

# Sudan University of Science & Technology

## Strategic Plan

### Chapter One

#### Introduction

##### 1-1 The Birth of SUST & its Evolution Over Time

Sudan University of Science & Technology, “SUST”, has been on the march since the establishment of Khartoum Technical Institute in the year 1950, and has continued evolution through the formation of Khartoum Polytechnic (KP) in the year 1975, which was finally transformed into a University in 1990. The University is comprised of the following ten (10) campuses pervading the cities of Khartoum and Khartoum North.

- Western Campus, or “The Core Area” which includes the University Administration, the Secretariat of Scientific Affairs, Deanships of Students Affairs, Library Affairs, Scientific Research, Distance Learning, Quality & Development, in addition to the colleges of Graduate Studies, Business Studies, Fine & Applied Art, Science, Medical Laboratory Science, Languages, Computer Science & Information Technology, Education, Technology, Computer Center, Institute for Family & Community Development, Institute of Islamic Science & Research, Institute of Laser, Staff Training and Rehabilitation Center, and Information & Documentation Center.

- Southern Campus in ad-Duyum ash-Sharqiya “Eastern Duyum” which comprises the Colleges of Engineering, Architecture & Planning, Physical Education & Sports, Petroleum Engineering & Technology, in addition to the University's Engineering Administration.
- Northern Campus in the Industrial Area in Khartoum North consisting of the College of Industrial and Engineering Technology.
- Colleges of Music & Drama, Communication Science, and Centre for Studies & Culture of Peace in al-Hilla aj-Jadida Quarter- Khartoum.
- The College of Forestry and Range Science in Soba-Khartoum.
- The College of Medical Radiologic Sciences in Khartoum South, the Center of Quality & Excellence in Central Khartoum, Center for Consultancy & Feasibility Studies in Taif-Khartoum.
- Colleges of Veterinary Medicine, Animal Production Science & Technology in Kuku Village-Khartoum North.
- College of Agricultural Studies, the Sudanese Turkish Continuous Training Center and Sudanese Malaysian Studies Center in Shambat- Khartoum North.

(Um al-Qura South), Khartoum North.

- Medical Colleges Complex- Khartoum, ‘Ubayd Khatim St.

Sudan University of Science & Technology is the number one citadel of technology in the country, as is distinguished by the graduation of highly qualified cadres specialized in all areas provided by the colleges mentioned above, noting that some of them are provided by SUST only. It also offers through its aforementioned colleges a pool of disciplines in all areas of applied and technical education and scientific research, in addition to graduate studies, beside Laser and its applications. It provides all the above within the framework of its ongoing quest for sustainable development, as well as its contribution to community service and development.

The University has also established the Deanship of Quality & Development, Training & Rehabilitation Center, the Strategic & Futuristic Studies Center, the Consultancy & Feasibility Studies Center and the Department of Investment. It has also expanded in the areas of parallel education and bachelor of technology (B.Tech.).

SUST is managed by a Board of Directors and its Vice-Chancellor through deanships, colleges and centers administered by the councils of colleges, deans and vice-deans. Each college is comprised of several departments, each department is handled by a council presided by a chairman, and some departments include divisions. The Senate works through committees, namely the Executive & Finance Committee, Policy & Academic Levels Upgrading Committee, Advisory Committee and Funding Committee.

Secretary for Scientific Affairs, Dean of Students Affairs, Deans of Colleges Institutes & Centers jointly assume the responsibility of administering the University through the Council of Deans and a number of committees such as the Central Planning Committee and the Central Training Committee, with the assistance of employees specialized in all administrative areas and other professional staff.

SUST's faculty consists of professors, associate and assistant professors, lecturers, teaching assistants, Instructors, teachers and teacher assistants.

The University Senate is the only authority to confer scientific degrees and is responsible for all academic related matters. The Senate works through various committees such as Registration & Admission, Academic Affairs Committees, beside the Exams Central Committee, and Authoring, Publishing & Translation Committee with the assistance of the Colleges, Centers and the Councils of Departments.

Currently the University is in the process of reviewing and assessing its previous achievements so as to establish the next basis to launch the pad for reaching greater heights and broader horizons in its vigorous efforts to assert its excellence and actively play its due role, locally, regionally and globally.

The start points of any successful strategic plan depend on the recognition of self, the prevalent situation and its characteristics. For this reason, SUST's Strategic Plan was the product of self and external evaluation that began from the year 2006 by assessing some of its programs in various colleges, followed by the institutional evaluation carried out by the Association of Arab Universities in 2010. The major objective of the Plan is to further develop the quality of SUST's various activities, while the

administrative cadre and provide them with a clear vision of this plan, engage them in achieving the University's mission and vision, and to participate in the identification of development priorities.

The Strategic Plan embodies the mission statement in a number of objectives. Every objective in it is composed of a number of procedures (Enclosed is the implementation schedule extending from 2012 second quarter to the last quarter of the year 2016), noting that SUST adopts a phase-by-phase approach to implement its objectives. The plan also identifies the possible sources of funding and technical support required for the implementation of the objectives and those responsible for the execution of the plan. The primary objectives of this approach for SUST are to be:

**▼ A Multidisciplinary University:**

Strives toward establishing new multidisciplinary colleges, centers and departments to serve the community, and add new programs so as to provide students, at all levels, with a wide range of study choices and alternatives, giving due care to qualify professionals and technicians through various training courses.

**▼ A Research University:**

The Deanship of Scientific Research has been established with the purpose of building an integrated, modern and balanced research platform in all areas to conduct new innovative and contemporary scientific research. The Deanship is seeking to create bonds

institutions of the community, and works toward establishing strong links and cooperation with Deanships of Scientific Research in other universities at local, regional and global levels.

#### ▼ **An Electronic University:**

Through its second Strategic Plan, SUST is seeking to instill the concept of transforming itself into an electronic university by linking the various units and departments with a wide electronic network to serve the University and the community, disseminate the culture of electronic transactions and develop e-transaction skills. It also aims at maximizing e-learning by designing the majority of curricula electronically in accordance with the systemized study system, and the application of the same on distance learning and graduate studies through open conferences.

SUST continues to assume its responsibility toward the community as a leading university through the provision of research and consulting services to small and medium-sized enterprises, in addition to the establishment of business incubators, holding conferences and workshops, and financing faculty and staff small-sized projects.

#### **1-2 Academic Areas of Specialization**

The University offers a wide variety of academic programs in the following areas of knowledge:

- 1- Applied Science, Engineering and Construction Technology & Production, Control, Transportation, Aviation, Oil, Industrial Engineering, Water & Environmental Engineering, Computer Science and Communications Engineering, Artificial Intelligence, Value Engineering and Nuclear Engineering.

rangelands, veterinary medicine, animal production, fish and wildlife.

