

Dar es Salaam Institute of Technology



DIT Rolling Strategic Plan 2017/2018 - 2021/2022

July 2017

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PREFACE

Dar es Salaam Institute of Technology (DIT) which was established by an Act of Parliament No.6 of 1997 as a high technical training institution in Tanzania is now committed to expand and consolidate its services. This comes forth as a result of both increased demands of highly skilled manpower in technical education and the call by the President of the 5th phase Government of the United Republic of Tanzania (URT), His Excellency, Dr. John Pombe Joseph Magufuli, to spearhead the realization of industry economy by 2025, as spelt out in his inaugural speech to the Parliament of Tanzania on 20th November, 2015, as well as in the National Five Year Development Plan - 2016/17-2020/21 with the theme “Nurturing Industrialization for Economic Transformation and Human Development”. Furthermore the Institute intends to respond to market demand of ready-made Engineers, Technicians and Artisans.

DIT understands that such a mission could only be realized if local training institutions will significantly increase student enrolment and improve teaching methodology. We are therefore planning to increase our enrolment from 3,755 students in 2015/16 to 6,000 students in 2020/2021 through extending our services in Dar es Salaam at the Main campus and at our campuses in Mwanza and Songwe regions and neighbouring regions. Besides, DIT envisages putting in place support services for business start-ups for its students after completion of training, and similar measures for easing labour market entry and job-retention challenges.

The preparation of the plan was initiated by the DIT Principal and supported by the Institute’s Council. On behalf of DIT, I wish to thank all stakeholders for their contributions and support to the process of preparing this corporate strategic plan.

I now call upon all stakeholders and well-wishers of DIT to provide their moral and material support to enable timely and effective implementation of the Corporate Strategic Plan. Such support will in turn enable the realisation of the noble vision and mission of our esteemed institution.

.....
Prof. Preksedis M. Ndomba
PRINCIPAL

July, 2017
Dar es Salaam ,Tanzania

Executive Summary

The Dar es Salaam Institute of Technology (DIT) intends to become an agent of industrialization, development and progressive customer-centred high learning Institution addressing changing societal needs. This comes forth as a result of both increasing demands of highly skilled manpower in technical education and a call by the President of 5th phase Government of the United Republic of Tanzania (URT), His Excellence Dr. John Pombe Joseph Magufuli, to spearhead realization of industrial economy by 2025.

In order to respond to the labour market which requires practical technicians and engineers, DIT is planning to revolutionize the training methodology by adopting a teaching factory approach whereby technical training is interactively linked to a real life factory business.

The Teaching Factory Approach aims to align manufacturing, teaching and training to the needs of modern industrial practice. Future engineers and technicians need to be educated with new curricula in order to cope with the increasing industrial requirements of the factories of the future. The Teaching Factory paradigm comprises the relevant educational approach and efficient interaction between industry and academia. The Teaching Factory approach aims at a two-way skills transfer between academia and industry using relevant emerging technologies. The proposed teaching methodology has, therefore, three components i.e. training centre, teaching factory and incubator, which complement to each other.

This Five-Year Rolling Strategic Plan is intended to guide Dar es Salaam Institute of Technology (DIT) in fulfilling her objectives derived from the mandate and functions as prescribed in established Act of 1997, regulations and policies as well as the proposed new direction. The Plan establishes objectives and targets to guide efforts of all stakeholders in fulfilling institutional functions and achieving the country's developmental goals.

The purposes of DIT Strategic Plan therefore can be summarized as follows:

- To be a source of resource mobilization (Need for Funds, Technical Assistance (TA));
- To be a frame of reference for all stakeholders in terms of supporting and enhancing synergies in implementing various development and

governance interventions, social well-being projects/programs and all entrepreneurship activities;

- To provide new direction to address the changing societal needs;
- To indicate the timing of implementation;
- To indicate how progress will be measured against baselines and agreed performance indicators;
- To enable the preparation of performance budgets- The MTEF performance cycle;
- To use it as a management tool.

The current main Strengths, Weaknesses, Opportunities and Challenges of DIT are analyzed basing on the core functions as follows:

Strengths

- (i) Existence of market demanded programmes responsive to national priorities;
- (ii) Campuses location is easily accessible;
- (iii) Existence of qualified academic staff who can undertake research, compete and secure research funds from various sources;
- (iv) There is adequate structure to manage and coordinate research;
- (v) Research policy in place;
- (vi) Provision of Certificate, Diploma, Degree and Masters programmes, and
- (vii) Proximity to commercial city of Dar es Salam.

Weaknesses

- (i) Low numbers of academic staff and supporting staff;
- (ii) Low capacity to enrolment of students;
- (iii) None existence of Intellectual Property Policy (IPRP);
- (iv) Low number of programmes responsive to national priorities;
- (v) Inadequate availability of scholarship programmes;
- (vi) Inadequate learning environment for student welfare;
- (vii) Lack of a research agenda;
- (viii) Lack of incentives to staff to publish;
- (ix) Inadequate funds for research from the internal sources, and
- (x) Lack of adequate resources to support operations.

Opportunities

- (i) Existence of public sources of research funding internationally;
- (ii) Existence of national technical education supporting policies;
- (iii) Conducive national political and economic situations;
- (iv) Availability of financial support of Higher Education Student Loan Board;
- (v) High market demand for DIT programmes in relation to national and international policies;
- (vi) Willingness of some potential donors to fund DIT;
- (vii) High demand for leadership skills programmes;
- (viii) Goodwill from customers, government and donors (Development Partners);
- (ix) Existence of supporting policies, and
- (x) Availability of huge base potential students and staff.

Challenges

- (i) Growing demand for energy, food, land use, water, transport services, waste disposal, infrastructure etc.;
- (ii) Technical education being capital intensive;
- (iii) Insufficient funding from the government;
- (iv) Over-reliance on development partners;
- (v) Limited funding opportunities;
- (vi) Inadequate availability of scholarship programmes;
- (vii) Increasing competition for students' loans granted by the HESLB (private and public universities);
- (viii) Increasing competition for students from other institutions offering similar programmes and courses;
- (ix) Increasing national, regional and global competition among higher education institutions for research funding and links with international institutions; and
- (x) Existence of HIV/AIDS pandemic.

Strategic Issues for the Next 5 Years Period

A total of 95 strategic issues were identified in all 6 key result areas provided in the CSP as follows: 19 in technical education area, 12 in research and innovation, 10 in knowledge exchange and public services, 6 in internationalization, 44 in capacity building and 4 strategic issues in alumni relations.

LIST OF ABBREVIATIONS

ADE	Advanced Diploma in Engineering
BEng.	Bachelor of Engineering
BIP	Business Incubation Policy
BSc.	Bachelor of Science
CE	Civil Engineering
CEITT	Centre for Entrepreneurship, Innovation and Technology Transfer
CSOs	Civil Society Organizations
COSTECH	Commission for Science and Technology
DE	Diploma in Engineering
DIT	Dar es Salaam Institute of Technology
DTC	Dar es Salaam Technical College
DTE	Diploma in Technical Education
DTI	Dar es Salaam Technical Institute
ESDPs	Education Sector Development Programme
F	Female
FTC	Full Technician Certificate
FYRSP	Five-Year Rolling Strategic Plan
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
ICT	Information and Communication Technology
IE	Industrial Engineering
M	Male
MDGs	Millennium Development Goals
ME	Mechanical Engineering
MoU	Memorandum of Understanding
M&E	Monitoring and Evaluation
MTEF	Medium Term Expenditure Framework
NACTE	National Council for Technical Education
NGOs	Non Governmental Organizations
NTA	National Technical Awards
OD	Ordinary Diploma
OTD	Ordinary Technician Diploma
OPRAS	Open Performance Review and Appraisal System
R&D	Research and Development
PDP	Professional Development Programmes

PEDP	Primary Education Development Programme
PG	Postgraduate
PGS	Postgraduate Studies
PGD	Postgraduate Diploma
PhD	Doctor of Philosophy
PME	Planning, Monitoring and Evaluation
R&D	Research and Development
SDGs	Sustainable Development Goals
SEDP	Secondary Education Development Programme
SMEs	Small and Medium Enterprises
SP	Strategic Plan
STI	Science, Technology and Innovation
SWOC	Strengths, weaknesses, Opportunities and Challenges
TA	Technical Assistant
TCU	Tanzania Commission for Universities
TEA	Tanzania Education Authority
TEIL	Technology Enhanced Independent Learning
TT	Total
UG	Undergraduate
URT	United Republic of Tanzania
UNESCO	United Nations Educational, Scientific and Cultural Organization

CHAPTER ONE

1. INTRODUCTION

1.1 Establishment and Evolution of the Dar es Salaam Institute of Technology (DIT)

Dar es Salaam Institute of Technology is one of the oldest technical education in the country. It started under the name of Dar es Salaam Technical Institute (DTI) with the objective of upgrading youths who completed technical secondary school education as well as to train personnel in other fields such as secretarial services. The foundation stone for the Institute was laid by the Governor of Tanganyika, Sir Edward Twinning on 30th April 1956. The first building of the Institute was completed and opened on 21st October, 1957 by Hon. A.T Lennox – Boyd, the British Secretary of State for Colonies. At that time there were four commercial courses and one engineering course offered.

The expansion of the Dar es Salaam Technical Institute (DTI) continued to grow and on 7th August, 1962, when a new wing of the Institute was inaugurated, the Institute was transformed to Dar es Salaam Technical College (DTC). The inauguration of the first Technical College was performed by the Prime Minister of Tanganyika, Hon. Rashid M. Kawawa. The programmes were offered in collaboration with City and Guilds of London Institute. Sometime in 1964, training programmes leading to Ordinary Technician Diploma in Civil, Mechanical and Electrical Engineering were introduced.

In 1969 – 71 college programmes were reviewed and reorganized to meet the national educational policy changes with the objective of meeting the needs of technical teachers and supplementing manpower trained abroad. Training programs that were not related to engineering education such as secretarial courses, secondary school education and business education were removed from DTC. A two - year curriculum of Ordinary Diploma from City and Guilds was replaced by a three - year curriculum of Full Technician Certificate. A three - year Training programme leading to Advanced Diploma in Engineering (ADE) was introduced. In addition a Diploma in Technical Education was introduced and all of the programmes were examined by the National Examinations Council of Tanzania (NECTA).

