment for Dairy Science and Technology**

YEAR	2 YEARS		TOTAL
	FEMALE	MALE	
2008	18	36	54
2009	19	33	52
2010	14	34	53
2011	24	46	70
2012	23	41	64

Source: DTI Management

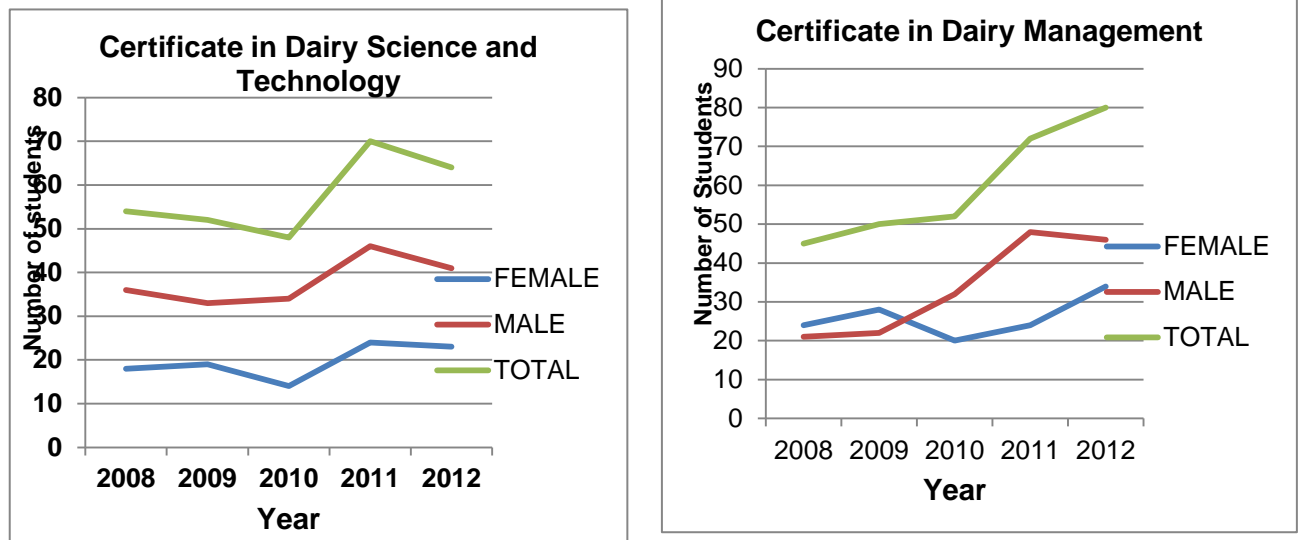
**Table 2. Student Enrolment for Dairy Management Course**

YEAR	1 YEAR		TOTAL
	FEMALE	MALE	
2008	24	21	44
2009	28	22	50
2010	20	32	52
2011	24	48	72
2012	34	46	80

Source: DTI Management

The proportion of female admission for the two-year course in Dairy Science and Technology Certificate has been around 34% for the past 5 years while it was 43% for the one-year course in Dairy Management. This is illustrated in the figure below.

**Figure 1. Gender Proportion in Admissions**



Source: DTI Students' Data

### Renting out of Conference Facilities

DTI is preferred by many government institutions and other partners as a venue for workshops and seminars since it provides a quiet environment conducive for discussions. DTI has therefore put aside two halls for hire for conferences. The catering is provided by the institution's catering services to institutions that seek to use them on a cost recovery basis.

### Farm Operations and Herd

The farm is operated as a non-commercial unit to provide facilities for practical lessons in dairy farming. Only about 120 acres of the 1,360 acre piece of land is utilized for the buildings and the farm operations. The largest area is unfenced with lots of bushes, and neighbouring animals are encroaching on DTI's land, which increases the risk of the spread of animal diseases.

Currently the farm is headed by a Farm Manager, assisted by six workers, four of whom have been permanently employed by the government. Apart from the Farm Manager, the other workers at the farm are unskilled; the farm also lacks important operational procedures such as store keeping and record keeping.

The herd of cattle consists of 100 animals, out of which 16 are dairy animals. The average total milk production from the farm is 120 litres per day, which is mainly used for consumption by the students. During holiday breaks, the milk is processed in the dairy plant. The dairy cattle are kept in a zero-grazing system, while the Sahiwal cattle, mainly kept for beef, are being grazed. The farm also has a dairy goat unit, three camels and a poultry unit with a capacity of 600

layers but currently operating at half capacity. In addition the farm utilizes about 8 acres for hay production, resulting in around 1,000 bales of hay annually.

In the current state the farm does not adequately provide facilities and support required for the practical trainings in dairy. The dairy animals do not receive supplementary feeding, and the quality of the general dairy management is not optimal. Development of the farm has mainly been hindered by a lack of funding, as well as:

- a) Low and erratic pattern of rainfall
- b) The farm is not recognized as a livestock production farm hence does not receive any direct funding from the government for its development
- c) Poor feeding of animals
- d) Inadequate farm personnel numbers and inadequacy of practical skills
- e) Low-business acumen
- f) Bureaucracy in government procedures hinders timely access to inputs

The government receives the institution's revenue and does not reinvest any of the funds in the institution's development.

### **2.3 Organizational and Human Resource Management Review**

There are five technical departments within DTI, with a departmental head for each:

- Animal health
- Dairy technology
- Animal production
- Economics & extension
- Basic science

Hardly any inter-linkages exist between these departments.

Currently, DTI has a staff capacity of 41 of which 30 are male and 11 are female. All are employed by the government. The teaching section has 32 members of staff while the rest are in support services. With a student population of 144 (2012), the teacher to student ratio is 1:5.

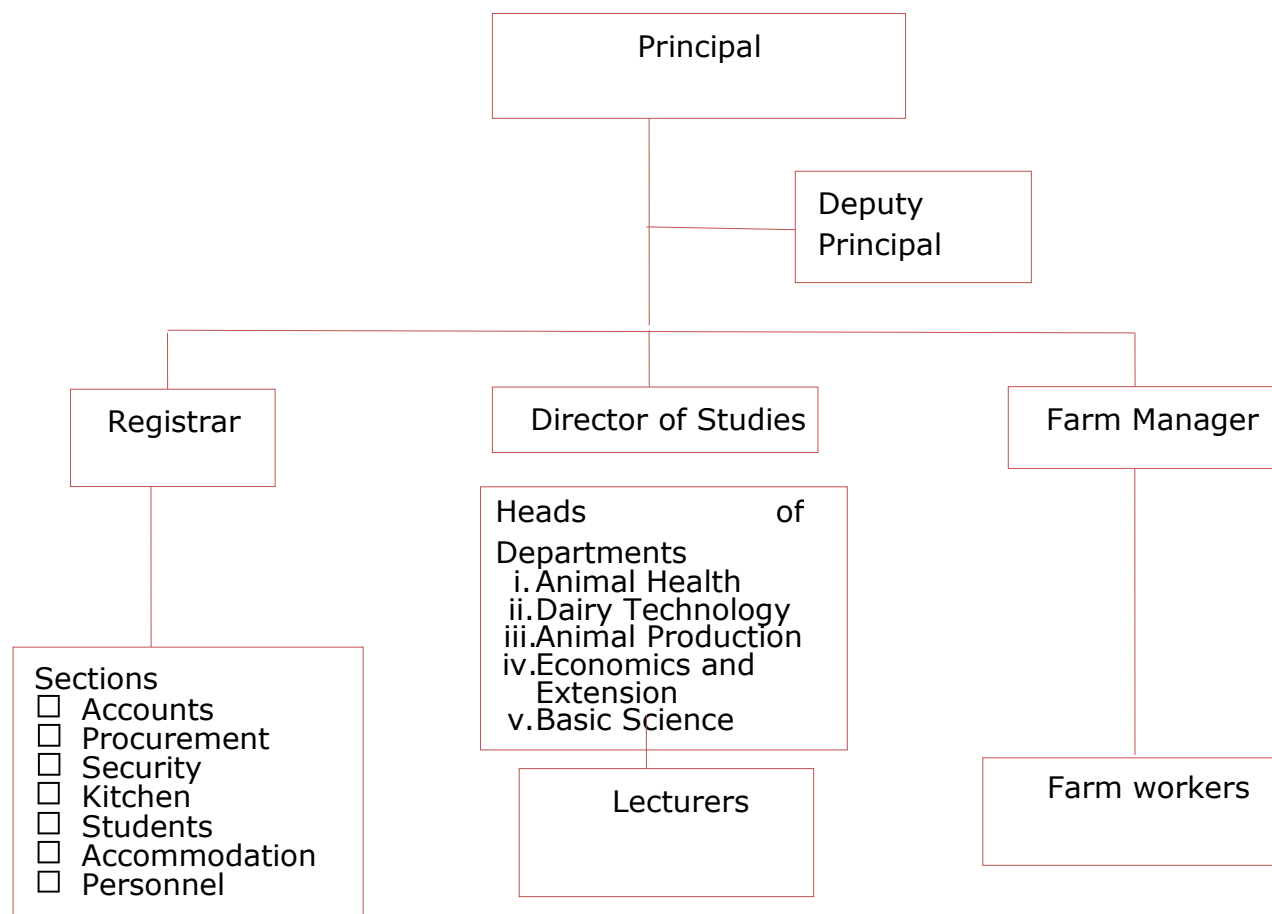
There are only three classes for the two courses, which means that at any particular point of time, only three lecturers are in class. It is however important to note that the same lecturers also act as technicians in providing practical training.

Regulations governing higher education place the required ratio of lecturer to students at 1:40. This implies that DTI can increase student enrolment by about 8 times to fully utilize the capacity of the teaching staff, providing lecturers are not conducting courses outside the institute.



DTI's Principal is the head of the management team and is in charge of running the institute, reporting directly to MoLD. The Registrar, Director of Studies and the farm manager all work under the Deputy Principal. The Registrar is in-charge of administrative issues in the institute including accounts, procurement, security, students' accommodation, catering as well as personnel matters. The Director of Studies (DoS) is responsible for the implementation and administration of all aspects of the academic programme, including the management of the teaching team and their performance. The figure below depicts a (not official) organizational structure of DTI.

**Figure 2. Current Organizational Structure**



**Job Descriptions**

The current structure of DTI does not clearly spell out roles and responsibilities. The job descriptions of the staff are set in accordance to the standard public servants act, and have not been tailor-made to reflect DTI's core business and goals. This makes it difficult to determine the level of commitment of employees towards the achievement of the institute's objectives across all positions. It is also worth noting that some positions like the "Head of Department" are not formal positions.

## Job Grading and Reward Systems

As government employees, each DTI staff is entitled to a basic salary and allowances as stipulated by law. The civil service salary structure is based on grading levels, which are taking into consideration economic performance, availability of funds, productivity level of members of staff and collective bargaining and there are 18 job groups labelled A to T. Currently, DTI staff fall between job grade "D" and job grade "R". Public servants are also entitled to an annual increment to their basic salary. Below is a table showing the ranking of DTI employees in the government's scheme of service.

**Table 3. Cadres and Job-Groups of DTI Personnel**

Designation/Cadre	Job Group	Position in DTI	In-post
Deputy Director/DDLP	R	Principal	1
Senior. Asst. Director	Q	Deputy principal	1
Asst. Director/ADVS/ADLP	P	Registrar, HOD-health	2
Principal Lecturer/PLPO	N	HOD-extension, lecturer	2
Senior Lecturer/CLPO/SVO	M	HODS, DOS, lecturer	8
Lecturer I/LPO1/VO1/SALHO/SALPO	L	Lecturer, Deputy Registrar	10
Lecturer II/LPOII	K	Lecturer, Farm manager, Dep. DOS	7
LPO III	H	Lecturer	1
Clerical officer I	G	Clerical officer	2
Clerical officer II	F	Clerical officer	1
Chief driver	H	Driver	2
Driver III	D	Driver	1
Cleaning supervisor	F	Copy typist	1
Support staff supervisor	E	Registry attendants	1
Senior support staff	D	Registry attendants	1
<b>TOTAL</b>			<b>41</b>

## Terms and Conditions of Employment

All aspects of staffing, training and development, grading and rewards management and performance management roles are performed by the Human Resource office of the Ministry. DTI follows the government sector appointment categories, which are as follows, i) Permanent and pensionable, ii) Permanent without pension benefits, iii) Temporary, and iv) Casual, hourly or daily paid. All permanent members of staff in DTI are answerable to the Public Service Commission. The recruitment process for the institute's personnel can be summarized as follows:

- The institute identifies the need to hire additional personnel
- DTI requests the MoLD for new staff
- The MoLD requests the PSC to recruit for the institute
- The recruited individual is then deployed to DTI

32 Staff members are on permanent and pensionable terms of services, while nine 9 are on probation. The direct association that DTI has with the government limits the exercise of authority of the top administration of the institution in issues pertaining staff promotions and disciplinary action on staff since the government is the chief decision making organ in regard to the institution.

### **Performance Monitoring**

The government code of regulations requires staff performance appraisals to be done every quarter as well as an end-of-year appraisal covering the period 1<sup>st</sup> July to 30<sup>th</sup> June of the following year. Currently, only the principal has a performance contract and his performance appraisal is based on the following skills and work attributes:

- (a) Leadership
- (b) Planning and organizing
- (c) Training and development of staff
- (d) Accountability and Resource management
- (e) Judgment and objectivity
- (f) Performance Management
- (g) Promotion of the use of Information Technology

Other staff members set their targets based on the principal's performance contract. The faculty holds weekly briefing meetings and meetings once every semester to assess the institute's performance.

### **Education and Skills Levels**

The minimum level of education required for teaching staff within an institute like DTI is an undergraduate Bachelors degree. For non-teaching and support staff, Certificate and Diploma level qualifications may be considered. The management team and other selected senior members of staff at DTI possess Masters Degree qualifications. More than half (68%) of the staff have a Bachelors degree and above, as illustrated in the table below.

**Table 4. Qualifications of Current Staff at DTI**

Level of Education	Number of staff	Percentage (%)
Masters Degree	11	27
Bachelors degree	17	41
Diploma	6	15
Certificate	7	17
<b>Total</b>	<b>41</b>	

*Source: DTI Management*

### **Training and Staff Development**

Management and coordination of staff training is the responsibility of the Ministry of State for Public Service. Staff training and development is guided by

the Human Resource Development policy for public servants that seeks to improve efficiency and effectiveness of service delivery. A newly appointed officer is eligible for a three-month induction course on joining a government institution to acclimatize him to his job roles. It is stipulated by law that a state officer pursuing a training course should continue to receive his salary as well as adequate benefits. The Ministry conducts training needs assessments to establish the training gaps. Staff is entitled to five (5) days of training in a year.