- 3- Applied Economics and Business, Administration, Management Information & Accounting Systems, and e-Commerce.
- 4- Discovering and caring for creativity in music, drama fine & applied arts and sports.
- 5- Laboratory Sciences & Technology, Diagnostic & Therapeutic Radiology, Biomedical Engineering, Pharmacy and Dentistry.
- 6- Educational sciences and their applications in teaching languages, science, arts, technical sciences, physical education, communication sciences, printing technology, the study of living languages, translation & localization.

### **1-3 SUST's Future Goals & Objectives:**

- 1- To fulfill its mission by improving the society through cultural and scientific excellence leading to the achievement of its futuristic vision.
- 2- Maintain its advanced status, locally, regionally and globally.
- 3- Achieve its required identity, not only as a specialized technological university, but also as a research and electronic multidisciplinary university in accordance with the requirements of the society of knowledge.
- 4- Work toward upgrading its internal and external competence in institutional performance and to ensure its quality of performance in this area in accordance with the quality standards of the institutional and programs academic accreditations.
- 5- Improve its image in supporting educational renaissance and by strengthening its role and programs in servicing the society for SUST to be the first choice of the community.
- 6- Student to be at the center attention of the University and provide a motivating learning environment that enables students to acquire

to get them "work-ready".

- 7- Promote its ranking position locally, regionally and globally and to have an effective presence and positive participations.

#### **1-4 Basic Postulates & Hypotheses**

SUST second strategic plan is composed of two groups. The first plan is related to Sudan University of Science & Technology, Higher Education System and factors affecting the society. The second plan represents a distillation of the basic postulates gained from good practices exercised by top international universities and its strategic plans thoughts, as well as the various bodies, councils, international organizations specialized in higher education. Basic postulates & hypotheses could be displayed as follows:

##### **1-4-1 SUST's Postulates & Hypotheses:**

- Sudan University of Science & Technology "SUST" is honored to take the name of Sudan. This is particularly significant because it places enormous responsibility on the University which makes it necessary for it to elevate its level to higher ranks and to continually maintain its excellence in conformity with this high honor and the heavy burden of responsibilities placed on it.
- Over nearly twenty three (23) years SUST has gained prominent and leading positions in many areas, particularly in the recent years, and is endeavoring to maintain and enhance those impressive achievements.
- SUST is aware that human resource is its most precious asset, and the source of its value through which it achieves its accomplishments and excellence. For this reason it is keen to develop the capacity of its Faculty (Human Intellectual Capital) and retain them, as well as its other human resources.
- In spite of the progress made in scientific research in recent years, yet the University is aware that it is necessary to build and maximize research capacities, taking into consideration its

financial aspects...etc...

- There is a significant increasing demand for higher education among the community, particularly the demand for enrollment in various graduate and BA degrees programs. This situation will continue to increase in future which requires SUST to expand its absorptive capacity.
- Recognizing the importance of harmonizing its curricula with the latest developments in science and the needs of labor market, SUST is constantly striving to improve, modernize and diversify its programs to suit the needs of the community. It is also cognizant of the need to develop teaching methods and its supporting techniques to enhance the learning outcome process.
- SUST places all its students at the centre of its attention because it is conversant of the importance of maximizing their educational participation and interaction with it, beside giving them the chance to develop all their skills to enable them keep pace with time and preserve and protect their cultural heritage which represent the true citizenship.

#### **1-4-2 Postulates & Assumptions Drawn from the Good Practices of International Universities & Specialized Bodies:**

- There is a need to increase resources so as to meet the number of students and the expansion in programs, activities, services, colleges and technicalities...etc...
- Greater efforts should be made to bring the University's programs in line with the need of labor market, taking into consideration the expectations of students to receive support from the University, beside training and consultation services so as to plan and gain its assistance for their future careers.
- SUST is actively seeking to obtain donations, contributions and endowments, with giving due care to manage and invest them properly to be one of the University sustainable funding sources.
- SUST is escalating its quest to obtain academic and institutional accreditation in accordance with the International accreditation standards and is exerting efforts in pursuit of various quality certifications for quality assurance and to achieve constant

different areas of specialties.

- SUST is working toward preserving its originality, deep roots and heritage values, this occurs simultaneously with its efforts to keep up with the development in knowledge, technical, intellectual and managerial aspects.
- SUST is eager to foster its competitive position among other universities, locally, regionally and globally by increasing and improving its competitiveness and focusing on scientific research and innovation.
- SUST demonstrates a growing interest toward Academic Ranking of World Universities as well as rankings carried out by other higher educational institutions in order to occupy a better position in all world rankings.
- SUST is eager to take advantage of e-learning and distance learning to serve its students in accordance with both the attendance and distance learning systems. This is not limited to theoretical disciplines but it also covers scientific disciplines by making use of virtual labs and expert systems.
- SUST is committed to the better use of its resources and is taking advantage of the developed programs for resources management. Within this framework, it places emphasis on the good administration and preservation of its intellectual assets such as patents.
- The University is focusing on the importance of the applications of information and communication techniques and consolidation of the concept of the importance of benefiting from them by providing its cadre and students all the required skills to use them properly and effectively.
- SUST recognizes that its human resources are its most important asset, in this regard it adopts careful selection to chose top-quality staff, develops and retains them to form its human and intellectual capital.

## **1-5 SUST's Mission, Vision, Objectives & Values**

### **1-5-1 Mission:**

- 1- Sudan University of Science & Technology "SUST" is committed to the provision of educational programs in applied knowledge in the areas of basic science, engineering, human & natural resources and to keep pace with modern programs in these areas.
- 2- SUST undertakes to conduct significant number of genuine scientific applied research that lead to sustainable development and keep up with modern technology to shed light on distinguished reputed and internationally known scholars.
- 3- SUST is committed to community service by performing its duties toward scientific, technological and industrial advancement in public service in Sudan.

### **1-5-2 Vision:**

SUST will become a beacon of knowledge in applied science and an international center for scientific excellence with commitment to community service.

### **1-5-3 Objectives:**

- 1- Acquire and teach knowledge, develop its curricula, and disseminate knowledge among the nation.
- 2- Affirm and consolidate nation's identity through curricula and their application.
- 3- Qualify and award degrees to its students.
- 4- Conduct scientific and applied research related to the needs of the community.
- 5- Seek for Innovation in technology and utilize it to serve Sudanese community.
- 6- Achieve the requirements of the national development plans and training in all areas.

- 7- Give attention to thought, development and technological issues locally, regionally and globally.
- 8- Provide advice and consultation to productive enterprises on technical issues.
- 9- Contribute to the improvement of employees' performance across the country.
- 10- Follow evaluation and quality assurance in all areas across the University.

**1-5-4 Values:**

Credibility and transparency, improvement and perfection, justice & equity, freedom of expression, will and determination, initiative, creativity & innovation, originality.