Until early 1970s, DTC was the sole supplier of technical personnel at the levels of technicians and engineers. Later in 1974, the University of Dar es Salaam established a Faculty of Engineering. In 1978 Technical College Arusha (ATC) was inaugurated and Mbeya Technical College (MTC) was set up in 1986. Several institutions of technical education were established in the same duration. Such institutions include the National Institute of Transport (NIT), TANESCO Institute and Rwegarulila Water Resources Institute.

In 1996, the Ministry of Science, Technology and Higher Education (MSTHE) reviewed its policy on Technical Education and Training in the light of global social economic changes. In the reviewed policy, the government demanded improvement of employment conditions of staff, governance and efficiency of management system of DTC and strengthening of training of technical education in the country as whole. As a consequence of that, in 1997, Dar es Salaam Institute of Technology was established in 1997 by the Act of Parliament to effectively and efficiently address current developments in the country [DIT Act, 1997] on the foundations of the former Dar es Salaam Technical College (DTC). Specifically, it was intended to provide competitive academic outputs not only in terms of quality technical training, but also quality applied research and related expert services to the community.

1.2 Rationale for Renewal of the Five Year Rolling Strategic Plan

DIT intends to become an agent of industrialization, development and progressive customer-centred high learning institution. This comes forth as a result of both increased demands of highly skilled manpower in technical education and a call by the President of 5th phase Government of the United Republic of Tanzania (URT), His Excellence Dr. John Pombe Joseph Magufuli, to spearhead realization of industrial economy by 2025, as spelt out in his inaugural speech to the Parliament of Tanzania on 20th November 2015 and reiterated in the National Five Year Development Plan 2016/17-2020/21 with the theme *“Nurturing Industrialization for Economic Transformation and Human Development”*. Furthermore, the market requires practical Technicians and Engineers.

In order to supply readymade graduates, DIT has planned to revolutionize the technical training methodology through adopting a teaching factory approach whereby technical training is interactively linked to a real life factory business. The Teaching Factory approach aligns manufacturing, teaching and training to the needs of modern industrial practice. Future engineers and knowledge workers need to be educated with new curricula in order to cope with the increasing industrial requirements of the factories of the future. The Teaching Factory paradigm comprises the relevant educational approach and the necessary ICT configuration for the facilitation of interaction between industry and academia. The Teaching Factory approach aims at a two-way knowledge communication between academia and industry. Both knowledge channels of the paradigm are presented, in the context of this work, within real-life industrial applications. The Teaching Factory approach provides a real-life environment for students and research engineers to develop their skills and comprehend the challenges involved in everyday industrial practice.

In line with the Teaching Factory Approach, the core business of DIT is summarized in Figure 1.1.

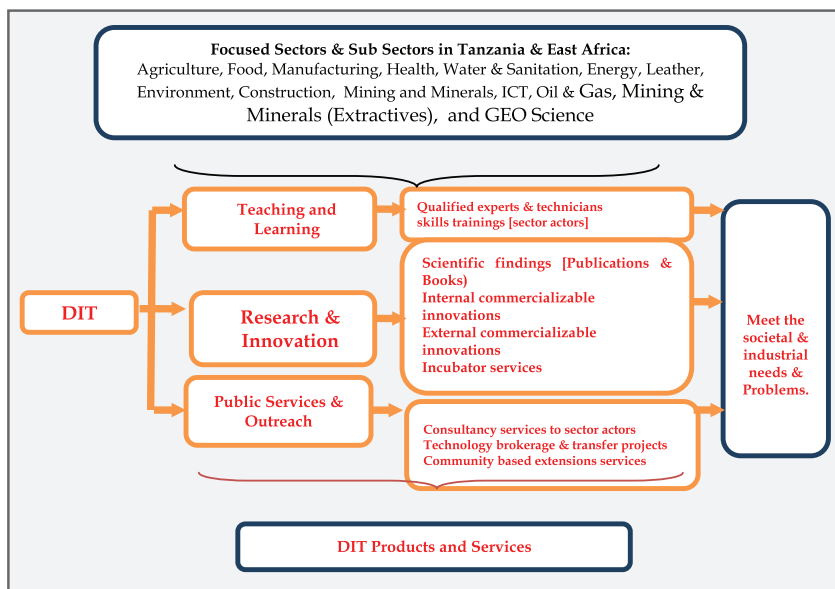


Figure 1.1: The Core Business Function of DIT

1.3 DIT Teaching Factory Approach Concept

The Teaching Factory Concept is aimed at addressing the hitherto unmet challenges faced by DIT in trying to emulate a real world environment within a typical institutional setting. An important and integral component of the concept is the industry project work in which staff and students work closely as a team on real-life industry problems with cost, quality, reliability and deadline constraints, and often requiring multi-disciplinary capabilities residing in different departments and units in the Institute.

The proposed teaching methodology has three components namely **Training Centre, Teaching Factory And Incubator**, which complement to each other. The concept of the teaching factory has its origin in the medical science disciplines and specifically, in the paradigm of the teaching hospitals. It aims at integrating the learning and working environments, from which realistic and relevant learning experiences arise. The configuration layout of the factory-classroom concept will follow a modular approach to allow flexibility on its

application and operation. The modularity of a teaching factory concept could be presented in four categories, namely factory, curriculum/study content, delivery mechanism and courses. The establishment of the technology incubators at DIT campuses aims at accelerating commercialization of scientific research results and technologies developed both from the Institute as well as from local R&D institutions and SMEs in the vicinity. The incubators will provide space, partnerships and networks to build a national community in which project/research students, innovators, entrepreneurs, scientists, technologists, professionals and investors can continuously exchange knowledge, share best practices, develop innovative businesses and expand their networks both locally, regionally and globally.

It is expected that the concept will facilitate effective learning in the implementation of the Institute's curricula. It is a concept which adopts a practice and application-oriented training approach that combines the learning and working environment from which realistic and relevant learning experiences arise.

The Teaching Factory approach is more than just a pedagogic approach that benefits student learning alone. It represents a total systems approach that releases the latent synergy between numbers of inter-related key success factors. When correctly implemented, it creates a powerful effect not only on the quality of teaching and learning, but equally importantly, on the attitude and mindset of staff and students. At DIT, this positive self-reinforcing systemic interaction will contribute greatly to the creation of an environment of teamwork, innovation, strong linkage with industry, and a strong focus on capability development.

This approach will continue to become a key contributor in shaping the unique DIT culture and spirit, which is an important prerequisite for the successful implementation of the borderless schools concept. Final year students in the engineering undertake industrial project work aimed at providing engineering and design solutions for the industry. The close collaboration with the industry has made possible opportunities for staff and students to work on real-life projects within time and budget constraints while observing industry standards.

These industrial projects are undertaken by a multi-disciplinary team of engineers and final year students on full-time project assignments. The real-life experiences which the students will draw from the practice-oriented

course will help them to relate closely to the occupational aspects of their studies and this will help to bridge the gap between industrial needs and training.

1.4. Purpose of the Five – Year Rolling DIT Strategic Plan: 2017/18–2021/22

This Five – Year Rolling Strategic Plan (FYRSP) is intended to guide Dar es Salaam Institute of Technology (DIT) in fulfilling her objectives derived from the mandate and functions as prescribed in founding law, regulations and policies as well as the proposed new direction. The Plan establishes objectives and targets to guide efforts of all stakeholders in fulfilling institutional functions and achieving the country’s developmental goals. The purposes of DIT Strategic Plan therefore, can be summarized as follows:

1.5. Methodology

This FYRSP was developed using a participatory and consultative approach involving both internal management collaborators and key Institute’s stakeholders. Facilitation was carried out by external facilitators. The process involved was a review of various documents developed internally as well as other external related documents such as the guidelines for the development of strategic plan from Treasury Registrar (TR) and a review of the previous Strategic Plan by a thorough examination of the Vision and Mission Statements, Objectives, Targets and Performance Indicators. The reviews that were done were presented and agreed in various stakeholders meetings as well as group work, plenary sessions involving Heads of Departments and Heads of Units and all institute participatory agents. The new reviewed Strategic Plan (SP) was later presented before the Management and Council for final approval. In the course of preparing this FYRSP, care was taken to embrace the environmental policy currently prevailing in Tanzania, particularly the national industrialization agenda.

1.6 The Layout of the Document

The Five Year Rolling Strategic Plan for 2017/18 to 2021/22 document contains five chapters preceded by preface and an executive summary. The executive summary briefly outlines key performance issues, the societal

vision, mission, institutional vision and objectives, and outlines the broad strategies to be undertaken by the Institute in the implementation of the plan. Chapter One introduces the document by describing the approach adopted, purpose of the Plan, layout and structure of the document and historical background of the Institute. Chapter Two presents the Institutional situational analysis; Chapter Three provides the internal context including the current mission, vision and functions. The chapter also reviews the service delivery performance as well as Strength, Weakness, Opportunity and Challenges (SWOC), and strategic issues for consideration during the next five years. Chapter Four provides the societal vision, reviewed mission, institutional vision statements and Objectives of the Strategic Plan. Chapter Five provides in summary the key result areas, strategies, output targets and outcome targets. Strategies for each outcome target are outlined for the purpose of achieving the set targets. Chapter Six, which is the last, present and discusses the implementation monitoring and evaluation of the plan.

CHAPTER TWO

2. INSTITUTIONAL STRATEGIC CONTEXT

2.1 The Global Context

The world is becoming more crowded, and its population more consuming, more polluting, desiring to be more connected, and in many ways less diverse than at any time in history. There is a growing recognition that humans are altering the Earth's natural systems at all scales, from local to global, at an unprecedented rate, changes that can only be compared to events that marked the great transitions in the geo-biological eras of Earth's history (Berry, 1988). The question now arises whether it is possible to satisfy the needs of a population that is growing exponentially while preserving the carrying capacity of our ecosystems and biological and cultural diversity. A related question relevant to DIT situation is what should be done now and in the near future to ensure that the basic needs for water, sanitation, nutrition, health, safety, and meaningful work are fulfilled for all humans in Tanzania and beyond.