### **Policies and Procedures**

Staff management is guided by the Code of Regulations for Civil Servants (revised 2006) administrative circulars, personnel letters, the Employment Act (2007) and other acts that guide human resource issues and administrative circulars issued to the public service from time to time. These have addressed issues in the human resource function, though not conclusively.

## **2.4 Financial Review**

### **2.4.1 Financial Management**

The accounts of DTI, being a government institution, are kept at the district accountant's office. The District Finance Officer (DFO) manages the financial records of DTI, releasing funds to the institute using the authority to spend vouchers provided. The finance clerk of DTI records the income and expenditure in a ledger, no detailed financial records or statements are kept at the institution. This method of financial management can be quite inefficient.

### **Current Income Sources**

Currently, DTI has two main sources of income: the central government funds and student fees. Any additional income from the conferencing, short courses and consultancy services are charged based on a cost recovery basis.

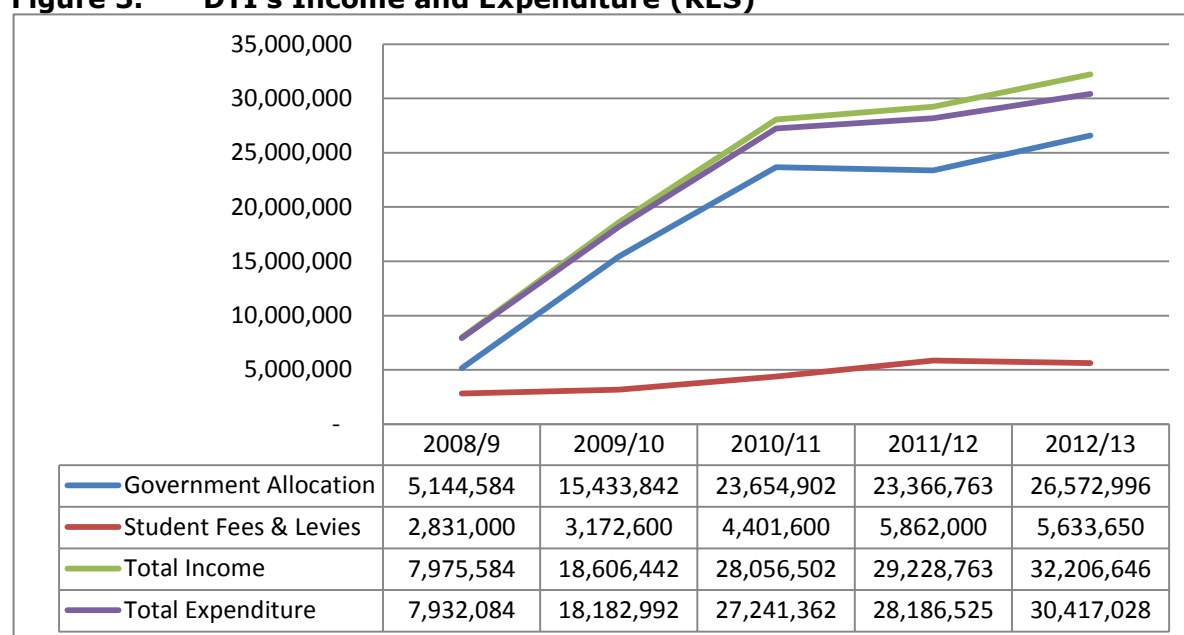
The institute receives the funds from the government every quarter through the District Treasury who is the custodian of the government accounts. There is an elaborate process in place before the release of any funds by the District Accountant, first staff presents an application to DTI's accounts clerk with details of the expenditure to be incurred. The accounts clerk then raises a Local Purchase Order (LPO) that is forwarded to the principal for approval. An imprest warrant is then prepared and presented to the District Treasury to release the funds; the accountant is responsible for collecting the funds from the District Treasury.

DTI operates a petty cash amount of KES 100,000 per week and for its release, the applicant must provide a receipt as proof of expenditure. The institution has to spend the money as per the Authority to Incur Expenditure (AIE) as the Ministry does not encourage any deviations from the budget. Any balances that occur as a result of under-spending are returned to the treasury. Suppliers are

paid directly from the District Treasury after approval of the LPO by the institute. The institute's total income from both student's fees and the government for the past five years is as summarised in the table below.

The one year course described in Chapter 2.1 costs KES 45,250 which is payable upon admission. The two-year course costs KES 68,250 which is payable in two instalments: KES 33,250 upon admission and 35,000 before completion of the course. The student fees and levies have been on an upward trend but the cumulative growth for the last *five* years has been only 12%, against annual inflation in Kenya of approximately 12% *per year*.

**Figure 3. DTI's Income and Expenditure (KES)**



Source: Authority to Incur Expenditure (AIE) provided by DTI Management

### Expenditure Review

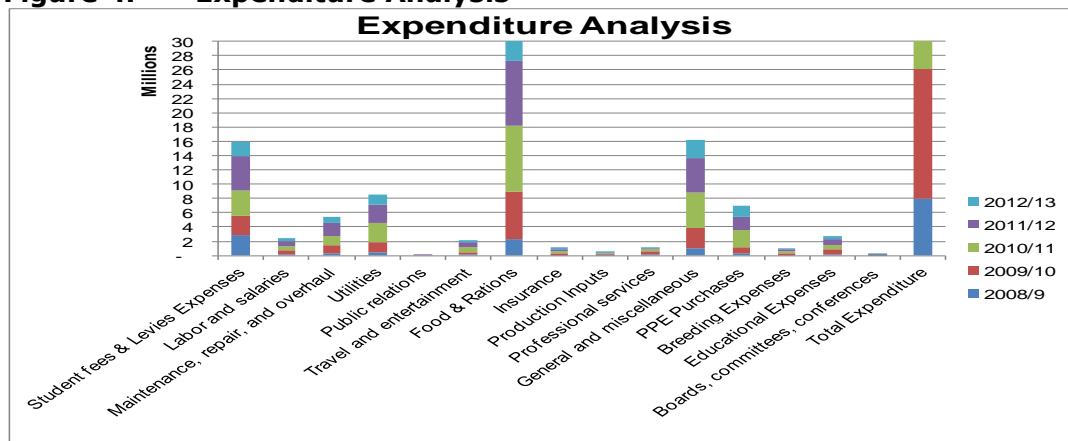
In the financial years 2008/9 to 2011/12, the institute has realized surplus funds averaging 2% of the total income received. Student enrolment has increased from 98 students to 144 students in the same period.

A review of the extrapolated financial statements reveals that the institute is unable to sustain itself financially without government support. Income from student fees and levies comprise on average 25% of the total institute's income, while the remainder are Government funds.

Food and rations for students are the largest expense item accounting for 42% of the total expenses. These are incurred in the provisions of meals and other supplies to students who are all residents of the campus, and have been increasing with the student population. Included in expenses are teaching aids and other amenities. Utilities form 11% of the total costs and these include electricity and water, among others. Labour and salaries are payments made to casual labourers.

The permanent staff salaries are paid by the central government through the Public Service Commission (PSC). Maintenance repair and overhaul includes expenses related to maintenance of property, plant and equipment and costs related to minor alterations to the existing buildings. Breeding expenses are expenses incurred in purchase of animals and breeding stock. The figure below depicts an analysis of the institute’s expenditure over the past five years:

**Figure 4. Expenditure Analysis**

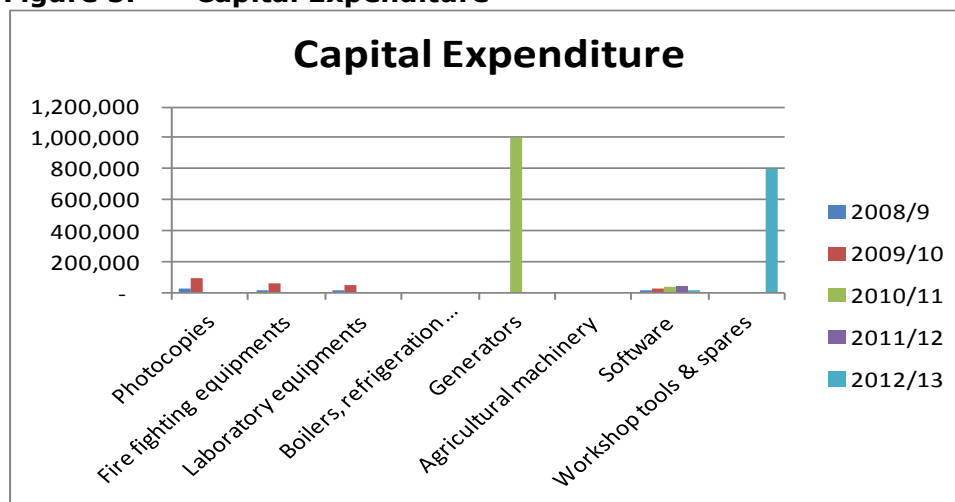


Source: Authority to Incur Expenditure – adapted from financial records at DTI

### Capital Expenditure

Because of the nature of accounting in the institution and the fact that DTI does not prepare financial statements, capital expenditure is classified as normal expenditure instead of as an asset, which is against the IFRS guidelines on financial reporting. It is important to take note of these expenditures as the institution will be required to document its capital expenditure after transformation, and the purchases reported as assets. In the figure below, outlined is the expenditure that qualifies to be classified as capital expenditure for the past five years.

**Figure 5. Capital Expenditure**



Source: Authority to Incur Expenditure records

## Budget planning

The heads of departments and sections prepare their respective proposed budgets, which are compiled by the principal's office for onward transmission to the parent ministry for approval and budget allocation.

### 2.4.2. DTI's Assets and Physical Infrastructure

The institute owns several assets as summarized in the table below; the figures are estimates provided by the institution. Actual figures will require the services of valuation experts. The detailed list of assets is attached as **Annex 3**.

**Table 5. Summary of Assets (KES)**

NO.	ASSETS	VALUE
1	Buildings (*)	237,300,000
2	Land	600,000,000
3	Farm Animals	5,550,000
4	Vehicles	7,602,000
5	Equipment	24,242,250
	<b>GRAND TOTAL</b>	<b>850,452,000</b>

*Source: Authority to Incur Expenses- Adapted from DTI's financial records*

#### Buildings

The buildings at DTI (classrooms, dormitory, admin blocks, staff houses etc) were constructed in 1963 to cater for a small number of students meant to be absorbed by the government. The capacity of the institution's accommodation facilities is 220. Most of the buildings are structurally sound but in need of rehabilitation and two of the buildings with asbestos roofing need replacing. However to revive the institute and transform it into a modern and state of the art training centre – which is the long term objective of the stakeholders – the majority of the buildings need to be replaced. In view of that the estimated value of the buildings (Table 5) is questionable and not realistic (\*).

#### Land

The land on which the institution is located is estimated at 1,360 ha, shared between two other institutions – the sheep and goat station, and the livestock-monitoring unit. KARI is the custodian of the documentation regarding the ownership of the land. The issue of land will need government intervention during the transformation period to enable DTI to acquire the titles to the land. The current arrangement of ownership doesn't refrain DTI from utilizing the land.

#### Vehicles

The value of the vehicles provided above reflect the vehicles that are currently in operations. The vehicles that are grounded and are beyond repair have been excluded, as they will require a revaluation where the ones declared obsolete will have to be disposed off.

## **Dairy Plant**

The processing plant was installed in 1977 for practical training purposes, and today most of the facilities and equipment are run-down and cannot provide the level of training that is required. The units that are still operational are based on old technology and should be considered obsolete.

## **Water Infrastructure**

DTI currently has only one functional borehole. This borehole not only serves DTI but also two other government stations (namely the Livestock Recording Centre and the Sheep and Goat station), as well as a Government dispensary located near DTI. The use of the borehole by several institutes results in water shortages.

An additional borehole is dysfunctional and in need of repair.

There are a total of six water storage tanks at DTI with a total capacity of 71,000 litres. These include one tank of 24,000 litre capacity, one tank of 5,000 litre capacity and four tanks each of 36,000 litre capacity.

## **Laboratories**

The institution has two laboratories for dairy chemistry and microbiology. The current capacity of the laboratories is for 11 students. The equipment used is very basic, outdated and partially dis-functional. According to the DTI management team, there is need for a complete overhaul of the laboratories including the expansion of the facilities to accommodate more students.

## **2.5 Commercial Review**

The commercial review provides an analysis of DTI's current and projected performance in the context of the market for dairy training, as well as competition with other players. DTI's services are currently categorized as 'public good and services' that are provided for social benefit rather than for income generation.

### **2.5.1 The Dairy (skilled-) Labour Market**

#### **Market Size**

In order to determine the market size and drivers for the training in the dairy sector, it is important to assess the number of actors involved in the dairy value chain, the current demand for training courses being offered, as well as the potential for growth.

The average earnings from dairy in Kenya are KES 100 billion. The dairy industry is the single largest agricultural sub-sector in Kenya, contributing 14 per cent of agricultural GDP and 3.5 per cent of total GDP (Government of Kenya, 2008).

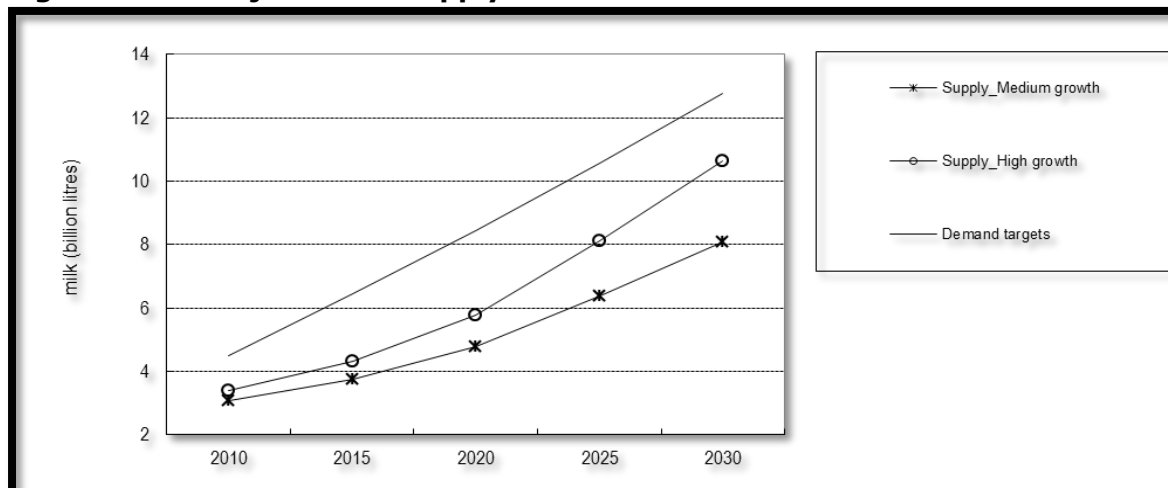
The Kenya National Dairy Master Plan 2010 estimates current total milk production at 4.5 billion litres and projects that at medium growth rate



production of milk will be 8-10 billion litres in 2030, whilst demand in the domestic market will have surpassed 12 billion litres.