## Chapter Two

### Executive Summary

Shaping the future vision of SUST is considered the logical start for the dependence on facts rather than hopes. Based on this, SUST's Strategic Plan includes the strategic objectives and goals it seeks to achieve during the time period of the plan. Below are the strategies it adopts to reach objectives and goals:

#### **2-1 Quality of Resources Strategy**

- 1- Disseminate the Mission, Vision and Objectives of SUST, with the strategy detailing annual plans covering all the University's objectives and follow up on their implementation.
- 2- Adopt the use of technology in all areas, support scientific dissemination and motivate researchers with giving due care to evaluation and quality assurance, intensify external relations, activate bilateral agreements and encourage students.
- 3- Complete the specifications of the organizational structure and the employees' job description, build competencies and periodically conduct employees' performance appraisals.
- 4- Use computerized systems to keep employees, administration and academics data, evaluate and keep them up to date by activating Documentation & Information Center.
- 5- Publication of rules and regulations governing the work, review legislative drafts and identify mechanisms to follow up its application with the provision of cadres necessary for it
- 6- Give attention to the provision of additional services to employees to achieve job satisfaction.

#### **2-2 Academic Strategy:**

- 1- Continuously review and update study programs, modernize methods and styles of teaching and provide items required for their implementation such as offices, halls, labs, workshops, just to name a few, according to different disciplines, and continue follow self evaluation to improve curriculum and colleges.

provide them with adequate opportunities to qualify and train them, review their conditions of service to achieve job satisfaction.

- 3- Review students' admission conditions periodically, expand admission opportunities, and provide all requirements needed for qualifying students in various areas, encourage them to participate in evaluation, extra-curricular activities and scientific weeks, and create the required environment for this purpose. Prepare systems for administering its alumni in order to link them with the University and support them morally and in kind.

### **2-3 Scientific Research Strategy:**

- 1- Support research projects, scientific publishing, authoring and translation.
- 2- Convene more conferences and scientific meetings, establish high class laboratories and pay more attention to inventions and patents and grant excellence awards.
- 3- Continue the publication of scientific research outcomes, establish a database for it, and develop a code of ethics for scientific research.

### **2-4 Strategy of Graduate Studies**

- 1- Provide an integrated building which includes a library and central laboratories.
- 2- Continue on developing and revising curriculum and expand PhD programs by courses and supplementary research. Provide national research projects through qualification for higher degrees, and develop relations between Deanships of Graduate Studies and Scientific Research.
- 3- Create relationships with local, regional and international bodies, and seek for distinguished professors in rare specialties.

### **2-5 Strategy of the Community Service:**

- 1- Establish a department for servicing the community to achieve its planned objectives.
- 2- Organize various programs and activities to serve the community.

### **2-6 Strategy of Financial Resources:**

- 1- Construct an integrated building for Finance Department and establish a division for Quality Control.
- 2- -Promote computerized systems for various accounting process, and use a developed methodology for the preparation of annual budget.
- 3- Contribute to the preparation of projects and programs for the development of financial resources and diversification of its sources.

### **2-7 Strategy of Infrastructures**

- 1- Construct classrooms and supply them with the required materials to meet the needs of the Strategic Plan.
- 2- Rehabilitate labs, workshops, studios, libraries and e-libraries.
- 3- Provide all services requirements needed for the creation of a positive environment in the University.
- 4- Provide and develop the outer environment of SUST's campuses.

### **2-8 Follow up & Implementation Mechanism**

- 1- Establish the Strategic Plan Unit under the management of the Vice-Chancellor to carry out execution functions, conduct follow up and periodic evaluation tasks.
- 2- College, Institutes and Centers Councils
- 3- Committees of Various Departments

## Chapter Three

### Strategy of Resources Quality Management

#### 3-1 Introduction:

The establishment of Sudan University of Science & Technology has passed through the following several phases in conjunction with the evolution of education in Sudan since the year 1902:

- Phase 1:** Khartoum Technical School and the School of Commerce in Khartoum, followed by the School of Radiology in the year 1932 , then the School of Fine Arts in 1946.
- Phase 2:** Khartoum Technical Institute (1950), Shambat Institute of Agriculture (1954), Music & Theatre Institute and the Higher Institute of Physical Education for Teachers (1969), the Institute of Veterinary Technicians & Animal Production (1972), the Institute of Technical Textile, the Institute of Wad al-Maqbul of Earth Science, the Institute of Technical Instructors, Survey Institute, the Institute of Civil Engineering & Architectural Technicians, the Institute of Electricity and Mechanical Engineering & Electricity Technicians (1972).
- Phase 3:** Khartoum Polytechnic Institute (1975). "The Institute of Technical Colleges" by the merger of the above mentioned institutions, except the Music & Theatre Institute, Physical Education Institute and the Institute of Radiology, the Khartoum Polytechnic Institute became the largest technical institution across Sudan.
- Phase 4:** As a result of the extensive development in education in Sudan, in the year 1990, Khartoum Polytechnic Institute has been transformed into what is known now as Sudan University of Science & Technology (SUST) comprising

Physical Education and the Institute of Radiology Sciences. During two decades, "SUST" has been expanded ten times in terms of study programs and number of students. Currently the University is composed of 22 colleges providing programs at the level of graduate studies (PhD, Masters Degree & Higher Diploma) besides offering studies at the level of bachelor degree and technical diploma including the provision of training programs and ongoing studies.

### **3-2 Mission:**

Commitment to the provision of the required human and administrative resources to achieve SUST's mission, vision and objectives in accordance with its approved values.

### **3-3 Objectives:**

- 1- Crafting a comprehensive approved strategy based on the mission and objectives of the University.
- 2- Developing and upgrading leadership and the administrative organization in the University to cope with the Total Quality Management trends, and working towards increasing and diversifying its resources using systems with the state-of-the art technologies.
- 3- Carrying out its duties according to law and make sure that its regulations are matching with this law, updating legislatives to keep abreast with the international and regional developments in education, and ensure that rules and regulations are available at all times.

### **3-4 Analyzing the Status quo**

#### **3-4-1 First Axis: Measurement of Mission, Vision & Objectives:**

##### **▼ Points of Strength:**

- 1- The University has a clear and specific mission that expresses its objectives.
- 2- Translate the mission of the University into specific objectives

University in formulating its mission, vision and objectives.

- 4- Integration of the University objectives with its mission and the purpose for which it has been established.
- 5- Ratification of the University's mission and objectives by the Supreme Council of the University.
- 6- Regularly review the University's mission and objectives for improvement and development purposes.
- 7- Build closer relationship between the University and similar institutions due to convergence between objectives.
- 8- Provide study and specialization opportunities and go deep in knowledge to explore more areas in this field.
- 9- Encourage scientific research, intellectual independence and develop teamwork spirit.
- 10- Give attention to religious values, national development, Arab and Islamic culture and disseminate its heritage.
- 11- Recognize advanced technology and build capacities to assimilate and classify them locally.
- 12- Acquisition of learning, teach it and develop curriculum.
- 13- Introduce new methods in learning system to boost the student's capacity for creativity and innovation, and link him with the various production sectors.
- 14- Coherence of the University's mission and its set out objectives with its ambitions to meet the community needs.
- 15- Develop modern technological innovations to serve the interest of the community.
- 16- Achieve the requirements of the national development plan and training.