Further, it has also been noted that, in the next two decades, almost two billion additional people are expected to populate the Earth, 95 percent of them in developing or underdeveloped countries (Bartlett, 1998). This growth will create unprecedented demands for more areas including energy, food, land, water, transportation, materials, waste disposal, earth moving, health care, environmental clean-up, telecommunication, and infrastructure. With these new demands, the role of engineers will be critical in fulfilling those demands at various scales, ranging from remote small communities to large urban areas (megacities), mostly in the developing world (United Nations, 1998). George Bugliarello (1999) stated that, the emergence of large urban areas is likely to affect the future prosperity and stability of the entire world. It is also estimated that between 835 million and 2 billion people will be living in some type of city slum and that the urban share of the world's extreme poverty will be about 25 percent (United Nations, 2001).

Considering the problems facing our planet today and the problems expected to arise in the first half of the twenty-first century, especially the developing world, the engineering profession must revisit its mindset and adopt a new

mission statement - to contribute to the building of a more sustainable, stable, and equitable world. Maurice Strong, Secretary General of the 1992 United Nations Conference on Environment and Development, noted, "Sustainable development will be impossible without the full input by the engineering profession." For that to occur, engineers must adopt a completely different attitude toward natural and cultural systems and reconsider interactions between engineering disciplines and nontechnical fields.

The external environment to DIT therefore, covers the country and extends beyond the nation's borders to include the international environment. It traverses the changes, developments, gains and challenges in political, educational, economic, technological, legal as well as social spheres. The consolidation of globalization and resultant liberalization of the country's economy are notable external forces that expose higher learning institutions including DIT to open market economy norms and take keen interest in customer demands, competition, and necessity for efficiency in the production and delivery of services/goods. The two powerful external forces necessarily present opportunities as well as threats call for DIT to take advantage of opportunities and minimize impact of threats.

2.2 The Regional Context

A comprehensive survey of modern enterprises of all sizes in three African countries namely Kenya, Tanzania and Zimbabwe found that companies repeatedly cite as a serious problem insufficiently skilled labour (Biggs, Shah, and Srivastava 1995a). Manufacturers in Kenya were found not to have the numbers of technical personnel at the certificate and diploma levels required to improve technical capacities. This is important from the manufacturers' perspective because industrial output is sensitive to small changes in the scarcest factors of production.

Low levels of education and skills in the labour force can severely restrict labour market flexibility in the formal sector of African economies. If companies cannot find abundant and adaptive skilled labour, they cannot respond to opportunities presented by new technologies. Skills development is important in Sub-Saharan Africa today for several reasons:

- Globalization and competition require higher skills and productivity among workers, both in modern companies and in the micro and small

enterprises that support them. Companies have been downsizing and outsourcing in response to liberalized trade regimes and lowered import tariffs. However, having fewer employees has not meant less training. Quite the contrary, evidence suggests that qualification levels are increasing and training efforts are intensifying within enterprises in competitive environments. Moreover, entrepreneurial skills are of growing importance and persons with more formal education outperform others in small enterprises.

- In many countries in Sub-Saharan Africa, technological changes require richer cognitive content, higher skill levels in the labour force, and continued enhancement of work force skills. Exploiting the potential of information and communications technology (ICT) requires a strong skills base as well as infrastructure and appropriate regulatory frameworks. Adoption of ICT is associated with the employment of more skilled workers. A labour force with a solid basic skills foundation is essential for countries to exploit the opportunities opened by technological change (Betcherman, 2001).
- Many countries in Africa, Tanzania included, have undergone significant structural adjustment over the past decade. This often entails the sale or closing of loss making state-owned enterprises. Structural adjustment can lead to substantial downsizing of employment in the state and parastatal sectors as well as in private companies that face increased competition. Workers displaced by structural adjustment often need upgrading of their skills. The numbers can be significant.

Poverty reduction requires investing in the productivity and skills of economically and socially vulnerable groups. This is one of the main messages of “Can Africa Claim the 21st Century?” (World Bank, 2000). Investment in people is important for two reasons: Africa’s future economic growth depends less on its natural resources, which are being depleted and are subject to long-run price declines, and more on its labour skills and its ability to accelerate a demographic transition. Investing in people promotes their individual development and enhances their ability to escape poverty. Improving human capital is thus crucial for Africa, both to reduce poverty and to improve people’s lives. Efforts to boost human capital in the region must cover a broad front, including education, health, and skills development (World Bank, 2000). Skills are an important means to increase incomes and sustainable livelihoods for the poor. Finally, skills development becomes

both more important and more difficult as a result of HIV/AIDS. AIDS depletes scarce human capital and magnifies the need to replace skills lost across a wide range of occupations (World Bank, 2000).

DIT's long history of training initially technicians and extending to engineers in 1990s has continued to produce quality graduates to meet employment requirements locally and for other countries in the region. Changes in economies from provision of raw materials for industrial countries to processing of available natural resources into products call for appropriate adaptation in training and skills development of labour force. Advent of new technologies (e.g. in ICT), changes in the society, and development of existing technologies therefore require DIT to adjust and cope with the regional market labour needs.

2.3 The National Context

2.3.1 The National Development Vision (NDV) 2025 and Five Years Development Plan (FYDP) phase II

The NDV 2025 and FYDP phase II advocate for people-centered national development based on sustainable and shared growth that will free citizens from abject poverty. For that, Tanzania is required to create a strong, diversified, resilient and competitive economy, which can effectively cope with the challenges of development, and which can easily and confidently adapt to the changing market and technological conditions in the 'regional and global economy. The realization of the NDV 2025 and FYDP phase II call for the development of competent human resources and research capacities. National aspirations will inevitably shape organizations' future strategic development. Thus, DIT has responsibility to produce well trained and innovative graduates to manage the science and technology in important areas to the economy.

2.3.2 The Education Sector Reform Programme

The Government embarked on ambitious Education Sector Development Programmes (ESDPs) with supplementary support from major donors. The programmes aim at increasing enrolment at both primary and secondary levels, while arresting the declining quality of education. Improving the quality of primary and secondary school education is a key goal of the Ministry of

Education, Science and Technology. Following the launching of the PEDP and SEDP programmes, it was expected that more students would qualify to join higher education institutions. It was envisaged that about 12.5% of the students in secondary schools would qualify to join institute education in the country. In the year 2004/2005, about 26,719 were expected to go to institute, and by year 2008 the number would double because of the PEDP and SEDP programmes. The impact of programmes will lead to an increase in demand for technical education. DIT needs to explore opportunities from emanating from the Education Sector Reform Programme to fulfil her mission.

2.3.3 The Technical Education Policy

The needs and challenges facing higher education in Tanzania as highlighted in the Higher Education Policy include the:

- (a) Need to meet increased social demand for technical education;
- (b) Need to step up application of science and technology for industrial development and increased production;
- (c) Need to meet technical manpower requirements in various sectors of the economy;
- (d) Need to promote participation of women in science and technical education and training;
- (e) Need to keep-up with new and emerging areas of science and technology; and
- (f) Need to tackle low employment of youths, globalization and international competitiveness.

The DIT has to support the Government by striving to address all issues relevant to the sector as provided in the policy.

2.3.4 The Higher Education Policy

The needs and challenges facing higher education in Tanzania as highlighted in the Higher Education Policy include:

- (a) Dealing with increased social demand for education;
- (b) The need for specialized skills;
- (c) The need to keep-up with new and emerging areas of science and technology;

- (d) The need for greater entrepreneurship;
- (e) Coping with globalization and international competitiveness;
- (f) The need for sustainability of higher education by improving resource mobilization; and
- (g) The need for greater social democracy and good governance.

The DIT has to support the Government by striving to address all issues relevant to the sector as provided in the policy.

2.3.5 Funding of Higher Education

Declining annual budget allocations face all public higher learning institutions. If this trend remains, the deficit in DIT budget and actual allocation from the government will keep on growing. The current state of the economy suggests that the Institute will face inadequate funding in the foreseeable future. Without sustainable and adequate funding, the realization of the plan and attainment of intended outputs will be difficult to realize. The access of funding from local and international donors has continued to become difficult as donor fatigue has increasingly continued to grow. To this end, DIT will need to request for special budget from the government as well as develop proposals for funding along the lines of the Strategic Plan to address the budgetary deficit.

2.3.6 Gender Issues

Like other science institutions, DIT faces wide spread gender inequalities and lack of inadequate mainstreaming in her operations and programmes. The proportion of females in higher education institutions is about 25% and is much lower in science and technical disciplines. Though modest efforts towards gender balance and mainstreaming issues are being addressed, long-term interventions at various levels are required. At organization level, DIT is expected to contribute to national drive towards alleviating gender-based inequalities.

2.3.7. Concluding Remarks and Way Forward

The landscape of engineering education is changing more swiftly than ever before. As fundamental shifts occur in technology and society, we must

consider the role of engineers and how we prepare our students in all levels to lead and succeed. This century requires us to address the many challenges like need for clean and sustainable energy sources, improved rural and urban infrastructure, advanced manufacturing, affordable health care delivery, cyber security etc. These needs have been recognized as Grand Challenges of the 21st Century for the current world.

Technical educational institutions in Africa including DIT, must adopt the role to ensure the next generation of engineers is prepared to address the above challenges. We must provide access to a world-class engineering education, retain top faculty to educate and engage students in breakthrough action research, and offer up to date facilities in which their work will flourish.

A world-class engineering programme is a characteristic of a modern institution. DIT is fortunate to be located in the City of Dar es Salaam with branches in strategic cities focusing in creativity and innovation in clean technology, infrastructure, information and communications technology all of which demand and have helped building cutting-edge engineering programmes.

Great engineering institutes like DIT anticipate, drive, and embrace change. We must be both strategic and responsive to fully realize our potential to improve the quality of life for our students and the community, and the world at large.

DIT is set and ready to move forward. To succeed, the Institute must make significant investments to increase the number of students. The FYRSP therefore, allows us to pursue emerging opportunities, and ensure DIT ranks among the best institutions in technical education and skills development now and in the decades to come.

In the innovation age, the successful leaders are not just measured by being visionary. Leadership requires many attributes including technical excellence, problem solving ability, innovation, collaboration, communication skills, and thoughtful management. The role of DIT is therefore to prepare students for both current challenges and for challenges yet unimagined.

Because DIT is a top-tier research institute, her students have unique educational opportunities. The DIT students participate in research, choose from a broad range of majors, and work collaboratively with their lecturers to address community problems. The Institute's best faculty members attract the most promising students and creatively engage those students in the learning and research processes. Students work with elite researchers, great educators and entrepreneurial innovators whose work leads to real impact.