The projected shortage of 2 billion litres, translates into an opportunity for the dairy training services, as they will be required to build human capital to meet demand for the increasing production by providing right training services. The figure below shows a projection of the milk demand and supply by 2030.

**Figure 6. Projection of Supply and Demand of Milk**



Source: KMDP 2010

Dairy farming is an important source of livelihood for approx. 840,000 small-scale farmers<sup>2</sup>. In addition there are over 2,000 large scale dairy farms in the country.

Considering that there are 1 million smallholders' farmers, for whom dairy is a family business, it is likely that more than 2 million people derive a living from the dairy sector through their involvement in production, marketing and service provision.

Although the dairy sector is still largely dominated by informal trading and marketing of liquid raw milk, over the last decade a robust processing industry got established with over 30 processors handling 1.5 million litres of milk per day, which increasingly invest in value added products.

The dairy sector therefore is a dynamic growth oriented and largely private sector driven industry, with a high and growing demand for skilled labour across the value chain, in particular due to the fast growing milk processing industry.

The current high demand for skilled labour in the industry is illustrated by the results of the Labour Needs Assessment (LNA) study conducted in 2013. However, different industry players require different trainings, and the LNA revealed that there is a mismatch between the supply and demand of skills in

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<sup>2</sup> Kenya National Dairy Master Plan 2010

the dairy sub sector, mainly in practical and soft skills. This applies as much to processors as it does to other parties in the chain.

Based on the study conducted, some of the short courses needed by the dairy sector at production level include:

- Introduction to farming as a business
- Enterprise analysis and feasibility studies
- Farm planning and record keeping
- Farm management
- Milking techniques
- Animal housing
- Feed formulation
- Herd fertility and calf rearing

### Employers

Employers in the industry include Government of Kenya, processors, dairy farms, dairy societies, and development partners. GOK and processors provide about 63% of total jobs for the graduates from the training institutions. The transition time between graduation and employment was 0-6 months, indicating good prospects of absorption of DTI graduates by the employers in the industry. The table below indicates the absorption rate by the various employers of graduates from three institutions.

**Table 6. Absorption Rate of Graduates by Employers**

Institutions	Government	Private Sector	Learning institutions	Others
DTI	8%	88%	0	4%
Bukura	73%	19%	4%	4%
Egerton	45%	56%	9%	0

Source: LNA Study (2013)

The largest employers of graduates from DTI are milk processors who employ a range of skills from processing to administrative support services such as accounting and sales, and more developed processors require higher qualifications. Examples of these jobs include QC and QA staff, production supervisors, system administrators, quality assurers, cheese makers and other processing staff. Milk processors in the industry mainly employed graduates with qualifications ranging from certificates up to masters degree level, 87% of who were certificate holders.

The study found that milk processors such as NKCC and Brookside preferred graduates from DTI, due to the fact that they received specialized training in milk processing. Institutions such as KARI, ILRI, and Heifer International preferred graduates from Egerton University, Nairobi University and Moi University.

Large scale farms seeking farm managers and other skilled staff preferred graduates from AHITIs, DTI and ATCs, because graduates receive much more specialised training from these institutions.

### **Market Drivers**

Major drivers for the skilled labour market in dairy are:

- General growth in demand for milk and milk products
- Growth of the formal market and investments in the value chain and into value addition by dairy societies and processors
- Growing number of farmers that see dairy farming as a business and preparedness to invest in skills and knowledge
- Growing number and professionalism of service and input suppliers, all looking for appropriate skills and skilled staff
- High interest from development partners in the dairy sector and in vocational training as opposed to academic courses.

### **2.5.2 Competition and Benchmarking**

In agriculture, different types and levels of education and training programs are provided by a variety of training institutions, ranging from village-level training centres or polytechnics categorized as Micro institutions, to middle level colleges categorized as Meso institutions to high level training institutions such as universities categorized as Macro institutions. Most institutions that provide an agricultural course have dairy training included as well. The following subdivisions are used:

#### **Macro Level Institutions**

Macro level institutions provide more specialized training aimed at managerial level, offering Degree and Postgraduate level, and include the following list of institutions: University of Nairobi (UoN), Egerton University (EGU), Jomo Kenyatta University of Agriculture and Technology (JKUAT), Baraton University, Chuka University College, and Mt. Kenya University. Macro-level institutions offer competition in the form of:

- **Technological knowledge:** institutions like UoN and EGU enjoy a wealth of technological knowledge, making their graduates much better equipped. Additionally, graduates from these universities are normally held in higher esteem, and graduates are able to fetch better jobs.
- **Practicals:** higher institutions have adequate facilities for carrying out their practical classes; these include well-maintained agricultural land for demonstration purposes and healthy livestock.

- **Exposure:** attachments are often better organized, as an example; the UoN provides attachments in the private sector for the veterinary medicine, including supervision of students.
- **Job market placement:** according to the lecturers, UoN graduates are preferred by the industry compared to graduates from other universities.
- **Curricula:** macro- level institutions offer a much wider variety of courses to students, from undergraduate courses like certificates, diplomas and undergraduate degrees, to postgraduate diplomas and degrees.
- **Resources:** macro-level institutions are often better resourced.
- **Trainers and lecturers:** lecturers and trainers are considered to be the most educated, experienced and well-known trainers in the country.

### **Meso Level Institutions**

These are intermediate level institutions that provide training from Certificate to Diploma level, focusing on technicians that will provide hands-on labour for the sector, including: DTI, Bukura Agricultural College, Animal Health Training Institutes (AHITIs), and Rift Valley Institute of Science and Technology (RVIST). Meso-level institutions offer competition in the form of:

- **Market share:** other Meso-level institutions charge about the same fees as DTI, meaning that they can choose to join either one or the other.
- **Job market placement:** students from the same level of training institutions seek employment in the same job market pool.
- **Similar curricula:** institutions offer almost the same type of courses in their curricula, and most of the training offered comprise of short courses, with duration of a few weeks or months.

### **Micro Level Institutions**

These are grassroots organizations that provide both in a formal and informal arrangement, short practical oriented trainings to farmers, ranging from short to longer term training. The micro level includes model farms, cooperative societies /milk collection points, and Agricultural Training Centres. Micro-level institutions offer competition in the form of:

- **Vocational training and more specialized agricultural courses:** these institutions provide hands-on training.
- **Lower costs:** they offer their courses at much lower costs.
- **Less entry requirements:** they don't have elaborate entry requirements.
- **Shorter courses:** they offer their courses in short periods of time of between one week to a month or more depending on the course.

- **Hands on experience in the case of model farms:** while at the farm, students get on-farm demonstrations.
- **Accessibility:** the institutions are often near to where the training is required.

### **Customer preferences**

The customers for the training include students and industry players. For students, the decision pattern revolves around affiliation to potential employers, affordability as well as reputation. According to the LNA study (2013) the major selection criteria was reputation; the study shows that 85% of graduates from DTI were influenced by the institutions reputation.

For employers, hiring criteria are determined by employability skills that graduates possess. They look for a blend of technical and soft skills such as communication, entrepreneurship. According to LNA study (2013), close to 80% of DTI graduates secured job places within 6 months of graduation. In some cases employers, signed up close to 90% of the final-year class prior to graduation.

### **Benchmarking**

In terms of benchmarking the following elements are to be considered:

- **Student enrolment:** the competition for students amongst vocational training institutions is fierce, and an attractive curriculum that will provide employment opportunities is very important.
- **Revenue collection/funding:** competition can also be analysed in the form of the ability to attract funding from various sources for different activities. DTI's current competition for funding comes in the form of institutions such as KARI Naivasha, which is able to attract a lot of funding.
- **Quality of staff:** experienced lecturers are in demand and most institutions recognise the value of employing good lecturers. As a growing institution poised for commercialization, it is important for DTI to have a staff retention strategy especially for its lecturers, as one of the challenges faced is the fact that lecturers move jobs for better payments.
- **Employers:** currently, DTI's graduates are absorbed very fast by the dairy industry. However, as one requires a higher level of skilled staff, the graduates from other institutions could present competition to DTI.
- **Curriculum:** DTI focuses with its trainings on certificate holders, rather than diploma holders and degree holders, which might be required for some higher level employees.
- **Quality of education:** although most of the macro institutions listed above have better training facilities, DTI has a range of courses that is very skill-oriented and industry-specific. This gives DTI more leverage

than other training institutions in terms of offering a competitive quality of education.

- **Facilities and infrastructure:** DTI's lack of adequate facilities could deter a sufficient student enrolment.
- **Fee charges:** In Kenya, where higher education is expensive, moderately and low-priced colleges will have an advantage over their competitors. DTI charges considerably lower fees than Bukura and Egerton. This is due to the fact that DTI's fees are highly subsidized by the government by up to 70%. The other reason is that the institutions confer only certificates and not diplomas or degrees like the counterpart institutions and therefore cannot justify higher fees.
- **Level of engagement with industry players:** for most prospective students an institution's affiliation to industry players increases perceived credibility and makes it more attractive. Currently, DTI is associated with the Ministry of Livestock and Development, giving it some credibility, the relationships with private sector industry players are yet to be fully developed, although there are on-going consultations, e.g. in curriculum development.

### **Examples of training institutions at Macro and Micro level**

#### Rift Valley Institute of Science and Technology (RVIST)

RVIST is a training institution and falls under the Ministry of Higher Education Science and Technology (MOHEST). It acquired SAGA status in 2004 with the mandate to provide technical training from artisanal level to diploma courses. The institute has over 3,000 ha of land with a dairy herd of over 1,000 cows, used both for training and commercial purposes. The farm is involved with growing maize and wheat on behalf of Kenya Seed Company and the farm has a horticultural farm and green houses. The institution offers around 42 different courses, accredited by various accreditation agencies both in Kenya and internationally, including Kenya National Examinations Council, and ICPAK for its accountancy courses. The student population is currently at 4,000. The institute has received funds from JICA, the patronage, the CDF funding and the community.

The institution works in collaboration with other technical training institutions such as Mombasa, Nyeri, Meru, Sigalagala, Friends, Kisumu, Eldoret, Kitale technical, amongst others, which also offer attachments and internships for RVIST. Graduates of RVIST are able to get credit transfers to other institutions of higher learning including Egerton, Moi, and Eldoret universities. Advertisement of the institution is done in the print media, radio, agricultural shows, and the community outreach team. The staff of the college is provided by the Teacher Service Commission (TSC), and there are a total of 200 lecturers provided by the TSC and 40 part time lecturers employed by the board, whose qualifications range from bachelor's degrees through to Master's and PhD level. The school's management team is answerable to the board of governors.

### Agricultural Training Centres (ATCs)

There are currently a total of 27 Agricultural Training Centres across the country, which offer farmer training, including dairy. The Ministry of Agriculture plans to open additional training centres to cater for each County. Apart from the ATCs, there are also the agricultural mechanization stations and the agricultural technology development centres, which provide applications to fabricate small agricultural equipment and machinery. Information from the Ministry of Agriculture indicates that Chebororwa ATC is considered a successful model, which at the time of the study had over 210 million shillings in its reserve, a figure having risen from 12 million in 2004.

Interesting to note is that even though they are not SAGAs, ATCs run as commercial units. The ministry provides 50% of funds generated and 70% of the revenue collected is ploughed back into the ATC.

### Individual Demonstration or Model Farms

The need for practical skills in the dairy sector has motivated some dairy farms to conduct short practical training courses for income generation. Some of the private practical training centres include: Mwingu Training Institute in Nyeri, Willy Kirwa, Sarah Boit and Baraka Farm in Eldoret and Ndykak in Nakuru.

Mwingu Farm is located in central Kenya on 45 acres and is currently establishing classrooms and accommodation for the training courses. Mwingu aims to educate the small-scale dairy farmer using practicals including training in feed preparation for the animals. The farm has small demo plots for forage production. Willy Kirwa's farm in Eldoret, located on 50 acres, also provides training particularly in feed formulation, and produces biogas. Ndykak farm is located in Nakuru along the Nairobi-Nakuru highway on 0.5 acre of land.

### **Attraction of Clientele**

DTI sources its students through invitation for applications advertised in the mainstream newspapers with national coverage, like the 'Daily Nation' and 'The Standard'. The adverts specify the courses provided, qualification requirements and accompanying fees. There are no provisions for online applications, as DTI does not have a website of its own. A selection board determines which candidates are to be admitted, and this board includes:

- Principals from all the training institutions under the MoLD
- The Registrars of the Trainings institutions
- The Chief of Training at the Ministry, and
- The Permanent Secretary (PS) who is normally represented by the Human Resource Department.

Marketing for the short courses is currently minimal, mainly done through contacting the various industry players, informing them of availability of tailor-made trainings. The institution thus depends on the industry players who respond with an 'invitation to train.' Various structures could be put in place to

increase number of applicants and admissions, and the following strategies could assist:

- Visit secondary schools and engage in career talks
- Targeting students outside of traditional markets
- Promoting graduate school placements
- Developing a monitoring plan to analyse enrolment patterns for analysis

### **Porter's Five Forces**

Competition can further be described by five fundamental forces that shape up the attractiveness of any industry. They are better known as the Porter's five forces that include:

- 1) Threat of new entrants
- 2) Threat of substitute products and services
- 3) Bargaining power of buyers
- 4) Bargaining power of suppliers
- 5) Rivalry among existing players

#### **1) Threat of new entrants**

The enactment into law of the Constitution of Kenya 2010 and the development of Kenya Vision 2030, has led to policy changes in the education sector. The TVET law (see chapter 2) also recognizes the role of the private sector in providing vocational and technical skills trainings and allows private individuals to provide training services within a set quality criteria. However the TVET bill puts in place stringent measures that govern qualification for a TVET institutions or individual trainer, quality of training as well as well as infrastructure. These measures coupled with the high investment costs required for starting up a training institution implies that entry into provision of technical and vocational training will be slow.