**▼ Weakness Points:**

- 1- Lack of a comprehensive long term strategy covering all the University's objectives.

### **3-4-2 Second Axis: Measuring Leadership & Administrative Management:**

#### **✓ Points of Strength:**

- 1- The University Management has leadership characteristics that commensurate with total quality requirements.
- 2- The Management cares for creating a suitable environment for learning.
- 3- The Management is keen to support the development of scientific research.
- 4- It chooses its teaching and administrative workforce in accordance with approved standards.
- 5- Takes into consideration the views and proposals of the all parties in the University to improve performance.
- 6- The University Management assiduously seeks, as much as possible, to solve the academic and administrative problems through its various scientific committees.
- 7- It closely follows field operations and takes into account the views of those working in these areas.
- 8- The existence of an effective working relationship between the Management, Deans and Faculty.
- 9- The presence of bilateral agreements between the University and other institutions.
- 10- Availability of a system that enables students' representatives to participate with their views in the specialized councils.

#### **✓ Weakness Points:**

- 1- Poor utilization of technology in different areas in the University.
- 2- The increasing number of teaching hours and the weak incentives awarded to scientific publication impede scientific and technological development.

and Quality Assurance Committees.

- 4- Failure of Colleges Administrations to take advantage of bilateral agreements concluded between "SUST" and other institutions.
- 5- Scant interest among students in participating in the Specialized Academic Councils, self-assessment and quality assurance.
- 6- Lack of resources impedes the resolve of some academic and administrative problems thus resulting in the postponement of its resolution to a later date.

### **3-4-3 Third Axis: Measurement of the Quality of the University Organizational and Administrative Structure:**

#### **▼ Points of Strength:**

- 1- The existence of a clear and precise organizational structure approved by the Senate.
- 2- Conducting periodic review of the departments' organizational structures to ensure their consistency with "SUST" mission and vision.
- 3- Availability of organizational units and specialized committees to ensure performance quality as stipulated in the approved organizational structure.
- 4- The availability of mechanisms for follow-up and guidance to ensure compliance with the implementation of Quality Assurance policies and procedures.
- 5- The Organizational Structure is created in accordance with the principle of the delegation of authority.
- 6- Participation of the Department of Self-Evaluation and Quality Assurance in presenting and discussing quality issues in the University in the form of training courses for all staff levels in the University.

- 1- Poor training provided to cadres required for the organizational structure to be consistent with "SUST" mission and vision.
- 2- Non completion of the Job Description for most of the organizational structure jobs.

#### **3-4-4 Fourth Axis: Measurement of the Quality of Human Resources:**

##### **✓ Points of Strength:**

- 1- Selection of employees in accordance with competence standards.
- 2- The existence of a system for annual evaluation of performance.
- 3- The availability of a safe electronic system to retain employees' records and an archive to keep files.
- 4- Commitment to job requirements as identified by the University.

##### **✓ Weakness Points:**

- 1- Non- completion of the Job Description of the University staff.
- 2- The employees' annual performance evaluation does not reflect the actual level of performance.
- 3- Limited training opportunities and lack of a clear plan of training requirements.
- 4- Non-optimal use of the University employees' data and failure to update them periodically.

#### **3-4-5 Fifth Axis: Use of Information Technology (IT):**

##### **✓ Points of Strength:**

- 1- The presence of modern integrated systems.
- 2- The dependence of the University on a sound infrastructure which it is continuously developed. This infrastructure includes a network connecting all the University's communities in addition to the Internet.

access to the University's Intranet.

**✓ Weakness Points:**

- 1- Non-optimal utilization of the available systems.
- 2- Lack of a data repository to assist in the appropriate decision making.
- 3- Drop-out of IT qualified employees.
- 4- Non availability of a clear structure in the administrative structure for IT programmers and engineers.

**Sixth Axis: Legislations:**

**Points of Strength:**

- 1- Availability of an academic, administrative, financial and general rules and regulations covering all the business of the University.
- 2- Consistency of the University rules and regulations with most of its counterparts in Sudan.
- 3- Consistency of law and regulations with most relevant laws and regulations in the National Council for Higher Education.

**✓ Weakness Points:**

- 1- Limited dissemination of the University's rules and regulations in a manner that does not able it to raise awareness in this concern among targeted groups.
- 2- The small amount of printed copies of rules and regulations in order to make it available for all those involved as being binding on all of them.
- 3- Non-completion of legislative drafting in the correct manner with regard to some regulations.

the dissemination and application of rules and regulations in a full manner.

- 5- Issuance of decisions and publications in contradiction with some articles texts in rules and regulations due to the non availability of a mechanism to identify and compile them to remove any inconsistency.
- 6- Practical practice with non-adherence to rules and regulations and references by some departments creates problems for the University with regard to their proper implementation.
- 7- Non use of modern technological and communication methods in disseminating the University's legal culture.

### **3-4-7 Seventh Axis: Evaluation of Additional Benefits Provided to Workers:**

#### **✓ Points of Strength:**

- 1- Health Insurance and Takaful Medicare.
- 2- Takaful Life Insurance.
- 3- Financial hardship and building loans.
- 4- Education assistance provided to employees' dependents.
- 5- Takaful Social Funds for employees and Fellowship Fund.

#### **Weakness Points:**

- 1- Poor health services provided to employees.
- 2- Non availability of transport for the University staff.
- 3- Failure to establish a Fellowship Fund.
- 4- Stoppage of employees' charity funds.

- 1- Capacity building of Faculty, their assistants and give attention to improve services provided to them.
- 2- Developing skills of human resources (other than Faculty members) and developing a continuous training plan for them.
- 3- Selection of administrative leadership according to approved standards.
- 4- Affirmation of commitment to the profession ethical credibility.
- 5- Achieving job satisfaction among HR.
- 6- Improving the competitive status of the University locally.
- 7- Support an intensify links with relevant parties and boost the partnership relation with civil institutions locally and regionally.
- 8- Develop and apply mechanisms and requirements of periodical follow-up.

### **3-6 Strategic Plans for the Quality Management of Resources**

#### **First Axis: Assessment of Mission, Vision and Objectives:**

- 1- Continue publishing the University's Mission, Vision and Objectives.
- 2- Implementation of a full strategy for annual plans to cover all the University's objectives.
- 3- Follow up on the implementation of the drafted strategies.