CHAPTER THREE

3. INTERNAL CONTEXT

3.1 DIT Performance and Internal Context

This section provides information on performance of DIT for the past 5 years. Information provided has included current DIT Vision and Mission, student enrolments in certificate, diploma and degree programmes, postgraduate programmes, research development and technology transfer, entrepreneurship and incubation, consultancy and public services to industries, international relations, governance and human resource management, student welfare and affairs, infrastructure development and maintenance, gender equity & inclusiveness and finally, quality assurance and control.

3.2. The Current DIT Vision, Mission, Functions and Values

3.2.1. DIT Vision and Mission

The Vision states that, Dar es Salaam Institute of Technology (DIT) is to become the leading provider of high quality engineering education, research and consultancy, within Tanzania and the East African region.

The Mission is to:

- Provide access to high quality technical education and training for students in Applied Sciences, Engineering, Entrepreneurship and related disciplines as well as to conduct relevant research and consultancy;
- Promote the development and usage of appropriate technology that meets national, regional and international needs and standards through skills and practical-oriented training, research and consultancy;
- Cooperate with the Government of the United Republic of Tanzania and the private sector in establishing centres of excellence to combat national catastrophes such as draught, floods, hunger and pollution amongst other things, and
- Foster honesty, respect and responsibility, lifelong learning and innovation based on the situational analysis , it has become evident that both the vision and mission needs to be reviewed to match the changing needs of the society.

3.2.2. DIT Functions

The Functions of DIT include the following:

- To provide facilities for study and training in the principles, procedures and techniques and conduct training programmes in Electrical Engineering, Civil Engineering, Mechanical Engineering, Computer Engineering, Science and Laboratory Technology, Electronics and Telecommunications Engineering, and such other related disciplines as the Institute may from time to time decide;
- To engage in applied research and development in the disciplines specified above;
- To provide consultancy services to the public;
- To conduct examinations and grant awards of DIT as approved by the National Council for Technical Education.

3.3. Student Enrolment

Since her establishment, the Dar es Salaam Institute of Technology (DIT) has been witnessing steady growth of student population emanating from within and outside the country. Sustained demand and expanding enrolment has been in Ordinary Diploma Courses NTA Level 4 – 6, Undergraduate Bachelor Degrees NTA Level 7 – 8 and Master Degrees NTA Level 9. However, low participation rate of female students prevalent in science/tech educational institutions in the country is also evident at the Institute. Female students' average participation rates in Ordinary Diploma courses stood at 13.6 percent, Undergraduate Bachelor Degrees was 12 percent, while Master Degrees was 11 percent. Table 3.1 below presents students' enrolment in various academic levels.

Table 3.1. Number of Enrolled Students 2012/13 - 2016/17

Table 3.1. Number of Enrolled Students 2012/13 - 2016/17														
ORDINARY DIPLOMA (OD) NTA LEVEL 4-6														
2012/13			2013/14			2014/15			2015/16			2016/17		
M	F	TT	M	F	TT	M	F	TT	M	F	TT	M	F	TT
1617	238	1855	1793	294	2087	1753	275	2028	1590	226	1816	1829	324	2153
%F	13			14			14			12			15	
BACHELOR DEGREE NTA LEVEL 7-8														
M	F	TT	M	F	TT	M	F	TT	M	F	TT	M	F	TT
960	101	1061	1135	147	1282	1445	176	1621	1618	251	1869	1699	290	1989
%F	10			11			11			13			15	
MASTER DEGREE NTA LEVEL 9														
M	F	TT	M	F	TT	M	F	TT	M	F	TT	M	F	TT
			27	6	33	41	8	49	66	4	70	75	9	84
%F				18			16			6			11	

Source: Facts and Figures, Dar es salaam Institute of Technology, **2017**

3.4. Teaching and Learning

3.4.1 Certificate and Diploma Programmes

The Dar es Salaam Institute of Technology has been offering various Basic Technician Certificate and diploma courses with their curricula being reviewed from time to time along with technological advances in the world. Currently, the DIT offers a total number of fourteen (14) diploma programmes and twelve (12) professional courses. Industrialization is high on the agenda of fifth phase Government. Improvement in quality of education delivery, training, graduates in all offered/oncoming programmes will enhance nation's efforts towards industrial economy.

3.4.2 Degree Programmes

Running undergraduate programmes is the mainstay undertaking at DIT that produces graduates for the country with technical qualifications at degree levels. Undergraduate training imparts technical skills in basic spheres of

engineering, communication, and laboratory. Technologies for solving local problems are conceived, incubated/nurtured and transferred to society for wider application in the country. Currently, there are seven (7) Undergraduate Bachelor Degree Programmes at NTA Level 8 which are offered, these are:

- i. Bachelor of Engineering (B.Eng) in Civil Engineering,
- ii. Bachelor of Engineering (B.Eng) in Computer Engineering,
- iii. Bachelor of Engineering (B.Eng) in Electrical Engineering,
- iv. Bachelor of Engineering (B.Eng) in Electronics and Telecommunications Engineering,
- v. Bachelor of Engineering (B.Eng) in Mechanical Engineering,
- vi. Bachelor of Technology (B.Tech) in Laboratory Sciences, and
- vii. Bachelor of Engineering in Oil and Gas Engineering.

The Bachelor degree programmes listed above are of six semesters covered in three academic years. The DIT is planning in the near future to strengthen its undergraduate teaching and learning. The initiatives to strengthen DIT teaching and learning include providing undergraduate bachelor degree courses that are compatible with the current vision of the fifth phase government of industrialization.

3.4.3 Postgraduate Programmes

Training of Postgraduates is one of the critical areas that need deep and serious attention. Currently, the Dar es Salaam Institute of Technology has only two Masters Degree programmes NTA level 9. Postgraduate training is important to the country for developing high level manpower needed for innovation and improvement of productivity in various sectors. Market demand for Postgraduates is very high in technical/production sector and to emerging universities both private and public as instructors and lecturers. There is room for strengthening postgraduate training that include modern Research laboratories with the state-of-the-art research and training equipment in renewable energy lab, Festo labs, Mechatronics labs, electronic labs and biotechnology Labs. DIT has 47 academic staff with PhD qualifications who can facilitate postgraduate training. The completion of teaching tower will provide additional space that can be used for postgraduate training in the near future. There are two masters' programmes, namely Master of Engineering in Maintenance Management and Master of Engineering in Computational Science and Engineering.

These programmes are offered by coursework and dissertation, and the course durations are 18 and 24 months, respectively. The Dar es Salaam Institute of Technology is planning to devise a mechanism of facilitating students' fellowships for aspirants interested in various academic programmes. It is anticipated that employers in the country will be persuaded to shoulder part/all of training costs of their employees who are keen and ready to join various postgraduate programmes offered at DIT.

3.5. Research, Development and Technology Transfer and Outreach

Research and Development, Technology Transfer, and Outreach are one of the core functions of an academic institution such as Dar es Salaam Institute of Technology. It is anticipated that any innovation that comes out from the institution has to reach the communities to overcome problems and raise living standards. The Research Policy provides guidance regarding Research, Development and Technology Transfer and Outreach. Various research projects have been carried out and results disseminated for improved product/service delivery. Challenges and constraints against effective conduction of research and delivery of results include inadequate motivation for academic staff and postgraduate students to actively engage in research undertaking. Lack of fund to support various research activities as well as absence of clear research agenda are additional hindrance factor to staff/students participation in research.

3.6. Technology Entrepreneurship and Innovation

Technology, Entrepreneurship and innovation are of particular importance as they contribute to the development of the country, more so in enhancing government industrialization initiatives. Awareness seminars and workshops for staff had been conducted on entrepreneurship, innovation, incubation, and Intellectual Property Rights (IPR). The Dar es Salaam Institute of Technology has been organizing workshops in collaboration with International Organizations such as United Nations Educational, Scientific and Cultural Organization (UNESCO) on innovation, technology development and transfer. Business Incubation Policy (BIP) has been developed to facilitate Technology Entrepreneurship and Incubation. The Institute intends to establish Centre for Entrepreneurship, Innovation and Technology Transfer (CEITT) implement business plan, research policy and harness efforts in

three focus areas namely Technology, Entrepreneurship and Innovation. The roles of Technology and innovation in prioritizing industrial economy are explicitly stipulated in Science, Technology and Innovation Policy (2017).

3.7. Consultancy and Services to Industry

Consultancy and Services to industry are other key functions of the Dar es Salaam Institute of Technology apart from teaching and learning. These are undertaken by most of its staff and in some areas in collaboration with students. The DIT has the capability of enhancing its effective contribution to the development of the country through consultancy and service to the industry. Since its inception, the Dar es Salaam Institute of Technology has contributed significantly to providing engineering and non-engineering solutions to the numerous problems that confront industrial sector. Niche area, however, is in learned and knowledge intensive consultancy in engineering and technology and related aspects. Staffing mix of trained engineers and technicians has proved effective in provision of consultancies and service to industry and thus generated income to staff, Institute and enhanced country development.

3.8. International Relations

Collaboration and linkages with international bodies provide an opportunity for accessing funding, skills and knowledge exchange. The India-Tanzania Centre of Excellency in ICT (IT-CoEICT) is one of the bodies of DIT that demonstrates the bilateral collaboration initiatives from which the Institute benefits. The IT-CoEICT was established in 2009 as a result of friendly-relation between two counties and their desire to further strength bilateral cooperation in area of Information Technology. The project implementing Agencies on behalf of the two countries are Tanzania Dar es Salaam Institute of Technology (DIT) and India Centre For Development of Advanced Computing (CDAC). The principal objective of the IT-CoEICT is to promote development of Information and Communication Technology in the United Republic of Tanzania. In order to realize the stated objective, the centre engages in various professional activities in ICT including provision of video conferencing, telemedicine and e-learning facilities, High Performance Computing (HPC) and conducting modular short-term proficiency courses in Information Technology.