#### **2) Threat of substitute products and services**

With regard to training in the dairy industry, there are some apparent similarities in names of training courses, including e.g. 'dairy technology', 'animal health', 'animal science' and 'agribusiness'. However, DTI is the only institution offering practical dairy training courses, whereas the other institutions have a more theoretical focus. Some institutions have a model farm, but none have a dairy processing plant.

#### **3) Bargaining power of buyers**

Buyer power is one of the forces that shape the competitive structure of an industry, and in this case, the seller is DTI while the buyer is the student. Bargaining power of students in the industry affects the competitive environment for the institution and influences the latter's ability to achieve profitability. This pressurizes institutions to lower fees, improve quality of



training, and invest in adequate, up-to-date infrastructure, representing costs to the institutions. In this regard, DTI needs to focus on its core strength (e.g. practical dairy training), and establish an aggressive marketing strategy.

#### **4) Bargaining power of suppliers**

Suppliers are defined as those organizations or individuals who provide the materials, information and knowledge that allow an institution to produce its own products and services, which might include stationary suppliers, bookstores, suppliers of food/catering services, and health service providers. In DTI's case, labour should be viewed as an important supplier since it is highly skilled and very influential in the delivery of services.

#### **5) Rivalry among existing players**

Competition among training institutions has increased for faculty, students, donors and grants. Macro level institutions such as Universities have diversified their offering to include research, broad and varied graduate, undergraduate and tertiary programs that eat into the market share of TVET institutions such as DTI. The evolution of this competition is also sped up immensely by the arrival of Internet mediated distance learning and the introduction of parallel programs as institutions seek to expand their income base. The implication is that increased competition has provided more options for students and industry players. For purposes of good understanding of DTI operations, an assessment of external and internal operational environment was carried out to identify factors and challenges likely to affect its level of performance. This SWOT Analysis can be found in Annex 4.

## **2.6 Dairy Sector Stakeholder Review**

The dairy sector stakeholders are expected to play different roles in the transformation and commercialization of DTI. The institutions with interest in DTI include dairy value chain actors such as the regulators, farmers and "their" dairy societies, milk processors, input suppliers, service providers, market agents, research and development organizations, Non-Governmental Organizations (NGOs), Community-Based Organizations (CBOs) and other development partners.

The commercialization of DTI will require a lot of input from various stakeholders including the private sector, development partners and Kenya Government. Most of the stakeholders interviewed for this study report were very receptive to the idea of commercializing DTI. They were willing to offer their support once the institution has transformed, although they did not give concrete commitments.

The overall feedback from the stakeholders in the dairy sector was that the institutions would respond to proposals from DTI, if these were based on a clear and strategic and business plan.

The role of the various stakeholders is presented in the following overview.

## **Government's Role**

The role of the government in the transformation of DTI remains of paramount importance. During the first years of transformation, the government will still be the main financier of the institution in line with its policy of supporting newly formed SAGAs until it is satisfied that the institution has become sustainable. The institution will receive a government grant to run its affairs. At the moment, the institution has requested for a budget of KES 50 million per year.

## **The Role of Kenya Dairy Board (KDB)**

The Kenya Dairy Board is mandated to regulate, develop and promote the dairy industry in Kenya. As part of its regulatory mandate, KDB inspects and issues various types of licenses to various actors in the dairy value chain. The objective of this licensing is to ensure conformance to hygienic procedures and product standards. The role of KDB in the new DTI is not clearly defined. Apart from its current role as a regulator within the dairy sector, its governance or funding role in a "new" DTI cannot be determined just yet, as no concrete commitments from the management team on their perceived role exist. Some of the suggestions that have been made on DTI's proposed role to include the following:

- Representation on the Board of Directors to advise on various issues
- Advise on curriculum development to address the emerging trends
- Marketing of DTI as the centre for training for short courses
- Resource mobilization of funding for DTI
- Utilize DTI's laboratory facilities for milk testing
- Utilize the staff at DTI to provide training on various industry-related topics.

## **Other Regulatory Organizations**

Other regulatory institutions will include Ministry of Agriculture (MOA), the Ministry of Health (MOH, through the Public Health Department), the Ministry of Trade, the Ministry of Industry (through KEBS), the Ministry of Cooperative Development (MOCD), the Veterinary Vaccine Production Centre (VVPC) and the Pest Control Products Board (PCPB). Their role in a new DTI will be regulatory and advisory in nature, and DTI may invite them to serve as members of the Board from time to time and advice on issues that may arise from time to time.

## **Ministry of Higher Education Science and Technology**

The role of the Ministry of Higher Education, Science and Technology will depend largely on the direction that DTI will take. The TVET Act alongside the Education Act will influence to a large extent how the institution operates. The decision whether or not to register as a TVET institution is yet to be determined.

The following is an analysis of the role of MOHEST in the new DTI:

- To regulate, advise and coordinate training under the Act
- Accredite and inspect TVET programs and courses

- Advise the cabinet secretary on all matters related to training
- Define the national objectives to be achieved in training under this act
- Promote access, equity and relevance in training according to needs within the overall national socioeconomic development plans and policies
- Advise the government through the Cabinet Secretary on establishment of institutions
- Prescribe the minimum criteria for admission to training institutions and programs in order to promote access, equity and gender parity.

### **Development partners and international programmes**

Various donors are engaged in the dairy sector, and most if not all acknowledge the importance of skill and knowledge development for the dairy industry.

**SNV** (SNV Netherlands Development Organisation) and the **Royal Netherlands Embassy** in Nairobi - through the Kenya Market-led Dairy Programme (KMDP) – support the transition of DTI into SAGA, and the preparation of a business and investment plan for its future operations. With the assistance of SNV the DTI Steering Committee was established. The committee comprises of processors, Kenya Dairy Board, NGOs, and government representatives, and is chaired by the Chairman of New KCC. SNV and partners from the NUFFIC NICHE project also commissioned a Labour-market Needs Assessment of the dairy sector and a diagnostics review of DTI.

The **IFAD** Smallholder Dairy Commercialization Program (SDCP) is supporting DTI through its component D: “support to policy and institutions”. The program will support DTI through the establishment of a conference facility for around 100 persons, valued at KES 85 million. The procurement for this facility is expected to be completed by the end of May 2013.

The program also committed to the rehabilitation of 2 laboratories and 10 office buildings. SDCP further procured a tractor, harrow, plough, pickup, bus and a trailer for DTI. In addition support has been given to fencing, procurement of livestock, curriculum review, and the establishment of a hay barn and production of fodder.

**FAO** Kenya is supporting DTI through an EC funded project by developing interactive radio programs for farmers focusing on practical dairy training. Interest in these programs has been significant, demonstrated by 6,000 farmers donating KES 100 voluntarily through M-PESA. These radio programs have given DTI exposure to value chain actors and demand for training has increased as a direct result of this program.

The **World Bank** funded East Africa Agricultural Productivity Program (EAAPP) has selected Kenya as the country as Dairy Centre of Excellence. Kenya is supposed to assist other countries in the region in the development of a robust dairy sector based on the smallholder model. KARI Naivasha has been chosen as

the lead implementing agency of this World Bank funded project, while the Ministry of Agriculture has the fiduciary responsibility and coordination with other participating agencies.

DTI should position itself to play an important role in this project and its proximity to KARI Naivasha is advantageous to benefit from collaborations and cost sharing.

Currently EAAPP is assisting DTI through procurement of ice-cream makers, milk testing equipment, and pasture development. There is need to create more synergy and collaboration between DTI and KARI to avoid duplication of functions, to drain away public resources and to link research to practical skill development.

The **Government of Sweden** funded Agriculture Sector Development Support Program (ASDSP) is collaborating with DTI on establishing a chilling plant for camel milk in Isiolo. DTI is also providing training of the farmer groups in Isiolo for camel milk and cow milk in Meru.

The **World Bank** funded Kenya Agricultural Productivity and Agribusiness Project (KAPAP) project is supporting DTI through the review of the curricula for short-term dairy courses.

The NUFFIC project, funded by the **Government of the Netherlands** is developing training curricula. NUFFIC also partnered in the Labour-Market Needs Assessment (LNA) and will assist with upgrading of ICT systems and IT equipment, laboratories, and other equipment.

### **The Private Sector**

The private sector is composed of what can be called (a) value chain actors (farmers, dairy societies and milk processors and marketers, and (b) value chain facilitators, i.e. input suppliers and service providers.

They form by and large the (potential) consumers of the training provided by DTI (at government subsidized costs). However in a "new" DTI that will be more attuned to the needs of the dairy sector actors and facilitators – and with commercially-driven high quality trainings - their role is expected to change.

They are likely to become (more) pro-actively involved in the management and governance of DTI, the content of the training portfolio and the curricula and the financing of the institution. As for the latter, one option for structural funding of DTI operations is to introduce or raise the levy on milk and other products as a guaranteed source of income for DTI.

In addition model farms, dairy societies, processors, feed manufacturers, AI service providers, veterinary drug suppliers and so on, could be actively involved

in offering their localities as practical training grounds for DTI students. In turn their staff can be involved as trainers by DTI.

With reference to existing guidelines and practice in other SAGAs, the table below summarizes the envisaged roles of the various stakeholders in governance and funding of the “new” DTI.

**Table 7. Role of Stakeholders**

<b>Stakeholder</b>	<b>Role</b>
Ministry of Livestock Development	<ul style="list-style-type: none"> <li>- Program funding</li> <li>- Formulation of financial policies</li> <li>- Authority during SAGA transition</li> </ul>
Other government Ministries and Agencies	<ul style="list-style-type: none"> <li>- Formulation / implementation of government policies</li> <li>- Management of the sector programs</li> </ul>
Ministry of Higher Education Science and Technology	<ul style="list-style-type: none"> <li>- Regulate &amp; coordinate training under the Act</li> <li>- Accredit and inspect TVET programs and courses</li> <li>- Advise and make recommendations to the cabinet secretary on all matters related to training</li> <li>- Define the national objectives to be achieved in training under this act</li> <li>- Promote access, equity and relevance in training</li> <li>- Advise the government through the cabinet secretary on establishment of institutions</li> <li>- Prescribe the minimum criteria for admission to training institutions</li> </ul>
Industry regulators and marketing agencies e.g. Kenya Dairy Board, KEBS, the Ministry of Agriculture (MOA), the Ministry of Health (MOH, through the Public Health Department), the Ministry of Trade, the Ministry of Industrialization (through KEBS), the Ministry of Cooperative Development (MOCD), the police, KARI, VVPC and the Pest Control Products Board (PCPB).	<p>Governance:</p> <ul style="list-style-type: none"> <li>- Representation on the board of governors to advise on various issues</li> <li>- Curriculum development to address the emerging trends on the training needs of the dairy sector.</li> <li>- Marketing</li> <li>- Industry regulation</li> </ul> <p>Funding of DTI:</p> <ul style="list-style-type: none"> <li>- Resource mobilization for DTI</li> <li>- Utilize DTI’s lab facilities for checking quality standards for milk and dairy products</li> <li>- Utilize the expertise and training facilities of DTI to train milk inspectors and extension staff</li> </ul>
Development partners: such as SNV, FAO, EADD, EAAPP, IFAD	Providing financial and technical support
Academic institutions such as Egerton University	Provision of expertise and human capacity building
Research institutions (private and public) e.g. KARI	Collaborative research, program development, policy guidelines, synergies and capacity building.
Private sector and civil society (Processors, dairy societies, farmer’ organizations, input	<p>Governance:</p> <ul style="list-style-type: none"> <li>- Representation on the board of governors to ensure that DTI remains relevant in providing</li> </ul>

Stakeholder	Role
suppliers and service providers)	training for the private sector. - Lobbying to the government on behalf of DTI - Contribution to curriculum development - Partnering with the sector in program development, implementation and advocacy. Funding: - Provide financial contributions towards the development of DTI to provide training to its members (similar to FPEAK Horticultural PTC Thika) - The processors to send its staff for courses at DTI and pay commercial rates for this trainings - Set up demos at DTI to show case and test their products.
Local authorities such as County government and devolved funds	Development of local infrastructure such as rural access roads.

## **CHAPTER 3 RECOMMENDATIONS FOR DTI TRANSFORMATION**

### **3.1 Transitioning to SAGA Status**

Implementation of the new structure will need to be managed carefully, and a number of specific arrangements will need to be put into place.

#### **Restructuring Committee**

A restructuring committee is recommended as otherwise not enough consideration might be given to restructuring issues. Membership of the restructuring committee should mainly consist of members of the executive committee. In addition, members might be co-opted on Human Resources and other issues, as well as a staff representative. Individual members of the committee should have specific portfolio responsibilities to ensure that the responsibility for implementation is clear and transparent. The committee will ensure that all important policy and procedural issues have been discussed, approved and are in place before commencing the implementation.

#### **Task Teams**

The committee will appoint task teams to develop particular issues for example job descriptions. The various task teams would report to the restructuring committee on a regular basis.

#### **Committee meetings**

The planning meetings should take place as often as necessary but preferably at least once a week during the preparation phase when policy and procedures are being designed. During the implementation, the committee might have to meet as often as daily during demanding activities.

#### **Communication**

Communications must be regular (at least weekly) and up to date. For this purpose, one of the members of the steering committee should be given the portfolio for communication.

#### **On-going Delivery Plan**

During implementation, the restructuring committee should ensure that a regular agenda item is devoted to ensure on-going outputs of the organization – regular business should carry on with minimum disruption despite the fact that the restructuring process tends to take up a lot of time.

#### **Risk Management**

There are several potential risks to the transformation of DTI, including availability of resources. All these will be assessed and measures will be put in

place to mitigate potential risks. The risk management of DTI will be evaluated in order to take necessary mitigations actions.

### Risks and Mitigation Measures

Success in achieving the envisaged objectives of the commercialization will only be realized if the prevailing and anticipated conditions in the internal and external environment (i.e. assumptions) hold. The success will also be determined by potential unforeseen factors and events, which might threaten the implementation of the planned activities. Whereas these factors and events can happen, it is generally assumed that they will not occur at levels that can fatally undermine the commercialization.