#### **Second Axis: Assessment of Leadership and Administrative Organization:**

aspects in the University.

- 2- Prepare methods to support scientific publication and motivate researchers.
- 3- Activate departments and committees of self-evaluation and quality assurance.
- 4- Promote Foreign Relations Department to activate bilateral agreements concluded between the University and local, regional and international parties.
- 5- Encourage and activate the participation of students in academic areas, self-evaluation and quality assurance.

### **Third Axis: Assessment of the Quality of the Organizational and Administrative Staffing Structure in the University**

- 1- Prepare programs and training courses for the cadres in the organizational structure.
- 2- Complete the specifications of the components of the organizational structure.

### **Fourth Axis: Assessment of the Quality of Human Resources:**

- 1- Completion of the job description for all the University staff.
- 2- Develop periodic employees' performance evaluation systems with commitment to apply all measures therein.
- 3- Encourage the use of employees' data system, and periodically evaluate and update them.
- 4- Activate Documentation & Information Center.
- 5- Develop and implement plans to train employees, and evaluate their performance periodically.

### **Fifth Axis: Assessment of the Use of Information Technology**

- 1- Getting acquainted with the available systems, provide training on their use with commitment to apply them.
- 2- Develop and update information in the University's data repository and in Higher Education Network.
- 3- Prepare career structure for IT programmers and engineers.

### **Sixth Axis: Assessment of Legislations**

- 1- Disseminate rules and regulations using different methods, including new technological ones.
- 2- Review legislative drafting and complete its cycle until signature stage.
- 3- Identify a mechanism to follow up the application and activation of rules and regulations.
- 4- Upgrade Legal Department and support it with qualified professionals along with work aids that commensurate with the load of work.

### **Seventh Axis: Assessment of the Additional Benefits Provided to Staff by the University:**

- 1- Provision of health services at all locations in the University and promote the existing services.
- 2- Restore the system used for the transportation of the University's staff.
- 3- Complete the procedures of establishing the Employees Fellowship Fund.
- 4- Restore employees' Charity Funds.

No.	Description	2012	2013	2014	2015	2016
1	<p><b>Mission, Vision &amp; Objectives</b></p> <p>1- Dissemination of the University's Mission, Vision &amp; Objectives</p> <p>1- Draft a comprehensive strategy to achieve all the University's objectives and follow up on its implementation..</p>					
2	<p><b>Leadership &amp; Administrative Organization:</b></p> <p>1- Encourage and support use of technology in all administrative aspects in the University.</p> <p>2- Prepare methods to support scientific publication and motivate publishers.</p> <p>3- Activate departments and committees of self-evaluation and quality assurance.</p> <p>4- Promote Foreign Relations.</p> <p>5- Encourage and activate the participation of students in academic areas, self-evaluation and quality assurance.</p>					
3	<p><b>Quality of Organizational and Career Structure:</b></p> <p>1- Prepare programs and training courses for the cadres in the organizational structure.</p> <p>2- Completion of all jobs description in the organizational structure.</p>					
4	<p><b>Quality of Human Resources:</b></p> <p>1- Develop periodic</p>					

	<p>evaluation systems and commitment to the implementation of all measures therein.</p> <ol style="list-style-type: none"> <li>1- Encourage the use of employees' data system, and periodically evaluate and update them.</li> <li>2- Activate Documentation &amp; Information Center.</li> <li>3- Develop and implement plans to train employees, and evaluate them periodically.</li> </ol>				
<b>5</b>	<p><b>Use of Information Technology:</b></p> <ol style="list-style-type: none"> <li>1- Get acquainted with the available systems, provide training on their use with commitment to apply them.</li> <li>2- Develop and update information in the University's data repository and in Higher Education Network.</li> <li>3- Prepare career structure for IT programmers and engineers.</li> </ol>				
<b>6</b>	<p><b>Legislations:</b></p> <ol style="list-style-type: none"> <li>1- Disseminate rules and regulations using different methods, including new technological ones.</li> <li>2- Review legislative drafting and complete its cycle until signature stage.</li> <li>3- Develop a mechanism to follow up application and activation of rules and regulations.</li> <li>4- Upgrade Legal Department and support it with qualified staff</li> </ol>				

	commensurate with the load of work.				
<b>7</b>	<p><b>Additional Benefits Provided to Workers:</b></p> <p>1- Provision of health services at all locations in the University and promote the existing services.</p> <p>2- Restore the system used for the transportation of the University employees.</p> <p>3- Complete the procedures of establishing the Employees Fellowship Fund.</p> <p>4- Restore employees' Charity Funds.</p>				

**Chapter Four**

## **4-1 Introduction**

The academic Affairs are considered the lifeblood of the educational process in the University as it deals with education inputs such as admittance and its relevant polices in addition to education and learning processes through educational curriculum and their development, updating, accurate application and evaluation, beside the due attention given to educational affairs relating to Faculty staff and their assistants in addition to training, qualifying and promoting them. It also handles Educational inputs process such as students' results, graduates certificates including certification and documentation. All the foregoing make the proper and accurate academic strategic planning a pressing need.

## **4-2 Academic Mission of the University**

Sudan University of Science & Technology is committed to provide distinct and state-of-the art academic programs in applied knowledge in areas of basic sciences, engineering, humanities, medical and natural resources.

## **4-3 The General Framework of the University's Academic Strategy:**

The academic strategic axes include the following:

- 1- Study programs
- 2- Students' Affairs & results
- 3- Faculty staff, assistants, training and rehabilitation.
- 4- Libraries and information centers.
- 5- Evaluation

## **4-1 Analysis of the Present Academic Status in the University**

Below is an analysis of the present academic status in the University containing positive and negative indicators for all the above axes:

mentioned axes could be identified as follows:

### ▼ Points of Strength

- 1- Conformity of the mission of most programs, their objectives and educational outputs with the University's objectives and mission.
- 2- Commitment to work in accordance with the local and international standards and conformity of credit hours and outputs with these standards in regard to most programs.
- 3- The presence of certain and approved procedures for the preparation and development of the study programs and the availability of a mechanism for revision and development and a mechanism for the participation of stakeholders in its preparation and evaluation. Integration of study system by credit hours and computerization of the academic systems.
- 4- The availability of various types of education that witness substantial growth in demand for them.
- 5- The presence of a department for self-evaluation and quality assurance that have approved structures detailed in an approved manual and the existence of approved methods for self evaluation for materials and programs in accordance with benchmarking outputs and mechanisms for review and scrutiny in addition to the presence of a mechanism to analyze evaluation results.
- 6- The availability of systems to measure the students' level of education and the application of these systems in an acceptable way with providing opportunity for revision.
- 7- Evaluation of the University's performance by the Quality Assurance and Accreditation Commission in Arab Universities and the United Nations Development Program "UNDP", as it has gained good ratings beside the steady progress of the University in the African, Arab and global rankings.
- 8- Application of quality evaluation for programs upon the preparation of strategies and the implementation of the evaluation of the educational environment, the subject and the way of teaching it partially by the student, besides the implementation of the evaluation of programs partially by the external examiner and the

deans, heads of departments and by faculty.