3.9. Governance and Human Resources Management

3.9.1. Overall Staff at Dar Es Salaam Institute of Technology

The Dar es Salaam Institute of Technology has a total number of 384 employees as of March 2017. Three hundred and seventy two (372) staff are on permanent terms while twelve (12) staff are on contract employment terms. This number includes 161 academic staff, 105 technical staff and 118 administrative staff. Technical and administrative staff members work hand-in-hand with academic staff to facilitate delivery of teaching and learning, research and technology development outputs, consultancy and services. The overall proportion of female staff stands at 28.4 percent. Table 3.9.1 to 3.9.4 below present the distribution of staff at Dar es Salaam Institute of Technology for the academic year 2016/17

Table 3.9.1. Staffing level at Dar es Salaam Institute of Technology

	2016/17		
	M	F	TT
Academic Staff	132	29	161
Technical Staff	90	15	105
Administrative Staff	53	65	118
Total	275	109	384
% of Female	28.4		

3.9.2. Distribution of Academic Staff by Rank and Age Group as of 2017

Table 3.9.2. Academic Staff by Rank and Age Group as of 2017

Age	Tutorial Assistants			Assistant Lecturers			Lecturers			Senior Lecturers			Associate Professors			Professors			Total		
	M	F	TT	M	F	TT	M	F	TT	M	F	TT	M	F	TT	M	F	TT	M	F	TT
20-30	5	2	7	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	6	3	9
31-35	19	3	22	9	1	10	0	0	0	0	0	0	0	0	0	0	0	0	28	4	32
36-40	4	0	4	14	2	16	1	0	1	0	0	0	0	0	0	0	0	0	19	2	21
41-45	4	0	4	16	2	18	7	0	7	0	0	0	0	0	0	0	0	0	27	2	29
46-50	1	0	1	6	1	7	6	2	8	0	0	0	0	0	0	1	0	1	14	3	17
51-55	0	0	0	11	3	14	8	1	9	1	2	3	0	0	0	0	0	0	20	6	26
56-60	0	0	0	10	0	10	4	3	7	0	0	0	0	0	0	1	0	1	15	3	18
61-70	0	0	0	3	1	4	5	0	5	0	0	0	0	0	0	0	0	0	8	1	9
Total	33	5	38	69	11	80	32	6	38	1	2	3	0	0	0	2	0	2	137	24	161

3.9.3. Qualifications of Technical Staff

Table 3.9.3. Qualifications of Technical Staff

Highest Qualification	2016/17		
	M	F	TT
PhD	0	0	0
MSc.	10	0	10
BSc.	31	5	36
PGD	2	0	2
ADE/HND	13	2	15
FTC	12	2	14
Diploma	22	5	27
Form IV	0	1	1
Trade Tests and other non-FTC qualifications	0	0	0
Total	90	15	105

Table 3.9.4. Technical Staff Distribution by Cadre

	2016/17		
	M	F	TT
Lab Technicians	9	2	11
Medical Officers	2	2	4
Nursing Officers	3	0	3
Lab Assistants	0	0	0
System/ Network Admin	1	0	1
Artisans	13	2	15
Technicians	14	3	17
Workshop Instructors	50	4	54
Total	92	13	105
% of Female	12.4		

3.10. Student Welfare/Affairs

Student welfare takes into account maintenance of good conducive learning environment, good mental and physical health as well as social well-being of students. The Dar es Salaam Institute of Technology is a community that ensures high standards of student's welfare and affairs for better learning. DIT always wishes to put in place infrastructure to support acceptable levels of students' welfare/affairs including sport grounds of all types, swimming pool, restaurants, music halls, internet backbone/wireless communication network and good accommodation facilities.

3.11. Campus, Infrastructure Development and Maintenance

The Dar es Salaam Institute of Technology is constrained with modern infrastructure as the Institute is expanding in terms of academic programmes, staff and students. For almost five years now, no significant construction or rehabilitation has been made so far. It is however, expected in the soonest to have a 10 storeys building completed which is under construction. After the completion of this building, the following facilities will be available to accommodate 984 students and 46 staff in one sitting.

- (i) Classrooms, lecture theatres and seminar rooms;
- (ii) Laboratories and workshops including computer laboratory and library;
- (iii) Technology incubator; and
- (iii) Teaching factory.

Therefore, it is envisaged that, after the completion of the building, more space will be available to accommodate increasing/expanding students' enrolment and offices for staff. Other infrastructural facilities which need to be taken care of include provision of water supply, sanitation, road network, electricity and solid waste management systems, students' welfare facilities such as health and recreational facilities. This will alleviate the existing problems as most of the infrastructures - library, classrooms, road network need major repairs.

3.12. Gender Equality and Inclusiveness

Gender equality and inclusiveness is an area that has received greater attention at the Dar es Salaam Institute of Technology. This is because of long term imbalances which have been observed in the developing world including in Tanzania, where men are more favoured than women. To respond to these imbalances, the Dar es Salaam Institute of Technology then established the Gender Management Unit (DIT-GMU) in 2000 to advocate and mainstream all the gender related aspects in staffing as well as students. The Gender Management Unit recognizes and addresses all gender-related issues/problems with an overall aim of improving gender balance amongst staff and students. The DIT-GMU closely works with the Management in admitting more qualified female students and recruiting female staff to address gender imbalance. It also works closely with the Management to ensure supportive learning environment to both male and female. GMU has been providing counseling services, Gender sensitization programmes, gender awareness seminars and workshops and incorporation of gender modules in the curricula for all DIT programmes (O.D and B.Eng.)

3.13. Quality Assurance and Control

The Dar es Salaam Institute of Technology has the Quality Assurance and Quality Control Bureau (QAQC). The objective of QAQC Bureau is

to provide expertise to the Institute on how to provide quality services to students/public in terms of programmes, research and consultancies. The portfolio for the Quality Assurance and Quality Control Bureau include, but not limited to the following:

- a) Continuously monitor provisioning of education at DIT;
- b) Audit the performance of teaching against established criteria;
- c) Assure competent academic and administrative workforce;
- d) Evaluate effectiveness, accessibility, and quality of the programmes offered at DIT; and
- e) Research for new insights and innovative solutions to the teaching problems.

Future plans in this area include increasing the number of competent staff and providing them with requisite skills to enable the unit to perform its duties effectively.

3.14. DIT Strengths, Weaknesses, Opportunities and Challenges (SWOC Analysis)

The main Strengths, Weaknesses, Opportunities and Challenges of DIT are analyzed based on the core functions namely Teaching and Learning, Research & Space Publications and Outreach Services, Links and Partnerships, Leadership and Governance, Gender equity, Finance and Resource Mobilization, Infrastructure Development and maintenance and Human Resource and Management and Student Welfare. The summary of the SWOC analysis is provided in the following sections.

Strengths

- (i) Existence of market demanded programmes responsive to national priorities;
- (ii) Campuses location is easily accessible;
- (iii) Existence of qualified academic staff who can undertake research, compete and secure research funds from various sources;
- (iv) There is adequate structure to manage and coordinate research;
- (v) Research policy in place;

- (vi) Provision of Certificate, Diploma, Degree and Masters degree programmes;
- (vii) Proximity of the Main Campus to commercial city of Dar es Salaam.

Weaknesses

- (i) Low numbers of academic staff and supporting staff;
- (ii) Low capacity to enrolment students;
- (iii) None existence of Intellectual Property Policy (IPRP);
- (iv) Low number of programmes responsive to national priorities;
- (v) Inadequate availability of scholarship programmes;
- (vi) Inadequate learning environment for student welfare;
- (vii) Lack of a research agenda;
- (viii) Lack of incentives to staff to publish;
- (ix) Inadequate funds for research from the internal sources;
- (x) Lack of adequate resources to support operations;
- (xi) Non existence of Intellectual Property Policy (IPRP);
- (xii) Inadequate funds to support research, innovation and dissemination activities;
- (xiii) Existence of aging infrastructures;
- (xiv) Inadequate infrastructure for practical training and scientific experiments;
- (xv) Inadequate facilities to support people with special needs;
- (xvi) Outdated institutional policies;
- (xvii) Inadequate succession planning;
- (xviii) Low number of female students qualifying for enrolment

Opportunities

- (i) Existence of public sources of research funding internationally;
- (ii) Existence of national technical education supporting policies;
- (iii) Conducive national political and economic situations;
- (iv) Availability of financial support of Higher Education Student Loan Board;
- (v) High market demand for DIT programmes in relation to national and international policies;
- (vi) Willingness of some potential donors to fund DIT;
- (vii) High demand for leadership skills programmes;
- (viii) Goodwill from customer, government and donors (Development Partners),

- (ix) Existence of supporting policies;
- (x) Availability of huge base potential students and staff.

Challenges

- (i) Growing demand for energy, food, land use, water, transport services, waste disposal, infrastructure etc.;
- (ii) Technical education being capital intensive;
- (iii) Insufficient funding from the government;
- (iv) Over-reliance on development partners;
- (v) Limited funding opportunities;
- (vi) Inadequate availability of scholarship programmes;
- (vii) Increasing competition for accessing student loans granted by the HESLB (Private and public universities);
- (viii) Increasing competition from other institutions for the same pool of applicants aspiring for technical education training;
- (ix) Increased, national, regional and global competition among higher education institutions for research funding and links with international institutions;
- (x) Existence of HIV/AIDS pandemic.

3.15. Strategic Issues for the Period (2017/18 – 2021/22)

Table 3.1 presents the main key result areas and main strategic issues to be addressed during 2017/18 – 2021/22. The issues are identified for each key result area as suggested in the DIT Corporate Strategic Plan: 2017/18 – 2026/27.