**Table 8. Example of Critical Risks and Mitigation Measures**

<b>POTENTIAL RISKS</b>	<b>MITIGATING ACTIONS</b>
Rigidity/resistance of public institutions to change	Awareness creation among various stakeholders on the need to transform and become commercially viable Facilitating change management training sessions
Inadequate knowledge	Continuous capacity building
Competition for students	Designing market focused courses Competitively priced courses
Inadequate financial resources	Investing in alternative resourcing initiatives in addition to the government's budget allocation; Prudent utilization of available resources in key activities and programs that create optimal impact

### **Continuous Risk Management**

Effective risk management depends on early identification and analyses of risks, early implementation of corrective actions and continuous monitoring and reassessment. For this reason DTI will establish and strengthen an Internal Audit as well as a Monitoring and Evaluation Unit as fundamental functions in achieving its goals and objectives. These units will undertake the following key activities on a continuous basis: risk identification, analysis, mitigation planning, mitigation plan implementation, and risk tracking.

### **Accountability for Mitigation Measures**

DTI will establish a Risk Management System, with the following key components:

- a) A risk management policy to guide the operationalization of the system
- b) A Risk Management Committee composed of all Heads of Department, Deputy Principal and chaired by the Principal. The Committee's main responsibility will be to consider and adopt risk management measures.
- c) A Risk Management Coordinator (RMC) to harmonize and oversee the risk management activities in all Departments. These activities include risk identification, risk assessment as well as the development and implementation of appropriate mitigation measures. Another critical activity for the RMC will be the development of early warning indicators for risks.



## Key Assumptions

- a) Financial and human resources required for commercialization will be availed (by both the government and other stakeholders).
- b) The government and other key stakeholders shall continue to seek and respond to recommendations and policy and other advice relating to sustainability of DTI.
- c) DTI will have sufficient technical and infrastructural capacity to fulfil its mandate.

## 3.2 Recommended Organizational Structure

At the time of compiling this report the process for DTI's attainment of SAGA status had reached an advanced stage. A cabinet memo has been prepared and submitted to the Ministry of Finance for signature. The next stage would be to present the memo in the Cabinet for discussion and deliberation. The transformation process would then be formalized via a legal notice in the Gazette. The necessary steps for transformation of DTI into SAGA are listed in the table below.

**Table 9. Transformation Steps**

Phase	Approach	Timelines
Diagnostic phase	Diagnosis of the institute through 'strategic appraisal'	Done
Planning phase	Preparation of a business and investment plan	Planned
Implementation phase	Restructuring, including monitoring of progress and revisions of the previous phases	(±18 months)

Attainment of SAGA status implies that DTI will have to create a new organisational structure of which the main pointers are highlighted below.

### Formation of a Board of Governors or Directors

The role of the Board is to formulate policies and guidelines for operations and carries out its functions through the Audit, Finance and Administration and Technical Committees. It is recommended that there is a multi-stakeholder representation in the DTI Board of Governors to encourage co-operation and collaboration among all stakeholders. To this extent, the composition should be based on the partners that DTI would like to collaborate with, but with a strong private sector orientation and participation. For this reason, and keeping in mind the TVET Act and the State Corporation's Act, the Board of DTI should be composed as follows:

- Ministry responsible for technical and vocational training (currently Ministry of Higher Education, Science and Technology)
- Ministry responsible for development of DTI, currently MoLD
- Private sector players

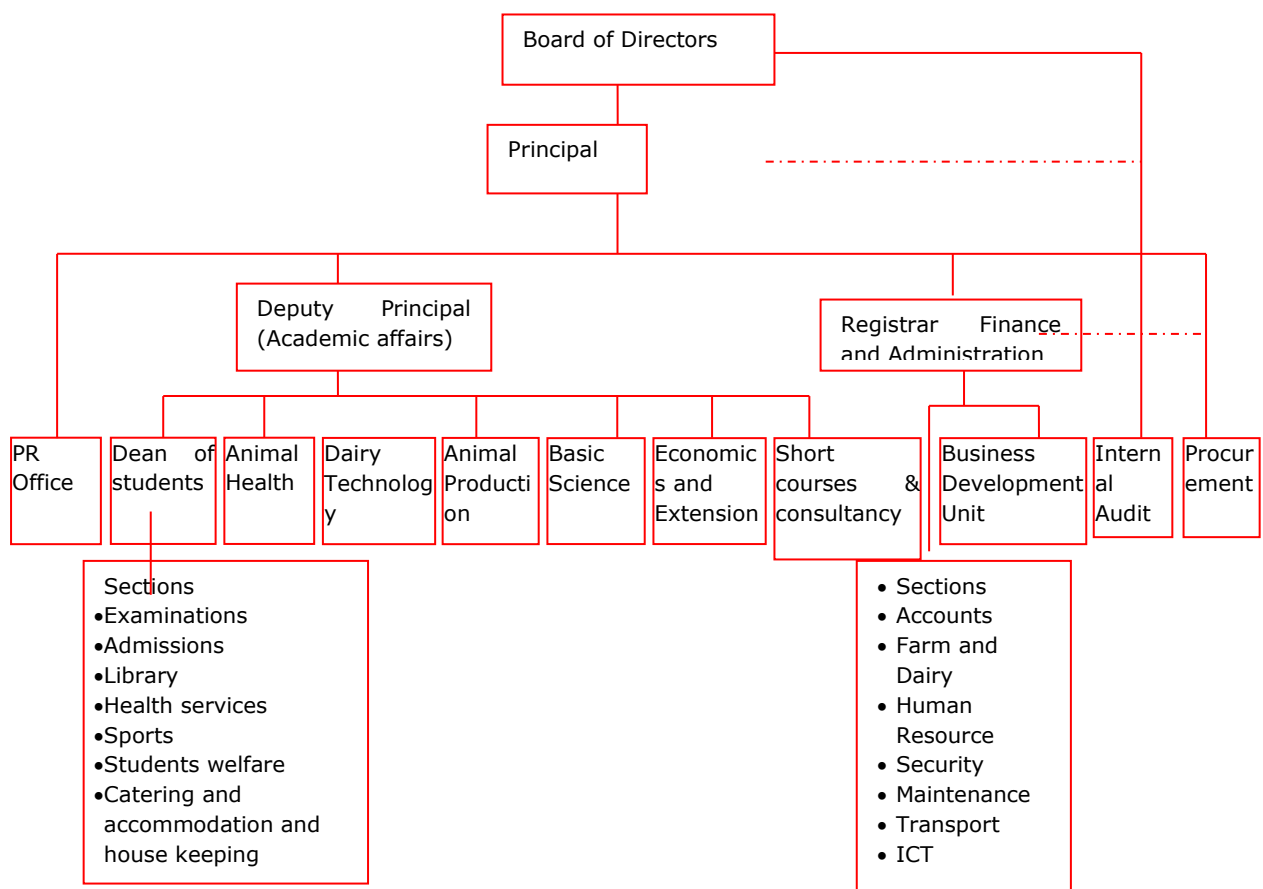
- Kenya Dairy Board
- A representative of the County
- Academia
- Other persons appointed

The membership of the Board should be between seven (7) and nine (9) members based on TVET law and best practices. The current steering Committee for DTI may reorganize itself to reflect the recommended composition. The appointment of the Board is via Gazette Notice. It is recommended to learn and borrow from other successful SAGA's in Kenya with a high private sector participation. Examples are KAGRI (the former CAIS), Thika Horticulture PTC and others.

### Organogram

DTI will need to develop a new organizational set up after analysis of the functions. The recommended design or organogram of the new DTI based on analysis of the organizational units of is illustrated in figure below.

**Figure 7. Proposed Organizational Structure**



The above structure shows the envisaged functions of the new DTI and does not necessarily illustrate the job positions. The envisaged functions are described below.

The day-to-day management of the institute is carried out by the Institute's Management headed by the Principal and supported by the Deputy Principal Academic Affairs and the Registrar Finance and Administration. These are supported by Heads of Departments. The institute is divided into two divisions namely Academic and Finance & Administration.

### **Deputy Principal (Academic Affairs)**

The Deputy Principal is the Principal Assistant to the Principal. The office of the Deputy Principal will coordinate Academic Affairs of the institute. There are seven departments under the office of the Deputy Principal, Dean of Students, Short courses, Consultancies, Animal Health, Dairy Technology, Animal Production, Economics and Extension, and Basic Science.

The office of the Deputy Principal is also in charge of the institute's performance contract with a focus on improvement of service delivery to the institute's customers (the students and their potential employers).

### Dean of Students

The office of the Dean of Students implements a range of programs and services to assist and support students in achieving academic and personal success. The office provides important educational and developmental opportunities, serves as student advocates, empowers students to be successful, and promotes students' rights and responsibilities.

The office seeks to facilitate the integration of the academic experience of students with all aspects of institute and student life. The office facilitates interactions among students, departments and staff to promote a climate, which supports students' academic success and their personal and professional development.

It complements the efforts of other departments in the provision of quality training by enhancing quality and beneficial behaviour. This is done mainly through dialogue, guidance and counselling, peer mentoring, role modelling and discipline. The Department takes care of students' physical, spiritual as well as psychological well being through meaningful and beneficial interactions meant to mentor them into the world. The following sections report to the Dean of students: Examinations, Admissions, Library, Health services, Sports, Students welfare, and Catering and accommodation.

### Short Courses and Consultancy Services Department

The Department coordinates short courses and consultancy services in dairy related disciplines. The services offered are demand driven and geared towards addressing and solving specific and emerging challenges.

### Animal Production

The animal production course units are aimed at instructing the Dairy Science and Technology trainees in aspects of animal production with special emphasis on commercialized dairy husbandry and clean milk production.

### Animal Health

The training program is aimed at equipping students with adequate, basic theoretical and practical knowledge in farm animal health and disease control. The teaching of the units is aimed at equipping students with knowledge and skills to understand how animal health issues relate to quantity, quality and bio-safety of livestock products.

### Basic Science

The department equips students with basic scientific theoretical and practical knowledge necessary in the dairy sub sector.

### Dairy Technology

The dairy technology course units are aimed at equipping the trainees with knowledge and skills in clean milk production, quality assurance and processing of dairy products.

### Extension Education and Economics

These course units are aimed at equipping the trainees with the necessary extension skills. They will also equip the trainee with knowledge on principles of Economics and Entrepreneurship.

### **Registrar Finance and Administration**

The objectives of this Division are to acquire, develop and retain high performing human resource capital for effective provision of agricultural training, research and extension services, to improve and sustain the college financial position, to strengthen college infrastructure, and to improve farm productivity for increased revenue. The following functions are carried out by the division:

- i. Facilitate Board of Governors activities.
- ii. Provide efficient financial and procurement services.
- iii. Generate revenue from sale of farm produce and other enterprises.
- iv. Ensure security and safety of institute and human resource.
- v. Make improvement on the institute's physical and human capital.
- vi. Provide efficient human resource management services.
- vii. Provide efficient health care services to the institute.

The following sections report to the registrar:

- i. Accounts
- ii. Farm and Dairy

- iii. Procurement
- iv. Human Resource
- v. Security
- vi. Maintenance
- vii. Transport
- viii. ICT
- ix. Business Development Unit

#### Internal Audit

This unit provides an independent, objective assurance designed to add value and improve the institute's operations by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

#### Procurement

This unit ensures that purchasing of goods and services required by the institute are carried out in compliance with the Public Procurement and Disposal Regulations of 2006 or any amendments thereof. Goods and services are sourced from suppliers who are selected and re-evaluated based on their ability to meet the institute's requirements.

#### Human Resources

The following tasks are identified:

- i. Conducting job analysis: developing job descriptions detailing the required skills and qualifications and specifying the roles and responsibilities and job specifications of the positions in the new institution.
- ii. Determining required staffing levels at the institution based on the positions that need to be filled. A workload analysis will require to be done to ascertain the ideal staff establishment to deliver on the new DTI's goals.
- iii. Conducting job evaluation to grade the jobs and develop a salary and benefits structure, which will help in designing an appropriate job grading and a remuneration structure that takes cognisance of the market environment.
- iv. Skills audit to determine the suitability of the existing staff based on the job specifications that have been developed. A skills inventory of staff at DTI will show the skills and competencies available for deployment in various positions in the new DTI.
- v. Staff placement in the new structure. Staff whose skills match the identified positions in the new DTI will be given an opportunity to stay with the new institution on voluntary basis, staff will also have an opportunity to be re-deployed to the Parent Ministry.
- vi. Development of human resource policies:

- Communicating values and expectations at the new DTI;
- Keeping DTI in compliance with legislation and provide protection against employment claims;
- Documenting and implementing best practices;
- Supporting consistent treatment of staff, fairness and transparency;
- Assist management to make decisions that are consistent, uniform and predictable; and
- Protecting individuals and the organization from the pressures of expediency

### **3.3. Recommendations for Financial and Human Resource Management**

#### **Financial Management**

An effective financial management system will improve short- and long-term business performance by streamlining invoicing and bill collection, eliminating accounting errors, minimizing record-keeping redundancy, ensuring compliance with tax and accounting regulations, helping personnel to quantify budget planning, and offering flexibility and expandability to accommodate change and growth. Other significant features of a good financial management system should include:

- Keeping all payments and receivables transparent.
- Amortizing prepaid expenses.
- Depreciating assets according to accepted schedules.
- Keeping track of liabilities.
- Coordinating income and expense statements, and balance sheets.
- Balancing multiple bank accounts.
- Ensuring data integrity and security.
- Keeping all records up to date.
- Maintaining a complete and accurate audit trail.
- Minimizing overall paperwork.
- The financial management software should include features that support creation of ad hoc reporting as well as month-end closing, quarter closings and year-end reporting.

#### **Human Resource Management**

The institute's mission to provide quality training, research, consultancy and outreach services requires human resource management that must be aligned to the overall institution's strategy. A comprehensive skill analysis will need to be done together with a job analysis and evaluation and staff aligned to various positions. The new DTI will require developing its own Human Resource policies and procedure in line with its new status.