- 9- The presence of acceptable systems for appointment, promotion, qualification, motivation, performance development and capacity-building of Faculty members besides the provision of systems for training and rehabilitating teaching assistants by the University.
- 10- The availability of modern methods for learning and communication of knowledge and centers for contribution to community service.
- 11- The availability of the qualifications and the professional expertise required for most areas of specialties with the existence of distinguished experiences in certain areas beside the support provided by the University for retaining qualified staff and hiring highly qualified professionals under contract from its own resources and the availability of a objective and agreed criteria for the evaluation of Faculty staff performance.
- 12- Diversify admission systems and adopt specific and standard conditions for them and make equal opportunities available for all students. Also the existence of specific and agreed systems to evaluate students' performance and a mechanism to implement those systems and use of continuous evaluation. Inclusion of students in the membership of councils and committees and in the evaluation process.
- 13- Establish a Unit to care for Alumni affairs and serve as a database for them. Provide Alumni with a number of valuable awards and positive results to improve their employability.
- 14- Make Internet and intranet access available and use them in an efficient manner, and develop directives and organizational rules to govern borrowing of books by Faculty and students.

**✓ Weakness Points:**

- 1- Restrictions on applied credit hours system and failure to modernize and computerize systems, including variation in credit hours for some programs and non-conformity of some of them with the approved standards, beside lack of attention given to the preparation of details relating to some curricula as required.

preparation and evaluation of study programs and lack of scientific studies that determine the market's need.

- 3- Larger number of students enrolled in some programs and restrictions imposed on switching from the current field of study to a different one, and non-conformity of evaluation systems prepared for the formal style with other two styles.
- 4- Adoption of an admission system according to Sudan Certificate Examinations irrespective of the student's achievement in subjects of specialization, and applying for admission according to available opportunities and not according to student's wish, in addition to restrictions resulting from centralization of admission in universities.
- 5- Variations in burdens and responsibilities between academic and administrative units and in the description of the administrative units, beside failure of the University's rules and regulations to keep up with the development in academic administration.
- 6- Extra hours system and poor incentives and allowances provided to Faculty and lack of evaluation of the efficiency of extra hours system periodically and the impact of the extra teaching burden on the performance efficiency of the Faculty member.
- 7- Limited opportunities for qualification abroad and problems related to support qualification internally, lack of job satisfaction due to accumulation of entitlements (even few) owed to Faculty by the government beside lack of methods and clear plans to evaluate the job cadre and to train and qualify employees in libraries and technicians due to lack of financial resources allocated to habilitation and training.
- 8- Insufficient capabilities to use modern educational methods and communicate knowledge beside the non-optimal utilization of the available methods and service centers and tight study schedules of students which do not allow them the opportunity for self learning in addition to poor academic guidance.
- 9- Non approval of certain jobs for Teaching Assistants by the Government, low number of technicians jobs, and lack of a clear career ladder for them, beside an unclear policy to retain them.

Arabic references which are not updated and some of them lack quality, non use of English references and the inefficiency of the qualified human cadres to administer libraries, in addition to the few number of modern methods and systems, beside the weak relationships with regional and international publishing houses, also Faculty staff and students do not adhere to Library rules and regulations.

- 11- Lack of knowledge about formulating the outcomes for subjects and programs, incompleteness of mapping in the direct evaluation of the study programs and incompleteness of the application of the computerized self evaluation, beside lack of a specific budget for this purpose. The slow implementation in improving the quality and standard of the education plan, and failure to verify and review the information posted on the University Web Page.
- 12- Failure to activate a mechanism for the evaluation of alumni and the few number of activities linking them up with the University, beside the weak relationship with employers to take advantage of their opinions in order to improve performance and develop programs, and limiting the performance evaluation conducted by external examiners to exams and annual results and non application of peers evaluation.
- 13- Students' violence and weak extracurricular activities.

#### **4-5 Strategic Objectives and Goals:**

- 1- Enhance and improve study programs to keep pace with the modern standards and provide the necessary potentials to improve them.
- 2- Identify number of students to correspond with the available capacities and commensurate with the approved standards of the number of Faculty staff, and in accordance with the opportunities available with regard to admittance at expense and based on achievement and areas of specialties.
- 3- Improve the financial, educational and professional conditions of Faculty staff, their assistants and technicians and provide favorable terms to retain them and continue to improve the University's environment.

with attention to be given to train Faculty on evaluation procedures to improve academic performance.

5- Attention should be given to the establishment of a central library and enrich the stock of Arabic and English references in it as well as in other libraries, train librarians to encourage students' interest in self-learning.

6- Activate the mechanism of the evaluation of programs by alumni and increase their participation in the University's activities and intensify its relations with them.

7- Operationalize students' activities and encourage them to take part in self-evaluation processes.

#### **4-6 Strategic Plans**

1- Complete review and programs study, develop and link them with the approved standard outputs.

2- Increase the number of Faculty and develop new study programs so that Faculty-to-students ratio becomes 1:20 for each specialty.

3- Review admission prerequisites and increase opportunities of internal transfer after the first year.

4- Prepare brochures and conduct introductory workshops about the University and its various disciplines.

5- Prepare plans and make the necessary funding available for the present lecturers to obtain PhD degree during the coming five (5) years.

6- Review conditions of service for Faculty, their assistants and technicians, and take necessary action for them to receive all their arrears and entitlements.

7- Construct new residential complexes and continue payment of building loans, increase amount of housing allowance and financial distress.

8- Provide adequate opportunities to qualify and train Faculty and their assistants through full and partial scholarships offered by the government, and those granted by brotherly and friendly countries.

- 9- Review employed teaching methods with emphasis on facilitative means of self-education and review the burden of teaching put on Faculty.
- 10- Continue following the approved and planned self-evaluation systems for curriculum, programs and colleges.
- 11- Establish the Central Library and provide it with new references, books and periodicals and link it with libraries of other colleges.
- 12- Prepare a career structure for librarians which shall include their duties, qualifying, training and promoting them and assign a qualified staffing cadre to work therein.
- 13- Prepare a new regulation to administer Alumni and establish their relationship with the University, receive their in kind and moral support as well as their participation in the evaluation and development of programs.
- 14- Review basic rules of scientific societies and identify the responsibilities and rewards for supervisors.
- 15- Innovate methods and mechanisms to ensure the participation of students in Scientific Weeks events.
- 16- Specify a suitable time within the study schedule for students' extracurricular activities.
- 17- Create an appropriate infrastructure for summer extracurricular activities.