Table 3.1 Critical issues for consideration during the period 2017/18-2021/22

S/N	10 YRS CSP KRAs	RSP Key Result Areas for the 1 st Phase of 5 YRS	Strategic issues
1	Technical Education	Technical Education	1) Need to strengthen specialized professional programmes. 2) Need to introduce leadership skills programmes. 3) Need to strengthen career development programmes. 4) Need to strengthen practical skills development programmes. 5) High demand for DIT academic programmes within and outside the country. 6) Need to introduce teaching factory approach as a teaching methodology to support government efforts on industrialization. 7) Limited number of female students enrolment for all DIT programmes 8) None existence of scholarship programmes to support increased enrolment. 9) Limited infrastructure to support programmes expansion efforts. 10) Limited space and facilities to match increasing enrolments. 11) Poor entrepreneurship attitude and communication skills to students. 12) Provision of poor services to customers. 13) Inadequate provision of

S/N	10 YRS CSP KRAs	RSP Key Result Areas for the 1 st Phase of 5 YRS	Strategic issues
			competence based training. 14) Need to introduce new courses in engineering and emerging technologies. 15) Need to introduce polytechnic programmes up to PhD level. 16) Inadequate entrepreneurship programmes for DIT students. 17) Need to conduct tracer studies. 18) Need to introduce distance education programmes for selected courses. 19) Need to develop technology transfer strategy.
2	Research and Innovations	Research, Innovation and Outreach	1) None existence of research agenda in respect to national agenda. 2) Inadequate collaborations strategies with key stakeholders. 3) Inadequate courses for developing research/project proposals. 4) Inadequate fund to support research activities. 5) Limited number of research development partners. 6) Poor support for research dissemination. 7) Inadequate outreach programmes. 8) Limited mechanisms for promoting innovation. 9) Need to re-establish

S/N	10 YRS CSP KRAs	RSP Key Result Areas for the 1 st Phase of 5 YRS	Strategic issues
			mechanisms for every unit to provide outreach services. 10) Inadequate research and technology transfer centres. 11) Inadequate mechanisms for commercialization of innovations made at DIT. 12) Inadequate platforms for incubators in strategic areas. 13) Need to establish incubator programme. 14) Need to establish Research Endowment Fund.
3	Knowledge Exchange and Public Services	Knowledge Exchange and Public Services	1) Need to promote entrepreneurial skills. 2) Support innovations. 3) Inadequate support for alumni innovations through exhibitions. 4) Need to establish IPR Office. 5) Development of collaborations with other institutes to promote innovation. 6) Ineffective knowledge transfer and adoption to the public. 7) The need to publicize DIT strength in provision of consultancy services. 8) The need to build capacity for DIT staff to conduct various consultancies. 9) The need to strengthen Institute Consultancy Bureau. 10) The need to inculcate the

S/N	10 YRS CSP KRAs	RSP Key Result Areas for the 1 st Phase of 5 YRS	Strategic issues
			culture of conducting consultancies to DIT staff and students.
4	Internationalization	Links and Partnerships	1) Limited strategic collaborations with key stakeholders. 2) Poor strategic partnerships for funding. 3) Need to establish collaboration with strategic multi-national companies to support core functions of DIT including teaching factory approach. 4) Support staff exposure programmes. 5) Support multidisciplinary research programmes. 6) Need to diversify funding strategy.
5	Alumni Relations	Alumni Engagement	1) Need to develop alumni database. 2) Need to establish convocation office. 3) Need to form an alliance with Alumni. 4) Need to promote alumni activities.
6	Institutional Capacity	Finance and Resource Mobilization	1) Limited number of strategic funding collaborators. 2) Non-existence of business plans to support teaching factory approach programmes. 3) Need to lobby with the government to provide special

S/N	10 YRS CSP KRAs	RSP Key Result Areas for the 1 st Phase of 5 YRS	Strategic issues
			line budget to support teaching factory approach. 4) Outdated fees structure for DIT programmes. 5) Inadequate strategy to mobilize resources
		Human Resource Management	1) Existence of staffing gaps for academic, technical and administrative functions. 2) Inadequate staff succession plan in place. 3) Outdated staff development plans for academic, technical and administrative functions. 4) None existence of a comprehensive staff retention scheme. 5) Outdated sabbatical staff policy.
		Staff and Students Welfare	1) Poor staff and students counseling services. 2) Inadequate indoor and outdoor sport facilities. 3) Inadequate student's hostels to match increased demands. 4) Inadequate coordination and funding HIV/AIDS interventions.
		Infrastructural Development and Maintenance	1) Inadequate teaching and learning facilities especially seminar rooms. 2) Limited and poor parking facilities.

S/N	10 YRS CSP KRAs	RSP Key Result Areas for the 1 st Phase of 5 YRS	Strategic issues
			3) Inadequate student hostels. 4) Inadequate plot size at the main Campus to accommodate DIT current and future needs. 5) Inadequate academic staff and administration offices. 6) Aging equipment in various laboratories and workshops 7) Limited library space. 8) Inadequate maintenance of buildings and facilities. 9) Inadequate laboratory facilities. 10) Aging ICT infrastructure. 11) Lack of DIT Physical Master Plan.
		Leadership and Governance	1) Limited trained administrative staff at the Institute. 2) Need to identify, develop and talents. 3) Inadequate quality assurance activities. 4) Inadequate attention in financial management and accountability. 5) Inadequate fundraising activities. 6) Inadequate strategy to address cost cutting measures. 7) Limited number of outreach programmes. 8) Limited public relations capacity. 9) Limited use of public media to

S/N	10 YRS CSP KRAs	RSP Key Result Areas for the 1 st Phase of 5 YRS	Strategic issues
			promote DIT activities. 10) Inadequate strategy to update alumni database 11) Inadequate strategy on alumni networking. 12) Limited coordination and participation in symposiums and conferences. 13) Need to orient staff to leadership skills.
		Gender Equality and Inclusiveness	1) Poor gender balance at all levels. 2) Inadequate attention to gender inclusiveness in student affairs. 3) Un-conducive environment for staff with special needs. 4) Inadequate of gender affirmative actions to promote staff male/female ratio. 5) Need to formalize establishment of DIT Gender Unit.

CHAPTER FOUR

4.1 Renewed DIT Societal Vision, Institutional Vision and Mission, Functions and Values.

The DIT is mainly guided by the societal vision which created the need of the services provided at DIT. The Societal vision was developed through consultative approach and later approved by DIT Council.

4.1.1 DIT Societal Vision

The society is provided with affordable, relevant and practical technical education to facilitate development and application of technologies to foster socio-economic development in a sustainable manner.

4.1.2 DIT Institutional Vision

To become a leading technical education institution in addressing societal needs.

4.1.3 DIT Mission

To provide competence based technical education through training, research, innovation and development of appropriate technology.

4.1.4 Core Values (Summarized as RESPECT)

The DIT Management and employees are guided by a set of core values in all their undertakings. We are also convinced that the key to creating a truly technical education institution is an intense focus on the values that guide our actions.

As members of the DIT community, we work diligently to merge our core values into all that we do to positively impact those who seek our services. DIT and its employees shall always operate in respect of core values mentioned below which could be abbreviated with acronymy “RESPECT”:

- 1) **Responsive:** DIT is quick to react in the way that is needed suitable or right for a particular situation.
- 2) **Exceptional Service:** The Institute creates and improves relationships through positive interactions with others.

- 3) Student Centeredness: The institution values and respects all students as unique individuals.
- 4) Professionalism: The Institute takes pride in the work we do and value to learn of our job and perform to the best of our ability.
- 5) Excellence: The Institute recognizes conducive working environment is needed including short and long-term planning, exploration of new ideas, support for innovation, enrichment & professional development programmes, accountability, and attention to health and well-being of faculty and all staff members.
- 6) Commitment: The Institute is dedicated to the community it serves.
- 7) Transparency: The Institute believes that success is achieved through open exchange of information. Cognizant is built on a foundation of open and honest communication.

CHAPTER FIVE

5.1 Implementation Arrangements

5.1.1 Key Result Areas, Strategic Issues, Strategies and Targets

To deal with a particular issue, strategies have been identified and corresponding appropriate measurable targets have been specified for each issue for the next five years. It is hereby recommended to further cascade the planned strategies and targets to Heads of Campuses, Centres and Departments, and individual staff to match their OPRAS performance requirements. Table 5.1 provides details of the strategies and targets identified for the period 2017/18 to 2021/22.

Table 5.1: Key Result Areas, Strategies and Targets

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
1	Technical Education	High demand for DIT academic programmes within and outside the country.	Expand facilities to accommodate more students.	Teaching and laboratory facilities expanded to accommodate 2000 students by June 2022.	Capacity expanded by 10% on high demanded programmes by 2019.
			Establish or expand evening programmes for all demanded programmes.	Feasibility study to identify demanded programmes for UG conducted by 2018 and PG by 2019.	One evening programme established every two years.
		Need to introduce teaching factory approach as a teaching methodology to support government	Enter into Memorandum of Understanding with selected industries and Organizations.	One MoU entered with Industries/Institutions annually.	10 Staff and 30 Students of DIT deployed to industries by 2020.
					Products developed and produced with

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		efforts on industrialization.			DIT logo included by 2021.
		Limited number of female students enrolment for all DIT programmes.	Promote DIT programmes to girl schools and co-education schools.	Gender programme established at DIT by June 2018. Gender centre established at DIT by December 2020.	Female students increased by 10% by 2020.
		None existence of scholarship programmes to support increased enrolment.	Develop and establish scholarship endowment fund.	Scholarship endowment fund established by December 2020.	50 Students able to access scholarships by June 2021.
		Need to establish and strengthen specialized professional programmes.	Conduct feasibility study for specialized professional programmes.	Feasibility study conducted by June 2019.	Students enrolled in specialized professional programmes by 2021.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		Poor entrepreneurship attitude to students and staff.	Establish entrepreneurship programmes.	Entrepreneurship programme established by 2020.	Staff and students trained in entrepreneurship from 2021.
		Poor communication skills to students.	Established communication skills department.	Students provided with mandatory communication skills studies.	Students' communication skills are improved.
		Provision of poor services to customers.	Establish DIT Client Charter.	Client Charter approved by December 2017.	Customer complaints reduced by 50% by 2020.
			Train staff to implement the DIT Client Charter.	Staff trained on customer care and adherence to the DIT Client Charter.	Stakeholder meetings held annually from 2021.
		Need to introduce new courses in engineering and emerging technologies.	Conduct feasibility study and establish new courses in engineering.	New courses in engineering established by 2020.	Increased enrolment at DIT by 15%.
		Need to establish leadership skills	Conduct feasibility study and establish	Leadership programme	Staff and students equipped with

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		programmes. Need to introduce PhD programmes in polytechnics.	leadership courses. Conduct feasibility study and establish PhD programme in polytechnics.	established by 2020. PhD programme established by 2022.	leadership skills. Increased action research conducted at DIT.
2	Research, Innovations and Outreach.	None existence of research agenda in respect of national agenda.	Develop research agenda in line with national agenda.	Research agenda developed by December 2017.	Relevant community based solutions developed and implemented.
				Implementation guidelines for the research agenda developed by March 2018.	
		Lack of funds to support research activities.	Increase funds for supporting research activities.	Case for Government allocation for research advanced every year. Training for 20 staff on writing fundable research proposals conducted twice every year	Funds available to conduct research agenda.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		Limited number of research development partners.	Establish framework for engaging research and development partners.	Framework for engaging development partners developed by December 2017.	One Development partner to support research solicited every two years.
				Implementation guidelines for R&D developed by March 2018.	
		Inadequate courses for developing research/project proposals.	Establish courses for developing research/project proposals.	Courses for developing research /project proposals established by December 2017.	Research activities increased by 10% annually.
		Inadequate outreach programmes	Establish Unit to manage outreach programme for DIT.	Outreach activities implemented from 2020.	Community problems identified and solutions developed.
			Establish programmes for outreach services.	Programmes to enable every unit to offer outreach services established by March	Visibility of DIT