DTI should come up with clear-cut job roles and descriptions so as to ease the process of staff performance appraisal. It would also necessitate the process of setting up new positions as would be required by the institution as it works towards achieving its objectives. The requirements for an industry-driven training institute that is commercially oriented are stipulated under the TVET Bill 2012 and include:

- Decentralizing decision-making authority with regards to financial matters, human resource issues, and other relevant matters.
- Enhancing the culture of accountability, democracy, and transparency in the governance and management of the institutions:
- Ensuring effective and efficient education and training;
- Ensuring the participation and consultation with all stakeholders at national and regional levels:

For easy transition DTI should embark on adhering to the guidelines of the Bill. The current structure and culture of DTI requires realignment. At the top tier of its governance structure should be the Board of Governors whose role should include the following;

- Overseeing the conduct of education and training in the institution in accordance with the provisions of the TVET Act and any other written law;
- Promoting and maintaining standards, quality and relevance in education and training in the institution in accordance with the Act;
- Administering and managing the property of the institution.

### **Developing Pension Scheme for Staff**

The pension scheme for staff should be developed with guidelines provided by the Retirement Benefits Authority Act. The Act specifies that the structure of a pension plan should have the following:

- Custodian – This is an independent bank that insures that members' cash and other investments are safe
- Fund Manager – this is an independent professional company that invests pension funds according to the fund and RBA's investment guidelines
- Trustees: Safeguards the interests of the fund's members in line with RBA Regulations
- Administrator – Ensures the efficient running of the Pension scheme and maintains accurate records of all contributions made by the members and all benefits paid to the members.

### 3.4 Recommendations to enhance the Level of Products and Services at Short-term

It is recommended that training remains the core business of DTI under the SAGA status, both at short and long term. Without a comprehensive business and investment plan and substantial funding to do major long term investments and overhaul of the institute's infrastructure, DTI needs to work within its current framework. Within its training program, DTI will provide the following courses:

#### a) Regular Courses

DTI should carry on providing training in the two Certificate courses: Dairy Management and Dairy Science and Technology. In order for the institution to sustain its operations and improve the quality of training, there is however the need to charge market rates. For current operations of DTI to be sustainable with consideration of current government support (about KES 23 million) and expenditures, the financial analysis arrives at a fee of KES 58,800 for the one-year course and KES 88,720 for the two-year course. A two-year diploma course if introduced would cost approximately KES 139,000. This is also based on the assumption that student capacity at DTI is capped at 220.

#### b) Short Courses

Short courses are tailor-made for various industry players. These short courses would be delivered through outreach programmes at clients premises or places of work, short-stay residential programmes at venues agreed upon with the client, and use of satellite training centres such as model farms. Currently DTI retains no income from delivery of short courses. It is recommended that the short courses be commercialized by charging a mark-up above the cost of delivering the training. Based on DTI records, the cost of providing a 5-day residential training to one person is KES 31,500 as distributed to cost items in table below.

**Table 10. Cost Analysis of Providing Short Courses**

Item	Amount (KES)
Administrative Cost	3,100
Food & Accommodation	19,000
Transport	1,200
Tuition	8,200
TOTAL	31,500

*Source: DTI Management*

Based on the market rate for residential week-long trainings and in order to remain competitive, the recommended charge for the courses could be KES 36,500 which gives a mark up of KES 5,000 to be retained as profit. DTI



trained 472 individuals in the year 2012 and earned KES 6,192,000 million. This was an average figure of KES 13,119 per person. This figure is quite modest considering that DTI does not actively advertise its short courses. Under the envisaged SAGA status the institute intends to carry out an aggressive marketing campaign to reach out to more clients. Through this effort the institute expects to increase the number of participants in the short courses for subsequent years.

**c) Outsourcing Practical Training Facilities**

Practical training facilities are required for delivery of quality training for both regular and short courses. This will require high investment costs in the dairy plant, the farm and laboratories. In order to avoid the huge investment costs in the initial years of semi-autonomy, it is recommended that DTI should:

- Continue using its facilities in their current state to provide the relevant practical lessons they can support.
- Outsource additional training equipment and facilities while it seeks to fully commercialize and generate income for upgrading.
- Collaborate with institutions such as KARI and model farms as venues for demonstrations.

**d) Establishing Partnerships for Student Attachments**

DTI should immediately embark on building partnerships with industry players to provide attachments for its students. This is likely to increase the employability of the students upon completion of their studies. Among the industry players that DTI can approach to provide learning and work attachment for its students are processors such as NKCC, Brookside, Sameer, Browns Cheese, Happy Cow and private dairy farms such as Sara Boit, Willy Kirwa and Baraka Farm in Eldoret.

**e) Introduction of Diploma courses**

DTI can explore the possibility of offering diploma courses. Analysis of the DTI curriculum and comparison with other institutions shows that the two-year course resembles diploma courses. DTI has made proposals for the following Diploma Programmes:

- Diploma in dairy science and technology
- Diploma in animal husbandry
- Diploma in range management
- Diploma in farm management
- Diploma in agribusiness and marketing
- Diploma in animal health
- Diploma in information technology
- Diploma in Feed milling technology

The introductions of these courses would have cost implications in providing additional accommodation facilities, lecture halls, laboratory facilities, and staff among others. Therefore this seems to be only achievable in the long term as part of a more comprehensive activity and investment plan for DTI.

### **Marketing of DTI**

In order to market DTI more strongly, the following potential marketing avenues can be explored.

#### Participation in trade fairs and agricultural shows

The ASK shows are organized by the Agricultural Society of Kenya. They are a great platform for advertising and showcasing the institute's products. The shows are usually attended by farmers, students, business people and anyone interested in farming. By setting up a desk at the show ground, representatives of DTI can market the institution during these shows. DTI could also participate in regional trade fairs (ESADA) to promote itself.

#### Participation in extracurricular activities in schools and colleges

Extracurricular activities such as sports and games competitions, attending prize-giving days in schools and donating trophies to these activities will greatly enhance the reputation of the institution and put it on the forefront of institutions of choice by students who have heard of it.

#### Collaboration and linkages

DTI should actively seek to participate in forums on issues such as the promotion of agriculture like the Parliamentary Agriculture Committee and in programs such as EAAPP. The institution should also position itself as the lead in food security and poverty eradication issues working with institutions of the UN, like FAO, UNIDO and the UNEP. The EADD (Heifer Project Int), KAVES (Fintrack) and KMDP (SNV) are other projects in dairy development in East Africa.

#### Collaboration with MOHEST and TVET Authority

The mandate of TVET is skills development in relevant technical, commercial and scientific fields to satisfy the needs of the national economy, supporting technical training institutions. DTI should tap into this funding and utilize the opportunity provided for marketing itself as an institution that complies with the TVET requirements.

#### Advertising

Advertising will involve the mass media including television advertising, newspaper advertising, radio, leaflets and flyers at strategic places etc. This form of advertising is bound to attract a large market for short courses especially.

### **Infrastructure and Farm**

To support the training offered for both regular and short courses in the short term, minor improvements in the infrastructure such as the laboratory, the processing plant and the farm are required.

As for the farm, DTI needs to make improvements on the dairy farm, and the first step will be to lobby for the farm to be classified as a production farm similar to the ATCs, as the funding for production farms is much higher than the funding for training farms. The zero-grazing units in particular need to be improved to the level of a model farm to support trainings.

Overall farm management and in particular feed management should be improved greatly, as this is often a limiting factor in dairy production in Kenya. The institute should strive to grow its own feed, and conserve high quality feed for use during the dry seasons. The farm currently produces 120 litres of milk per day, and since the milk is mostly used for student consumption, this amount should be chargeable to the catering fees paid by the students, which should be allocated for farm improvement.

### **Conference Facilities**

IFAD is facilitating the construction of conference facilities (see Annex 5) for DTI. This has the potential of contributing significantly to the income generation for the institute, as it will be utilized for hosting meetings and workshops by various organizations. The conference centre will provide both catering and meeting facilities. Until the centre is ready, DTI will continue hosting clients at the current available meeting rooms within the institution. For maintenance of these facilities and to generate income for the institution, DTI should charge clients for the use of these facilities above cost and at market conform rates.

### **Recommendations The Friesian Agro Consulting BV**

In February 2013 SNV contracted the Friesian Agro Consulting (Leeuwarden, the Netherlands) to carry out a quick scan of DTI and give recommendations for short term interventions and improvements of DTI's operations.

The study report is attached as Annex 6 and includes important and useful suggestions for DTI's turn around both at short and long term.

## **3.5 Recommendations and options to enhance Level of Products and Services at the Long-term**

### **Business and Investment Plan**

For DTI to enhance its performance in delivering high quality skilled professionals in sufficient numbers to the labour market, the institute needs fundamental changes in legal, managerial and governance structure, as well in relationship with stakeholders in the dairy sector.

This needs to be accompanied by a review and development of types and methods of training offered and staff composition, as well as by significant investments in teaching and training infrastructure and unlocking of new revenue streams for the overhaul and upkeep of the institute.

In order to achieve this, DTI requires a comprehensive business and investment plan. The business plan will assist DTI during the transformation, identifying the most important and feasible initial and longer term activities as well as sources of finance, and laying the detailed implementation path including timelines for different activities.

The investment plan needs to capture on-going and new investments needed for implementing the business plan. In particular also, for the purpose of “fund-raising” and accessing revenue streams from the public and the private sector.

### **Tasks to be carried out (Terms of Reference)**

In order to achieve this, an expert consultant(s) needs to be hired who will work in close collaboration with DTI, SNV, the Ministry of Livestock Development and other relevant government authorities, donors, experts and likely clients, to develop options and deliberate essential elements of the business and investment plan including the following:

- a) Review key documents including DTI’s strategic plan, the recent Labor-Market Needs Assessment (LNA) for the dairy sector and the DTI Status Report.
- b) Establish the training requirements for the different target groups in the dairy sector in view of DTI’s mandate and interest, taking into account the skill-sets required by the industry according to the LNA report.
- c) Formulate key training programs and modules for DTI’s target groups (short and longer term courses), including duration, frequency, number of students, location (in-house or in-situ), training methods and delivery/communication models (e.g. lecturing, demonstration, practicals, books, radio, internet, etc.).
- d) Formulate at least two scenarios for DTI’s core business or training model, with a detailed overview of the required infrastructure and equipment and an investment plan for each scenario.
- e) Develop realistic scenarios for DTI’s future financial model and income streams, assessing type and size of different investment and income sources, respectively for capex and current expenditures after the center is up and running. This includes for example income from training, consultancies, demonstration, conference facilities, accommodation and catering, the farm and possible other profit centers within DTI. It also includes investments and revenues from donors, Kenya Government, Kenya Dairy Board, private sector (through cess or levies), and so on.

- f) With a view to possible donor funding of DTI, inventorise and advise upon current donor programs that have committed or are willing to invest in DTI. In addition to that, make an assessment of Dutch Private Sector Development instruments that offer potential for funding of DTI infrastructure and/or curricula.
- g) Propose a management and governance structure for the institute in order to implement the proposed business plan.
- h) Develop guidelines for the implementation and operation of the defined business model, including a detailed timeline.
- i) Provide inputs and guidelines for private sector engagement in DTI's governance, financial model and revenue collection, training programs and delivery models, student intern programs, development and management of profit centers, and others.
- j) Identify key national, regional and international institutions for partnership with DTI.
- k) Identify other steps necessary for DTI as may be defined by mutual agreement between the Consultant and SNV.

#### **Profile consultant(s)**

- For this consultancy, a dairy training expert and a dairy training center manager are required, with a successful international track record of developing and managing dairy training activities in similar institutes.
- He/she should have a master degree in education, training or management, with solid knowledge and experience of dairy production and dairy training.
- He/she must have a significant track record of successful planning, leadership and management of training institutes with good level of knowledge of business plan development and finance.
- The international team needs to be supported by a local expert with proven experience and ability in turnaround of government institutions into semi-autonomous or private agencies.

#### **DTI Potential Profit Centers (excl. training and conference hall)**

##### Pasture and fodder crop production

The farm currently utilizes 15 acres of land for Rhodes grass. DTI intends to expand the acreage under pasture for commercial pasture production as well as to boost feeding for commercial breed and milk production.

The institute also intends to enter into a contract with seed companies for pasture seeds and for technical range management.

Out of the 540 acres of land which has been fenced off and prepared, it is planned that 140 acres shall be under irrigation with 100 acres of Lucerne and 40 acres of maize. The remaining 400 acres will be under rain-fed Rhodes grass. The optimal utilization of the farm and the required investments and management needs to be assessed and investigated by a fodder expert, with knowledge of commercial fodder production and fodder supply chains in Kenya.

### Breeding

From discussions with key informants in the dairy industry it appears that rearing of breeding stock for sale is a lucrative business. Breeding could be one of the focus areas DTI's training agenda, as well as a potentially income generating activity. Whether this is a viable option for DTI to invest in needs to be assessed by an expert in breeding and marketing of pedigree heifers.

### Dairy processing

DTI has expressed interest in running a dairy processing plant for sale of their products, as well as for training purposes. There are however huge cost implications, operational and managerial implications with regard to running a commercial (mini-) dairy plant. Baraton University has a mini-dairy processing plant which sells products to the college canteen.

DTI has adequate skilled manpower in the Dairy Department who can handle production at the dairy plant, however the plan to commercialize the dairy plant has high cost implications that should be taken into consideration, taking into consideration that:

- The dairy plant should be upgraded.
- Management of the farm should be improved to increase the current production, or alternatively milk should be sourced from nearby dairy farmers or traders.
- DTI will have to obtain various legal permits and comply with the regulations on milk processing.
- DTI will have to employ technically skilled staff to run the plant and the marketing of dairy products.

## **3.6 Roadmap to Commercialization of DTI (adapted from DTI Strategic Plan and PKF Diagnostic Review)**

For DTI to run as a successful commercial training centre, investments in infrastructure, equipment and the training program are needed. Involvement of the industry in this process is considered crucial to develop a market-led course curriculum that increases the employability of the graduates. As for the rehabilitation of infrastructure and curriculum development, DTI aims to partner with the dairy industry and donors/NGOs. The following strategic issues need to be resolved in order to commercialize DTI:

### **Revise Legal Status and Enhance Autonomy**

The current lack of a legal framework needs to be resolved as a priority issue, for which the following activities should be undertaken:

- a) Pursue SAGA status through Legal Notice or a Cabinet Memo.
- b) Assure the land issue is settled.

- c) Assure DTI's mandate for training remains intact after SAGA.
- d) Work towards meeting the requirements of the TVET Law for accreditation.
- e) Develop and implement MOUs with private and public sector for collaboration and support.