#### **4-7 Timeframe for the implementation of the Strategic Plan**

<b>No.</b>	<b>Activity</b>	<b>2102</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>1</b>	Completion of review and development of study programs and linking them with standards outputs.					
<b>2</b>	Increase the number of Faculty staff and develop new study					

	students ratio becomes 1:20 for each specialty.					
<b>3</b>	Review admission prerequisites and increase opportunities of internal transfer after the first year.					
<b>4</b>	Prepare brochures and conduct introductory workshops about the University and its various disciplines.					
<b>5</b>	Prepare plans and make the necessary funding available for the present lecturers to obtain PhD degree during the coming five (5) years.					
<b>6</b>	Review conditions of the service of Faculty, their assistants and technicians, and take necessary action for them to receive all their arrears and entitlements.					
<b>7</b>	Construct new residential complexes and continue payment of building loans and increase the amount of housing allowance.					
<b>8</b>	Provide adequate opportunities to qualify and train Faculty staff and their assistants through full and partial scholarships offered by the government, and those granted by brotherly and friendly countries.					
<b>9</b>	Review the burden of teaching put on Faculty staff.					
<b>10</b>	Continue on following up the approved and planned self-evaluation systems for curriculums, programs and colleges.					
<b>11</b>	Establish a Central Library and provide it with new references, books and periodicals and link it with the libraries in other colleges.					

	librarians which shall include their duties, qualifying, training and promoting them and assign a qualified staffing cadre to work therein.					
<b>13</b>	Prepare a basic regulation to administer Alumni and establish their relationship with the University, receive their in kind and moral support as well as their participation in the evaluation and development of the programs.					

#### **4-8 Follow Up, Implementation & Evaluation System of the Strategic Plan**

Ensuring the proper implementation and continuous development of the plan requires a formation of a higher committee to follow up and evaluate its implementation. The committee shall be chaired by the Secretary of Scientific Affairs and the membership of the higher academic and administrative leaderships, in addition to members of the Strategic Plan Preparation Committee. The main role of the higher committee shall be focused on the periodical and bi-annual review for the plan's outputs and the continuous follow up to ensure the good implementation of the strategic targets and objectives and make the required amendments in a timely manner, beside providing the adequate funding from internal and external resources to ensure the accurate implementation of the plan.

The committee shall hold monthly periodic meetings to follow up on the implementation and evaluation processes according to the established standards, compare the actual achievement with the planned activities, take remedial measures and make appropriate recommendations to the Vice-Chancellor directly and prepare the bi-annual reports to be submitted to the higher committee.

Scientific Affairs to be named "**Strategic Planning and Follow Up Unit**" to include in its membership members of main units responsible for the implementation of the plan.

**The functions of employees working in this unit shall focus on the following specialties:**

- 1- Strategic and Five Year Plans to be broken down into annual plans.
- 2- An annual work plan to be prepared by selecting activities and procedures required to be implemented every year.
- 3- The Annual Work Plan shall be divided into bi-annual work plans to facilitate the preparation process of the bi-annual performance and follow up reports.
- 4- Follow-up on the implementation of activities assigned to parties outside the University or to external experts during the implementation process to ensure the effectiveness and efficiency of the performance outputs.
- 5- It is proposed that there be a follow up for the provision of the required human resources as well as the provision of the cash flows required for every activity in accordance with the time frame of the program's plan.

## Chapter Five

### Scientific Research Strategy

#### 5-1 Introduction:

This plan has been prepared on the basis of the strategic plan of the University, its mission, vision, objectives and values and in an effort to work within one system framework with regard to all activities carried out in the University, keeping in sight its slogan: "**Perfection-Quality-Excellence**".

#### 5-1-1 Historical Background:

Since its inception, Sudan University of Science and Technology has paid attention to scientific research. In 1996, it has established the Center of Scientific Research and External Relations to coordinate scientific research process in the University and link it with its counterparts and other internal and external research centers. In 2006, the Center has been upgraded from the Center of Scientific Research to the Council of Scientific Research, then to the Deanship of Scientific Research in 2010.

Based on the exigencies of work, the College of Graduate Studies and the Deanship of Scientific Affairs have been integrated in one college under the name "College of Graduate Studies and Scientific Research."

Thereafter, in 2012, in view of the growing attention paid to scientific research, the University considered the establishment of an independent Deanship for Scientific Research to further improve and

publish its outcomes, as well as to strengthen the capacities of Faculty and students and link scientific research with the government's approved strategic plan.

The Deanship of Scientific Research started to develop an administrative structure composed of the Dean and the Deputy Dean of Scientific Research, the Department of Research Projects, Publication, Information and Patents Departments, in addition to Planning, Follow-Up and Statistics Department and Support Units. The Deanship has also a council for scientific research and scientific committees.

The Deanship is discharging its duties in accordance with a mission and vision that enable it to conduct high quality research with due care given to scientific research quality and looks to future prospects to provide unique applied and attractive projects and research to be published in journals of wide circulation, beside issuing scientific journals documented globally, and qualifying and preparing highly motivated researchers to perfect scientific research.

#### **5-1-2 General Academic Profile:**

The Deanship of Scientific Research is working toward training Faculty on the way of preparing research and projects and the methods of applying for funding, in addition to providing them with style guides for scientific papers writing and publication in internal and external journals as well as encouraging them to innovate and make patents for new inventions and follow up sabbatical leaves for research.

### **5-1-3 Future Perceptions**

In view of the foregoing, the future vision of the Deanship of Scientific Affairs requires it to be able to implement the University's strategic scientific research prepared by its Management in the Colleges' Research Councils, Institutes, Centers and various Research Units.

### **5-2 Mission:**

Promote scientific research and build research capacities of Faculty members, researchers and students and keep pace with new technologies through the provision of an advanced research environment to the interest of the community.

### **5-3 Objectives:**

- 1- Researchers Capacity Building
- 2- Promote and develop scientific research in the University.
- 3- Link scientific research with the University's objectives and the national development plans.
- 4- Transference and adaptation of new technology.
- 5- Provision of financial support for research obtained from internal and external granting and funding parties.
- 6- Attract and entice distinguished researchers.
- 7- Encourage joint research between different disciplines in the University and authorized bodies internally and externally.

### **5-4 Analysis of Current Status:**

- Conducting scientific research and creative activities is one of the core functions of Sudan University of Science & Technology. However, still there is a marked decrease in applied research activities and publication in influential journals of wide circulation rates.

with "SUST" and its researchers to keep up with today's challenges and achieve many of the basic essentials.

- Faculty members have the adequate expertise in several disciplines as well as the capacity to apply a wide variety of research studies and consultations and the provision of advice and support in various scientific fields (Humanities, Science and Engineering.)