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
				2018.	increased by 10%.
			Establish programmes for enhancing innovations	Programmes to enhance community awareness to availability of local innovations established by March 2018.	
		Inadequate of mechanisms geared towards enhancing innovations at DfT.	Establish strategic partnerships for funding innovations.	At least one partnership for funding innovations sought and established by 2019.	One donor solicited every two years.
		Inadequate research centres and technology transfer centres.	Establish research centres and technology transfer centres.	One research centre established each year starting 2018.	Increased solution to Societal technological problems.
				One technology transfer centre established each year starting 2019.	Factories use new technologies to enhance productivity.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		Inadequate mechanisms for commercialization of innovations made at DIT.	Establish DIT intellectual Property Right (IPR) Office.	IPR Office established by 2020.	One patent registered every two years.
			Strengthen research activities.	Academic staff required to publish.	DIT staffs publish in recognized international and regional journals.
		None existence of platforms for incubators in strategic areas	Conduct feasibility to establish incubator programme	Incubator programme established by 2021	Local companies incubated and promoted
3	Knowledge Exchange and Public Services	Need to promote entrepreneurial skills.	Conduct training on entrepreneurship to staff and students.	Courses on entrepreneurship established by 2019.	100 students and 30 staff trained on entrepreneurship each year starting 2019.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		Need to support innovations.	Enhance mechanism to support innovation.	DIT policy to support innovation in place by 2020.	Staff rewarded for innovation activities annually from 2020.
		Need to establish IPR Office.	Establish IPR Office.	IPR Office established by 2018.	Increased innovation and registration on Intellectual Property Rights.
		Development of collaborations with other institutes to promote innovation.	Enhance collaboration with other institutions.	Enter into MoU with strategic collaborators to promote innovation by 2019.	1 MoU entered with strategic collaborators to promote innovation each year starting 2019.
		Ineffective knowledge transfer and adoption to the public.	Improve the process of knowledge transfer and adoption to the public.	Knowledge transfer and Commercialization Unit established by 2020.	One Innovative technology commercialized every year.
		The need to publicize DIT strength in provision of	Enhance DIT visibility in conducting	Radio and TV programmes on DIT activities provided.	DIT Visibility increased by 10%.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		consultancy services.	consultancy.		
		The need to strengthen Institute Consultancy Bureau.	Provide training to staff and restructuring of DIT consultancy bureau.	Training and Restructuring of DIT Consultancy bureau done by 2019.	Consultancy services increased by 10% annually.
		The need to build capacity for DIT staff to conduct various consultancies.	Provision of training to DIT staff to conduct quality consultancies.	Training needs assessment and capacity building programme to staff conducted by 2019.	10 DIT staff trained annually.
		The need to inculcate the culture of conducting consultancies to DIT staff and students.	Encourage DIT staff to involve students in various consultancy services.	Policy to include students in all consultancy services in place from 2019.	10 Students mentored on consultancy services starting from 2020.
			Establish guidelines for commercialization of innovations.	Guidelines for commercialization of innovations developed	One MoU signed with Private sector to Commercialize

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
				by June 2018.	every three years.
					1 MoU for Factory Teaching Approach signed every two years starting from 2018.
		Inadequate mechanisms/policies geared towards enhancing entrepreneurship among DIT staff and students.	Develop a policy to enhance entrepreneurship at DIT.	Policy to support entrepreneurship efforts developed by December 2017.	Staff and students able to establish their businesses.
4	Internalization	Inadequate strategic collaborations with key stakeholders.	Develop a policy to enhance Links, Projects and Partnership policy.	Policy to enhance Links, Projects and Partnership at DIT developed by December 2018	5 New links established every two years.
			Develop guidelines for implementing links, projects and	Guidelines for implementing links, projects and	Links productivity increased by 5% biannually.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
5	<i>Alumni Relations</i>		partnership policy.	partnership policy developed by March 2018.	
		Lack of collaboration with industries to undertake teaching on a factory approach.	Establish links with industries to enable teaching on factory approach.	Links with industries to facilitate teaching on factory approach established by December 2017.	Two MoU for running TFA signed annually.
		Poor support for alumni innovations.	Set guidelines for supporting alumni innovations.	Exhibitions of alumni innovations are prepared by June 2018.	Alumni activities promoted.
		Inadequate strategy to		Guidelines to support alumni in place by 2019.	Alumni database and activities registered.
			Establish Alumni	Alumni home coming events organized every two years starting 2021.	Alumni engagement enhanced.
				Alumni database	Alumni involvement

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
6	<i>Finance and Resource Mobilization.</i>	update alumni database.	Relations Unit.	developed and maintained.	in DIT activities enhanced.
		Inadequate strategy on alumni networking.	Establish Alumni Portal.	Alumni portal developed by 2020.	Alumni receive DIT newsletters electronically through Portal.
		Inadequate number of strategic funding collaborators.	Develop proposals to harness fund from strategic collaborators.	At least 10 proposals written each year.	Increased funding support to DIT.
		Non existence of business plans to support teaching factory approach programmes.	Enhance collaboration with development partners Develop business plan in support of teaching factory.	Enter into MoU with strategic partners each year Business plan in place to support a teaching factory by 2018.	Strategic partners increased by 1 every two years Teaching Factory operational.
		Need to lobby with	Prepare MoU with	Special budget to	Products from

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		the government to provide special line budget to support teaching factory approach.	Central government and other agencies to provide financial support in support of a teaching factory.	support a teaching factory in place by 2020.	teaching factory in market by 2022.
		Outdated fees structure for DIT programmes.	Reviewing the fee structure for DIT programmes.	All fee structures reviewed by 2020.	Improved fees structure.
		Inadequate strategy to mobilize resources.	Enhance DIT capacity to mobilize resources.	Identify potential areas for investing to attract finance at DIT.	One investor MOU signed every two years.
			Introduce courses and seminars that attract more financial resources to DIT.	3 courses introduced into the curricular each by 2018.	Increased internal revenue for DIT.
		Inadequate attention in financial	Review Financial policy.	Financial policy reviewed by 2018.	Clean financial audit reports provided

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		management and accountability.			annually.
		Inadequate fundraising activities.	Develop proposal to establish Advancement Office.	Fundraising activities conducted from 2020.	Alumni involved in supporting DIT.
		Inadequate strategy to address cost cutting measures.	Develop cost cutting strategy for DIT.	Cost cutting action plan developed by 2019.	Cost cutting measures implemented.
7	Human Resource Management	Existence of staffing gaps for academic, technical and administrative functions.	Establish 3 career development programmes.	20 staff trained in career development programmes each year.	Staff capacity building realized.
			Need to review DIT Scheme of Service.	Reviewed DIT Scheme of Service in place by June 2018.	Complaints on staff benefits reduced by 10% annually.
		Inadequate staff succession plans in place.	Review DIT staff succession plan.	Update DIT Staff succession plan in place by December 2019.	Gaps in staff establishment reduced by 10% annually.
		Outdated staff development plans for	Review and update staff development	Reviewed staff development	Capacity for Staff development

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
8	<i>Staff and students Welfare</i>	academic, technical and administrative functions.	programme for academic, technical and administrative functions.	programme for academic, technical and administrative functions in place by June 2019.	implemented. DIT Staff Inspired.
			Need to introduce a comprehensive staff retention scheme.	Comprehensive staff retention scheme in place.	Reduced staff turnover by 10% annually.
			Need to review retirement package for DIT staff.	DIT retirement package in place.	Increased benefits for retirees.
		Outdated HRM Policy.	Enhance review of DIT HRM Policy.	Reviewed HRM Policy in place by 2019.	HRM Capacity built at DIT.
		Poor staff and students counseling services.	Prepare counseling services policy.	DIT counseling services policy established by December 2017.	Improved counseling services for staff and students at DIT.
			Prepare counseling services guidelines to implement the Policy.	DIT counseling services guidelines prepared by March	

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
				2018.	
		Inadequate indoor and outdoor sport facilities.	Rehabilitate existing sports facilities.	Existing sports facilities Rehabilitated by December 2018.	Good sports facilities available to students.
		Inadequate coordination and funding HIV/AIDS interventions.	Prepare HIV/AIDS intervention policy.	HIV intervention policy by December 2017.	Improved coordination and funding of HIV/AIDS
			Prepare HIV/AIDS intervention guidelines to implement the Policy.	Guidelines to implement HIV/AIDS policy prepared by March 2018.	intervention for staff and students at DIT.
9	<i>Infrastructural Development and Maintenance</i>	Inadequate teaching and learning facilities especially seminar rooms.	Construct teaching and learning facilities especially seminar rooms.	4,000 Sq metres of teaching and learning facilities constructed in the next five years.	Student enrolment increased by 10% annually.
		Inadequate plot size at the Main Campus to accommodate DIT current and future needs.	Acquire plot size to accommodate DIT current and future needs.	Plot size to accommodate current and future needs acquired by December 2018.	DIT activities expanded.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		Inadequate staff and administrative offices.	Construct office space to house administration activities and staff.	2,000 Sq meters of office space for administration activities and staff constructed in the next five years.	DIT Staff and students inspired.
		Aging equipment in various laboratories and workshops.	Acquire laboratories and workshops equipment.	Equipment to replace aging laboratories and workshops equipment acquired over the next five years.	Quality of DIT outputs increased.
		Limited library space.	Increase library space to cater for teaching, research and public services.	2500 Sq meters of Library space increased to cater for teaching, research and public services by 2021.	Adequate Library space for quality teaching, learning, research and public services in place.
		Inadequate maintenance of buildings and facilities.	Rehabilitate all DIT buildings and facilities.	All DIT buildings and facilities rehabilitated by 2022.	Inspired staff and students.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		Inadequate laboratory facilities.	Construct new lab and workshops facilities.	New laboratories facilities acquired over the next five years.	Skilled DIT students.
		Aging ICT infrastructure.	Acquire new ICT infrastructure.	New ICT infrastructure acquired over the next five years.	Quality teaching, research and public services provided at DIT.
		Lack of DIT Physical Master Plan.	Develop Master Plan for DIT physical infrastructure.	DIT Physical Master Plan developed by 2019.	Improved DIT physical infrastructure.
		Inadequate infrastructure to support programme expansion efforts.	Solicit fund to support infrastructure programmes.	Develop proposals to solicit fund for DIT infrastructures by 2019.	1 proposal funded every two years starting 2019.
			Design and ring fence funds to build academic sky scraper buildings at DIT.	Identify and demolish buildings at DIT by 2020.	Spaces to build new buildings identified and provided by 2020.
				Solicit funds to build	One Sky scraper