### **Develop DTI's Business Strategy**

In order for DTI to operate more commercially, the institute needs to develop a clear business strategy, taking into consideration its strengths and weaknesses. The following activities are planned:

- a) Recruit a consultancy team for business plan development.
- b) Carry out a detailed business plan development process, detailing:
  - The core business of DTI as a practical dairy training institute;
  - Core geographical focus (e.g. national versus regional);
  - The training program and delivery model;
  - Investment plan;
  - Detailed proposal for financial revenues from training, conference facilities, consultancies, farm, infrastructure and land;
  - Role of the public sector, development partners (donors) and the private sector in investment and operations plan;
  - Financial analysis of the business plan proposed.
- c) Review the business plan within the steering committee for endorsement.
- d) Develop a resource mobilisation strategy and seek partnerships with the private sector, the donor community and financial institutions for funding
- e) Implementation of business and investment plan.

### **Improve Organizational Structure and Staffing**

In order to acquire, develop and retain qualified and competent technical and support staff, the following activities are planned:

- a) Following transition into SAGA, develop HR department.
- b) Formulate HR policy.
- c) Develop an appropriate scheme of service.
- d) Carry out work load analysis.
- e) Recruit staff according to the establishment.
- f) Train the staff in relevant technical, managerial and pedagogical skills.
- g) Develop exchange programmes for staff.
- h) Explore use of trainers from other stakeholders and private sector.

### **Develop Training Programmes and Publicity**

With the technological and market dynamism in the dairy industry, there is need to diversify the courses, expand on existing ones, make them more relevant to respond to the current labour market requirements and publicize the training programmes to a wide audience. The following activities are proposed:

- a) Training Needs Assessment (TNA) for the dairy labour market requirements (done).
- b) Review existing curricula and explore modular curricula for flexibility of use. Develop diploma programs
- c) Develop new and relevant Technical and Vocational Education and Training (TIVET) courses.
- d) Enter into partnership agreements with the private sector for practical attachment and in-situ training of students.
- e) Consider partnerships with RVIST and Bukura
- f) Develop new training delivery methods, e.g. using radio, distance learning and farmer field schools.
- g) Align curriculum with the Kenya National Examinations Council.
- h) Develop a marketing strategy incl. wide publication of training courses:
  - Develop interactive website for DTI
  - Advertise courses in electronic and print media
  - Production and distribution of brochures
  - Hosting exhibitions and open days
  - Publicize an annual training calendar

### **Improve Infrastructure**

DTI's existing training and farm infrastructure is aged, dilapidated and overstretched and there is a need for rehabilitation and expansion of the physical facilities. The following investments are proposed, but will be fine-tuned once the business plan has been approved:

- a) Renovate, equip and expand laboratories.
- b) Renovate and expand the boarding facilities.
- c) Renovate and equip the dairy plant and establish waste disposal system.
- d) Renovate and expand classrooms.
- e) Renovate, expand and equip the kitchen and dining hall.
- f) Repair and expand the office blocks.
- g) Improve access road.
- h) Construct a sewerage system.
- i) Construct and equip a modern conference facility.
- j) Establish a student centre with clinic, common room and shopping facilities.
- k) Erect perimeter fence around the DTI land.
- l) Establish and equip a library.
- m) Sink a borehole to cater for expansion within the institute.
- n) Procure and install the relevant ICT facilities/infrastructure.
- o) Construction of relevant farm infrastructure.

### **Improve Productivity of the Farm**

DTI's farm is underutilized, both for training and demonstration purposes, and as a possible revenue or profit centre. Investments are required for both; however the commercialisation of the farm as a profit centre needs to be based



on a feasibility study indicating the most profitable use of the land and the mode of operation. The following activities are proposed:

- a) Lobby for the farm to be classified as a production farm to enable additional funding for its development.
- b) Carry out a feasibility study for commercial fodder production; prepare investment plan.
- c) Carry out a feasibility study for commercial breeding programme; prepare investment plan.
- d) Seek partnerships with suppliers of forage seeds and farm equipment for demonstration and training.

These steps can be summarized as in the implementation matrix below. The matrix is derived and adapted from the PKF diagnostics review and merely serves as a guide. It is not comprehensive.

Phase	Activity	Responsibility/Actors	End Date
Transformation to SAGA	Gazettement of legal notice	The Minister	2013
	Asset valuation and transfer	The Treasury	2013
Define a new mission statement	<ul style="list-style-type: none"> <li>• Based on the SWOT, DTI's objectives, its strategic vision and business philosophy.</li> <li>• Determine commercial activities</li> <li>• Market Penetration Strategies</li> <li>• Client Satisfaction Strategies</li> </ul>	Steering Committee and Management team	06/2013
Develop the business and investment plan	<ul style="list-style-type: none"> <li>• Business and investment plan development</li> </ul>	Consultant	2013
Develop the implementation plan	<ul style="list-style-type: none"> <li>• Set Milestones – describe activities to be completed and when</li> <li>• Set Policies</li> <li>• Set Responsibilities</li> </ul>	DTI Board and Management	07/2013
Prepare the organization	Prepare the organization to accept and welcome the changes	DTI Management	On-going
Organizational Development/HR Strategy	Compose the Board of Governors	The Ministry	After Gazette notice
	Develop organizational structure	Board of Governors	June 2013
	Develop Divisional/Departmental functions	Board of Governors and DTI Management	August 2013
	Develop provisional job profiles and specifications	DTI management/ DPM	Oct 2013
	Determine required staffing levels	DTI management	Oct 2013
	Conduct skills audit	DTI Management	Nov 2013
	Conduct job evaluation of all the positions	DTI Management	Dec 2013
	Review of human resource policies and procedures	DTI Management	Feb 2014
Staff placement/ redeployment in new structure	Voluntary self – selection	DTI Management	June 2014
	Selection by management	DTI Management	July 2014
	Temporary placement to fill gaps	DTI Management	August 2014
Recruitment and selection of new staff	Recruit new and additional skills on a permanent basis	HR recruitment consultant	December 2014
Training and development for the new	Capacity building should be developed in advance and carried	Training and development	March 2015

Phase	Activity	Responsibility/Actors	End Date
structure	out during restructuring.	consultants	
Phasing over from old to new structure	Manage activities to ensure a smooth transition	Board of governors, DTI management and staff	December 2015
New structure fully operational	As soon as the new structure is fully operational.	The board of governors, DTI management and staff	June 2016
Commercialization of Training and Consultancy services	Formation of strategic partnerships for use of facility for practical training, model farms and industry players	DTI Board and Management	Begin immediately
	Revision of fees	DTI Board	Begin '14 intake
	Marketing of DTI	DTI Board & Management	Immediately
Commercialization of the Dairy farm	Lobby for classification as a production farm	DTI Management	Immediate
	Improve management of the dairy animals	DTI Management	Immediate
	Development of business plan for dairy farm	DTI Management	Dec 2014
	Mobilize resources from potential investment partners	DTI Management	Begin immediately
	Progressively increase rain-fed acreage	DTI Management	Begin immediately
	Establish irrigation scheme	DTI Management	June 2015
Commercialization of the Dairy Plant	Development of business plan for dairy plant	DTI Management	June 2013
	Repair and servicing of dairy plant	DTI Management	December 2015
	Enter into contracts with raw milk suppliers such farmers, informal traders	DTI Management	Begin December 2015
	Enter into contracts to supply excess milk	DTI Management	Begin January 2016
Marketing of DTI	Marketing of DTI courses and consultancy services	DTI Management	Begin August 2013
Financial Management of DTI	Preparation of detailed business plan,	Consultants	July 2013

## **ANNEX 1. TOPOGRAPHIC MAP OF DTI INFRASTRUCTURE**

**To be added**

## **ANNEX 2. CURRICULUM OF DTI CERTIFICATE COURSES**

**To be added**

## ANNEX 3. DTI'S LIST OF ASSETS

### Offices (buildings)

Location (description)	Status	No. of Rooms	Est. Value (KES)	Remarks
Administration block A	Permanent	21	50,000,000	Old
Administration block B	Permanent	10	20,000,000	Fairly old
Class rooms	Permanent	7	10,000,000	Old
Library	Permanent	1	4,000,000	Old
Hostel blocks	Permanent	4	70,000,000	Fair
Kitchen and dining hall	Permanent	3	20,000,000	Fair
Stores	Permanent	3	10,000,000	Fair
Stores	Semi permanent	2	300,000	Old
Dairy plant complex	Permanent	9	30,000,000	Old
Dairy laboratory complex	Permanent	8	20,000,000	Old
Prefabs	Semi permanent	4	400,000	Old
Poultry units	Semi permanent	3	300,000	Old
Piggery	Permanent	1	200,000	Old
Hay barn	Semi permanent	1	700,000	New
Zero-grazing unit	Semi permanent	---	1,400,000	New
			<b>237,300,000</b>	

### Farms and Stations

Size (Acres)	Est. Value (KES)	Livestock	Number	Est. Value (KES)
1350	600,000,000	Cattle	101	5,050,000
		Goats	4	40,000
		Camels	4	400,000
		Chicken	300	60,000
	600,000,000			5,550,000
SUB-TOTAL				605,550,000

### Vehicles

Vehicle Reg. No	Make	Year of manufacture	Condition**	Est. Value (KES)
GKA366S	Isuzu bus	2009	A	4,000,000
GKA610P	Toyota double cab	2006	A	1,500,000
GKA889	Isuzu mini-bus	1996	B	400,000
GKA238A	Isuzu mini-bus		C	200,000
GK037R	Tractor - Massey Ferguson	2007	A	1,200,000
GKY	Pajero	1996	B	500,000
GKZ252	Mazda pickup	1997	D	100,000
GKZ256	Tractor - case international	1997	C	100,000
Gk Y980(motorcycle)	Yamaha	-	C	30,000
Bicycle	AVON-A310		A	2,000
				8,032,000

\*\*Condition: A. Running (Good condition) B. Running (Poor condition) C. Grounded D. Boarded

### A. Equipment

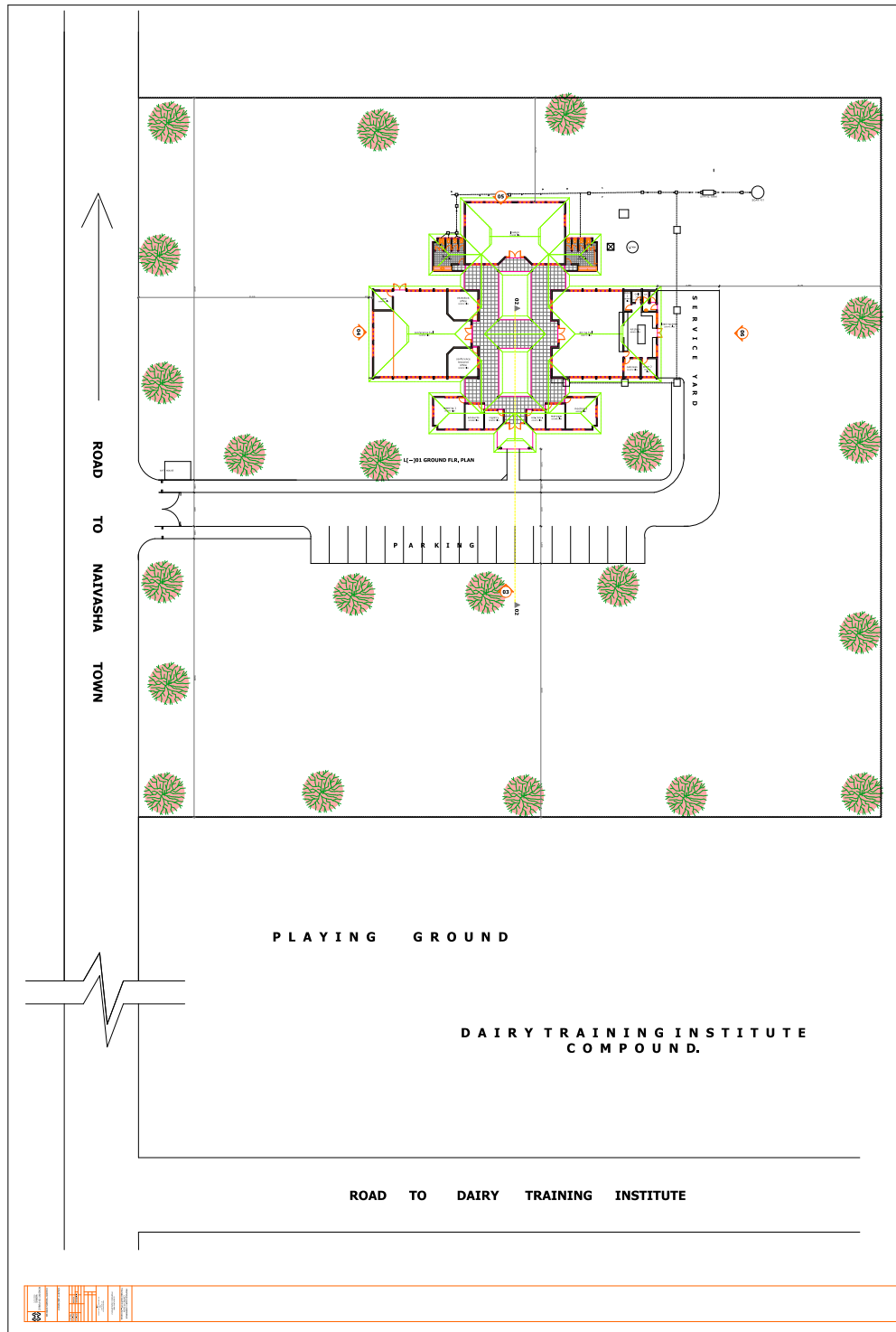
Type	Model	Serial No.	Condition	Est. Value (KES)
Milk processing plant	N/A	N/A	Not working	10,000,000
Steam boiler	Fire tube	N/A	Not working	500,000
Refrigerator (lab)	PHILLIPS	-	Working	50,000
Refrigerator (dairy)	PHILLIPS	-	Working	45,000
Refrigerator (dairy)	LG		Working	60,000
Freezer (kitchen)			Working	70,000
Freezer (kitchen)			Working	30,000
Freezer (dairy)	SANYO	-	Working	60,000
Freezer (dairy)	-	-	Not Working	20,000
7 Aluminium cans (50lts)	-	-	Working	50,000
2 Aluminium cans (30lts)	-	--	Working	10,000
5 Aluminium cans (25lts)	-	-	Working	22,000
3 Galvanised cans (20lts)	-	-	Working	10,500
1 Galvanised cans (10lts)	-	-	Working	2,000
2 Stainless steel cans (25lts)	-	-	Working	8,000
2 Incubators (lab)	-	-	One Working	70,000