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
				sky scrapper buildings at DIT annually for five a years.	buildings built by 2025.
			Build sky scrapper buildings at DIT by 2022.	Foundation for One sky scrapper built by 2022.	3000m ² availed for teaching and learning.
			Design and ring fence funds to build Students' Hostels at DIT.	Identify and demolish buildings at DIT to provide space for student Hostels.	Spaces to construct new buildings identified and provided by 2020.
		Limited space and facilities to match enrolments		Lobby and procure plot for student hostels in the neighborhood of DIT.	Hostel to accommodate 500 students built in the DIT neighborhoods by 2022.
			Conduct study to build and run parking facilities.	Parking facilities built by June 2021.	Income generated from parking facilities from 2022.
			Construct new student hostels for students.	New hostels for 3,000 students contracted to meet existing and	Availability of quality accommodation for

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
				additional enrolment.	existing and additional students.
10	Leadership and Governance	Untimely review of Institutional Organization Structure.	Review DIT Organization structure timely.	Reviewed DIT organization structure in place by December 2019.	Improved leadership exercised.
		Limited trained administrative staff at DIT.	Develop leadership capacity building for administrative staff.	20 Administrative staff trained on leadership.	Leadership skills imparted to administrative staff.
		Inadequate quality assurance activities.	Establish quality assurance bureau at DIT.	Develop proposal to establish quality assurance bureau December 2018.	Employability rate of DIT outputs increased by 20% from 2021.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
11	Gender Equality and Inclusiveness	Need to identify, develop and deploy talents.	Conduct feasibility study on talents identification and development.	Curricular to identify talents developed by December 2020.	Technical talents identified and developed at DIT by June 2022.
		Limited public relations capacity.	Strengthen Public relations Unit.	Public Relations Officer recruited and trained.	DIT activities publicized.
		Limited use of public media to promote DIT activities.	Strengthen Public relations Unit.	Regular media programmes developed.	DIT activities known to the general public.
		Poor gender balance at all levels.	Develop affirmative policy.	Incrementally Female staff employed and female students enrolled annually not less than 5%.	Female /male ratio improved by 10% by 2021.
		Inadequate attention to gender inclusiveness in	Enhance gender inclusiveness in student affairs.	Gender policy developed by 2020.	Gender awareness enhanced.

S/N	Key Results Area	Strategic issues	Strategy	Output Targets	Outcome Targets
		student affairs.			
		Un-conducive environment for staff with special needs.	Develop policy to support staff with special needs.	Buildings redesigned to support people with special needs by 2021.	Buildings provided with ramps for special needs people.
		Inadequate gender affirmative action to promote staff male/female ratio.	Develop affirmative policy.	Female/male ratio improved by at least 10% in 2022.	Gender balance enhanced.
		Unformalized Gender Unit.	Formalize Gender Unit.	Gender Unit formalized by end of 2018.	More gender issues addressed.

CHAPTER FIVE

5. Implementation, Monitoring and Evaluation

5.1. Introduction

DIT will put in place a participatory review mechanism to monitor progress and assess outcomes against time line, milestones by comparing them with the original objectives and expectations. Periodic reports will be generated to explain progress, achievement or underachievement made along with explanations either way. The Monitoring process will entail continuous tracking of the progress of implementing the Plan. Evaluation activities will involve a critical and objective examination over a specific period of the strategic planning process against actual outcome/achievement of the Plan.

5.2. Implementation Arrangement

The DIT Strategic Plan on five-year tenure will be used as a basis of preparing Annual/Triennial Action Plans which will then guide the preparation of the Annual/Triannual cascading the plan and develop annual action plans for all units, cascading the plan to individual OPRAS forms as well as DIT MTEF budgets submitted to the Government. Long-term strategic direction for the College is depicted in five-year horizon. Targets that fall within the period in the circle will be included in the MTEF budgets. For targets extending beyond MTEF budgeting period, only the relevant activities leading to a clear output within the budgeting period will be included. Also for targeting extending beyond the planning period, these targets will be monitored by planning for relevant activities and then rolled over to the new five period plans until completion planned targets.

5.3. Monitoring and Evaluation (M&E)

5.3.1. Organizational framework for monitoring activities

The Planning Office of the Institute will have the overall responsibility for the M&E of the DIT Strategic Plan. The Institute will appoint a Strategic Planning Monitoring and Evaluation Team (PME Team) to monitor cascading of the plan, track progress, evaluate outcome and periodically provide technical and administrative support for successful implementation.

The PME will include department/unit levels moderators of the strategic planning process and will prepare periodic M&E reports file to the Institute Management/Council for appraisal.

The PME Team shall:

- (i) Ensure that DIT units prepare respective Annual/Triannual cascaded action plans in line with the strategic objectives, strategies and targets at the institute level plan that reflect the expected funding for the period;
- (ii) Prepare and issue M&E reporting guidelines to all DIT departments/units with templates of data collection instruments and quarter/six-monthly reports to be prepared by the departments/units;
- (iii) Determine the type, format, and schedule of the flow of information from the DIT and departments/units for central compilation and analysis;
- (iv) Collect relevant information on external (outside Institute) an impact that is likely to affect implementation of the Plan and disseminate to lower and higher levels.
- (v) Ensure flow of resources to departments/units for financing the planned activities.
- (vi) Organize Annual Consultative Meetings to discuss the progress in implementing triannual/annual operational plans and institute level Strategic Plan.

5.3.2. Monitoring Methodology and Instruments

The following shall constitute the main steps in the monitoring process for the DIT:

- (i) Preparation of a detailed triannual/annual operational plan **as prepared by the Planning Office** showing quarterly targets and reporting the extent to which the operational plan is being accomplished;
- (ii) Prepare a field observation schedule and conduct physical observations and interviews/discussions with various stakeholders to get insights, clarification and feedbacks;
- (iii) Conducting enquiries with the assistance of a questionnaire at the end of every year to obtain the impressions of stakeholders to identify and timely solve problems impeding implementation of the Plan;

- (iv) Coordinating the preparation of the Institute monitoring report out of input-reports from departments/units.

5.3.3. Monitoring reports

There will be two six-monthly reports per annum: one covering the period from July to December and the other for January to June. However, when presenting the January to June implementation report, the reporting unit will also report on the whole year's achievements. Thus the report ending June will compose of the 6-month report (i.e. the implementation report for January to June) and the year's report (July - December).

Monitoring reports at all levels; departments/units and the Institute, will comprise:

- (a) A narrative Strategic Plan implementation report prepared every six months.
- (b) Contents of the narrative report will include but not be limited to:
 - An extract of the respective RSP showing in summary form the approved Strategic Objectives, Strategies and Targets.
 - An approved Operational Plan for the year under reporting.
 - Qualitative and quantitative achievements in terms of actual outputs against the planned activities and outputs in the operational plan.
 - Internal and external factors which affected implementation of the plan and the proposed remedial steps to mitigate effects.
 - Indicating clearly the planned activities for the succeeding period.

5.3.4. Schedule of Monitoring Reports: July - December

For the July to December report the departments/units will do the following:

- (i) **January of succeeding year:** *strictly sticking to a uniform format*, the reporting departments/unit prepares performance reports on implementation of scheduled Strategic Plan activities for July – December.
- (ii) **Mid-January of succeeding year:** *strictly sticking to a uniform format*, PME compiles departments/unit performance reports on implementation of Strategic Plan activities for July – December into Institute level report.

- (iii) **Mid-January of succeeding year:** mid-year review meeting at institute level to discuss progress on Strategic Plan implementation to be held.

5.3.5. Schedule of Monitoring Reports: January - June

In January - June period departments/units will prepare implementation status report for half year (Jan – June) and the overall end-of-year report (i.e. July -June). The final report for the year will be as follows:

- (a) **July of current year:** strictly sticking to a uniform format, departments/units will prepare end-of-year performance reports by mid-July and also to provide summaries of Strategic Plan activities (operational plans) scheduled for implementation in the subsequent year.
- (b) **July of current year:** based on agreed uniform format, PME to finalize the preparation of the Institute-level end-of-year progress report by end of June and also produce fully rolled out activity Plan for the next year.
- (c) **Mid-July of current year:** at Institute level Annual Consultative Meeting to discuss progress on Strategic Plan implementation to be held.

5.4. Evaluation of the Plan

There will be two types of evaluation of the strategic planning process at DIT once in every two and a half years: internal and external evaluation. **Internal evaluators** will closely examine the implementation the Institute Strategic Plan and produce a detailed independent report. Internal evaluators will give their independent opinion on the progress of implementation of the Strategic Plan forming a basis to be validated by external evaluators. Once in every five years, an external evaluation team with one internal evaluator will conduct an overall evaluation.

The internal and external evaluations will have similar Terms of Reference, and will focus on:

- i. Assessing the reasons for the success or failure of specific aspects of the plan;

- ii. Finding out whether implementation of the plan contributes to achievement of objectives, accomplishment of the mission and achievement of vision of the DIT;
- iii. Assessing the timing and adequacy of resources mobilized to implement the plan;
- iv. Determining whether the available resources are being utilized efficiently to achieve the strategic objectives of the plan;
- v. Determining whether the process of strategic planning and implementation is facing any challenge/problem and alternative interventions.

The Planning Office/PME shall prepare clear and comprehensive Terms of Reference to guide both evaluations. Internal and external evaluators will have the mandate to decide on additional factors/issues that are relevant to the plan to be evaluated. ToRs will be vetted at the Annual Consultative Meeting.

Selection of the appropriate internal evaluators will consider relevant technical skills and experience in similar assignments. The internal and external evaluators shall be approved by the Planning Office/Institute Management. The recommendations adopted will be implemented and included in the revised Action Plan.

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