1 hot air oven (lab)	-	-	working	20,000
3 autoclave (lab)	-	-	Working	60,000
1 centrifuge (lab)	-	-	Working	10,000
1 distiller	-	-	working	20,000
4 water bath (lab)	-	-	Working	40,000
1 Butter churn st steel	-	-	working	40,000
2 buckets st steel	-	-	working	8,000
1 Cream separator	-	-	working	100,000
9 sufurias	-	-	working	13,000
2 starter culture cans st steel	-	-	working	30,000
1 Side mower	SITREX DMN	230 275	Working	700,000
2 Rakes	SITREX	23096/230283	Working	1,200,000
1 baler	ATESPAR Z-224/2	1864789090	Working	2,300,000
1 water boozier	-	-	Working	600,000
Trailer	CASE		Working	100,000
Trailer	Mercy Ferguson	-	Working	100,000
Harrow	Mercy Ferguson		Working	200,000
1 Lawn mower	-	-	Working	60,000
1 backup generator	60kva415 50Kz	3H.4031/1100006	Working	1,500,000
1 Portable generator	HONDA	-		20,000
1 Gyro mower	BALDAN	-	Working	400,000
PLOUGH	Mercy Ferguson	-	Usable	150,000
31 wooden tables			Usable	155,000
62 office chairs			Usable	186,000
214 classroom arm chairs	-	-	Usable	856,000
220 dining hall chairs	-	-	Usable	440,000
234 hostel beds			Usable	380,250
22 dining hall tables	-	-	Usable	220,000
14 Metal filing cabinets	-	-	Usable	140,000
5 Wooden filing cabinets	-	-	Usable	10,000
2 pool tables	-	-	Usable	60,000
2 table tennis tables	-	-	Usable	20,000
Printer (reg.)	HP LaserJet P1005	VNFNF07636	Working	20,000
Printer (ext.)	HP-LaserJet p3005	CNF1F02390	Working	40,000
Printer (ANHE)	HP LaserJet	-	Working	40,000
Printer (dairy)	HP LaserJet		Working	40,000
Printer (Principal)	HP LaserJet p3005	CNF1C40366	Working	40,000
Printer scanner	HP	-	Working	10,000
2 Printer Desk Jet	-	-	Working	20,000
Photocopier (registry)	Kyocera	PAE8183940	Working	12,000
Photocopier (comp. lab)	Kyocera	PAE8183952	Working	120,000
Photocopier (registrar)	Ricoh	L679630122	Working	120,000
Computer (PRIN.)	HP Compaq	MXL7240KOB	Working	120,000
Computer (DOS)	HP Compaq	MXL7240L00	Working	120,000
Computer (Reg.)	HP Compaq	3CB019254Q	Working	120,000
Computer (D/P)	HP Compaq	MXL7240L02	Working	120,000
Computer (ext.)	HP Compaq	MXL7240KNZ	Working	120,000
Computer (dairy)	HP Compaq	MXL7240KKW	Working	120,000
Computer (ANHE)	HP Compaq	-	Working	120,000
Computer (FM)	HP Compaq	MXL7240KXQ	Working	120,000
Computer (Principal)	HP Compaq	MXL7240LTM	Working	120,000
Computer (comp. lab)	HP Compaq	MXL7240LIN	Working	120,000
Computer (comp. lab)	HP Compaq	MXL7240KXG	Working	120,000
Computer (comp. lab)	HP Compaq	MXL7240KKD	Working	120,000
Computer (comp. lab)	HP Compaq	MXL7240KY8	Working	120,000
Computer (comp. lab)	HP Compaq	MXL7240KYZ	Working	120,000
Computer (comp. lab)	ACER VERITON M460	PSM6D070480600787W	Working	120,000
Computer (comp. lab)	T PEOPLE 52XMAX	S20050402938	Working	120,000
Computer (comp. lab)	TPEOPLE BEnQ 56X	S20650482897	Working	120,000
2 Computer (comp. lab)	-	-	Working	120,000
2 Toshiba lap tops	-	-	Working	120,000
1 Dwell laptop	-	-	Working	120,000
3 WATER DISPENSE	-	-	Working	40,000
Television (tea room).	LG	811SYSD3G88	working	40,000
Plasma TV	Sony Bravia	1153856	working	70,000
3 Water dispenser			working	30,000
<b>SUB-TOTAL</b>				<b>24,242,250</b>

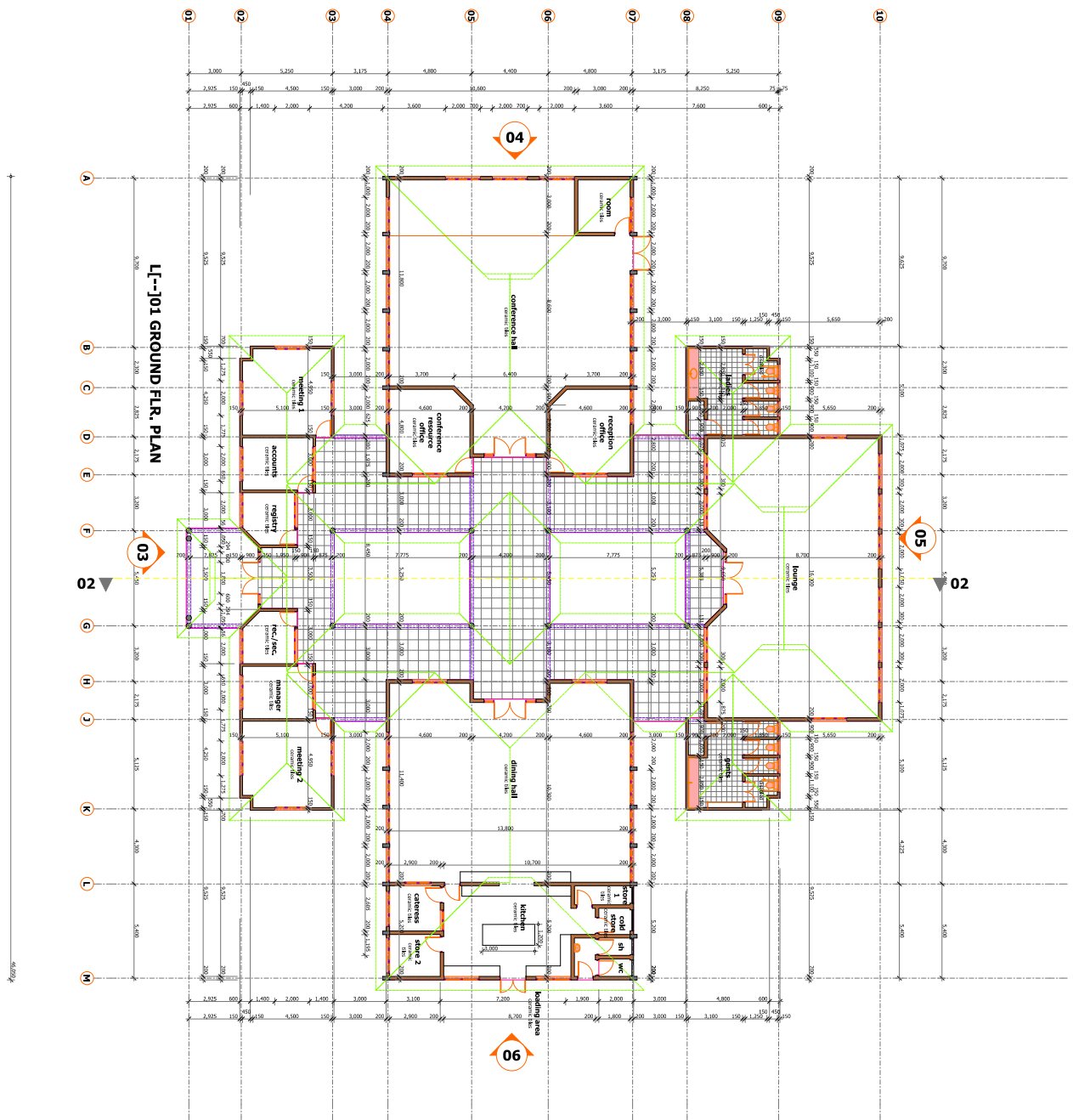
## ANNEX 4. SWOT ANALYSIS

<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>✓ The only institution in Kenya with the mandate to provide specialized training in dairy at that level</li> <li>✓ Large demand for skilled labour in dairy</li> <li>✓ Qualified staff</li> <li>✓ Centrally located</li> <li>✓ Quiet environment for learning</li> <li>✓ Land is an asset</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>✓ Lack of legal framework</li> <li>✓ Lack of proper human resource management</li> <li>✓ Lack of proper policies and procedures to guide the operations of the institution</li> <li>✓ Lack of a resource mobilization strategy</li> <li>✓ Limited financial resources</li> <li>✓ Heavy reliance on government funding</li> <li>✓ Too much bureaucracy</li> <li>✓ Dilapidated infrastructure, outdated training equipment</li> <li>✓ Unpredictable low rainfall</li> <li>✓ The curriculum does not address the changing market needs</li> <li>✓ Lack of ICT</li> <li>✓ Lack of support staff e.g. – a matron</li> <li>✓ There is no credit transfer to other institutions</li> <li>✓ Distance to main road</li> <li>✓ Lack of adequate accommodation</li> <li>✓ Lack of proper financial management</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>✓ Potential to develop strong partnerships with stakeholders in the dairy sector incl. processors, EAAPP, RDCoE, IFAD, SNV, FAO, the TVET Authority etc.</li> <li>✓ The goodwill of development partners</li> <li>✓ Increasing interest in dairy, meaning increased training demands</li> <li>✓ Emergence of milk collection centres, minidairies and new processors present an opportunity for demand in training</li> <li>✓ The land can be developed as profit centre</li> <li>✓ Take the advantage of Kenya being chosen as the dairy centre of excellence</li> <li>✓ Take advantage of its position as a TVET institution to receive funding.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>✓ Lack of regulatory authority in dairy training</li> <li>✓ Potential competition from upcoming institutions providing agriculture training</li> <li>✓ Change in funding priorities by the central government</li> <li>✓ The threat of being absorbed by universities like many other institutions</li> <li>✓ The land threat – it could go to any of the institutions that share land with DTI unless the land is clearly earmarked for DTI.</li> <li>✓ Squatters (land issue)</li> <li>✓ Encroachment by the herders – threat of transfer of animal diseases</li> </ul>

# ANNEX 5. IFAD PLAN FOR NEW CONFERENCE FACILITIES







**ANNEX 6. REPORT THE FRIESIAN AGRO CONSULTING**

**Separate document**

## ANNEX 7. LIST OF RESPONDENTS PKF DRAFT-DIAGNOSTICS REVIEW

Institution	Location	Contact	Designation
Kenya Dairy Board	Nairobi	Dr. Cheronno	
Ministry of Livestock Development	Nairobi	Julius Kiptarus Caroline Ngunjiri	Director of Livestock production
IFAD	Nairobi	Moses A. Kembe	Program Coordinator
Ministry of Agriculture	Nairobi	Mr. John Mwaniki Mr. Maheti Fabian s Muya	Deputy director of agriculture – Technical training division
Ministry of Higher Education	Nairobi	Mr. Nanjakululu	Ass. Director, Directorate of Technical Education
Co-operative College of Kenya	Nairobi	Dr. E. Gicheru	Acting Principal
Kenya Animal Genetics Research Centre	Nairobi	Dr. Wamukuru	CEO
Jomo Kenyatta University of Agriculture and Technology (JKUAT)	Juja	Prof. Kamau Ngamau Dr. David Mburu	Dean, Faculty of Agriculture Chairman Land resources planning and management dept
Egerton University	Njoro	Professor Kahi Professor Bebe Mr. Wilson M. Karimi	Dean faculty of Agriculture Program Administrator, Value Chains Programme
University of Nairobi	Nairobi	Prof: Charles Gachuiiri Dr. Abuom	- - Farm Manager
Cheborowa ATC	Eldoret	Nicholas Keino	Deputy Principal
Bukura Agricultural College	Kakamega	Justus Mudogo Simiyu	CEO/Principal
Rift Valley Institute of Science and Technology	Nakuru	Mr. Eddy Koimet Mr. John Kimemia - Mr Paul Langat	Chief Principal Registrar Dean of students
Dairy Training Institute (DTI)	Naivasha	Mungai Gabriel	Principal DTI/Deputy Director livestock production
Nestle	Nairobi	Ian Donaldson	Managing Director
KARI Naivasha	Naivasha	Dr. Kariuki	Director
ILRI	Nairobi	Ben A. Lukuyu	Feed Specialist
KAGRC	Nairobi	Dr. H.K. Wamukuru	Managing Director
New KCC	Nairobi	Mr. Matu Wamae Dr. Langat	Chairman Managing Director
Githunguri Dairy	Githunguri	Samuel Muiruri	Quality assurance & extension officer
Matu Wamae	Mukurwe-ini	Matu Wamae	Proprietor
Willy Kirwa	Eldoret	Willy Kirwa	Farmer
Sarah Boit	Eldoret	Sarah Boit	Farmer
Baraka farmhouse	Eldoret	Jos Creemers	General Manager
Heifer International	Nairobi	Alex Kirui	Country Director
EAAPP (East Africa Agricultural Productivity project)	Nairobi	Catherine Kinyanjui	Training, Dissemination & Agribusiness Dev. Specialist
African union	Nairobi	Andrew	
EADDP	Nairobi	Moses Nyabila	Country Director
East Africa grain council	Nakuru	Charles Boit	Director
Sigma Feeds	Kitengela	Mr. Bornface Kamau	Human Resource Manager
Unga Feeds	Industrial Area	B. Karimi	Human Resource Manager
Browns Cheese	Karen	Andy Stirling	Managing director and factory manager
Uchumi supermarket	Nairobi	Michael Kibe	Group Human Resources Manager
Sigma feeds	Kitengela	Viral Shah	Managing Director
Sidai		Anthony Wainaina Christie Peacock	Managing director Chairman
EDFA	Eldoret	Mr. Nicholas Kositany	Chairman
FAO	Nairobi	Mr Njuguna	