#### **✓ Points of Strength:**

- Researchers at the University have many original applied research associated with the needs of the community and development priorities.
- Many Faculty members and researchers have the spirit of innovation, discover ability, creativity and patents acquisition.
- The existence of specialized scientific journals to contribute to scientific publication, and link promotions to scientific research and publication in highly influential international journals.
- Researchers have the full capacity for publication in internal and external journals.
- The University has many specialized research centers to examine technology methods, test new thoughts and inventions in many areas.
- Overseeing scientific innovation, discovery, creativity and promote the acquisition of patents by the Deanship of Scientific Research.

#### **✓ Weakness Points:**

- Insufficient financial resources allocated to support research.
- Lack of financial support provided by the University for publication in highly influential international journals.
- Absence of impact factor in the University's journals and non-inclusion of these journals in the International index.

participate in conferences, regional and international workshops.

- Lack of time to conduct research activities due to the present teaching burden.
- Absence of research activities that have not been yet undertaken, or lack of follow up and monitoring.
- Lack or poor linkage and cooperation between research centers in the University which leads to inadequate interaction between these centers and Faculty staff.

### **5-5 Strategic Objectives of Scientific Research:**

- Upgrade the Organizational Structure of the Deanship to be consistent with the strategic details.
- Review regulations governing the business of the Deanship and promote them.
- Allocate budgets for the implementation of the plan in accordance with the set time limit.
- Employ the specialized staff required for the implementation of the strategy.
- Strengthen communication channels between Research and Executive Institutions.
- Promote scientific research in quantity and quality.

### **5-6 Strategic Objectives:**

#### **General Objective**

Optimize scientific research through the creation of the infrastructure which includes supplies, facilities and provide the appropriate financial to encourage Faculty to conduct research projects. Implement applied research through partnership with the private sector.

### **First Objective:**

To maintain the distinctive quality of projects and research conducted in the University, and continue its efforts to become a Research University by steering and activating scientific research and provide it with the required finance support to ensure excellence.

### **Procedures Required to Achieve the Objective**

#### **Second Objective:**

Intensify cooperation with prominent research centers across the region and globally.

#### **Third Objective:**

Seek to complete the organizational structure and implement the buildings and the Deanship's infrastructure.

### **5-7 Scientific Research Priorities**

- 1- Support research project
- 2- Expansion in the area of publishing of scientific papers and research
- 3- Encourage authoring (textbooks and references).
- 4- Encourage translation (textbooks and references).
- 5- Hold scientific conferences, seminars and meetings.
- 6- Establish outstanding laboratories for scientific research.
- 7- Encourage inventions and patents.
- 8- Award scientific prizes for excellent research and distinguished researcher in Pure and Applied Science Colleges.
- 9- Award scientific prizes for excellent research and distinguished researcher in Humanitarian and Social Studies Colleges.
- 10- Publish scientific research outputs.
- 11- Develop a charter for scientific research ethics.
- 12- Create a database for scientific research.
- 13- Complete the Deanship's structure, make the infrastructure required for structuring available and prepare an integrated building for the Deanship.
- 14- Follow up, Evaluation and Training.

<b>Activity</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Support research project</b>					
<b>Publishing of scientific research.</b>					
<b>Authoring (textbooks and reference books).</b>					
<b>Translation (textbooks and references books).</b>					
<b>scientific conferences, seminars Scientific meetings.</b>					
<b>Establish outstanding laboratories for Scientific Research</b>					
<b>Inventions and patents.</b>					
<b>Scientific prizes for excellent research and distinguished researcher in Pure and Applied Science Colleges.</b>					
<b>Scientific prizes for excellent research and distinguished researcher in Humanitarian and Social Studies Colleges.</b>					
<b>Publish scientific research outputs.</b>					
<b>Create a database for scientific research.</b>					
<b>Develop a charter of scientific research ethics</b>					

## 5-9 Implementation Schedule of the Strategic Plan 2012-2016

Activity	2012	2013	2014	2015	2016
<b>Support research project</b>					
<b>Publishing of scientific research.</b>					
<b>Authoring (textbooks and references).</b>					
<b>Translation (textbooks and references).</b>					
<b>Scientific conferences, Seminars Meetings.</b>					
<b>Establish outstanding laboratories for Scientific Research</b>					
<b>Inventions and patents.</b>					
<b>Scientific prizes for excellent research and distinguished researcher in Pure and Applied Science Colleges.</b>					
<b>Scientific prizes for excellent research and distinguished researcher in Humanitarian and Social Studies Colleges.</b>					
<b>Publish scientific research outputs.</b>					
<b>Create a database for scientific research.</b>					
<b>Completion of building to accommodate the current Deanship</b>					
<b>Develop a concept for the integrated building of the Deanship of Scientific Research and obtain approval.</b>					
<b>Prepare structuring, Rules and Regulations</b>					
<b>Continue the application of structuring and assimilation of the appropriate frameworks</b>					

<b>committees</b>					
<b>Follow up on the work of the committees</b>					
<b>Evaluate performance of the committees</b>					
<b>Training and habilitation</b>					
<b>Develop a charter of scientific research ethics</b>					

### **5-10 Mechanism of General Implementation**

The Deanship of Scientific Research jointly with all Colleges in the University will follow up on the implementation of the strategic plan through the following:

- Periodic meetings of the Deanship Council (Four times annually).
- Periodic meetings convened at the end of each month bringing together all departments heads.
- Periodic meetings of editorial boards of journals held at the beginning of each month.
- Periodic monthly meetings of the journals coordination council.
- Periodic biannual meetings of all the Deanship staff.
- Continuous meetings between the Dean, Deputy Dean and the Secretary of the Deanship.
- Continuous meetings between the Dean and researchers.
- Continuous meetings between the Dean and Head of the Accounting Unit.

## Chapter Six

### Strategy of Graduate Studies

#### 6-1 Introduction

Since its foundation in 1990, Sudan University of Science & Technology "SUST" has demonstrated active interest toward graduate studies. To achieve the required target in this respect, it has established the College of Graduate Studies to take part in qualifying holders of Bachelors degrees to obtain higher degrees (Diploma, Masters and PhD degrees). Today, there are more than seventy (70) programs in the College which represent a wide spectrum of disciplines in humanities and applied sciences. These programs have been designed to be implemented by course and research, besides; the College accepts students to obtain Master's and Doctoral degrees by research in various disciplines. Doctoral program by course and research represents an advanced leap in the field of graduate studies, noting that recently some programs have been implemented externally. It is worth noting that there were rules and regulations for governing this continuous move of development, as the Senate has issued in 1992 the first regulations for graduate studies, later amended in the years 1997, 2004, 2007, and last amendment made to it was in 2012 to keep in line with the phase requirements which has seen a horizontal development by adding new doctoral programs by courses, and vertical developments by adding new outputs to the program in its new version and also to be in harmony with the practices yielded from the comments on the previous regulations and the previous decisions of the Council of the College of Graduate Studies before and after the restructuring process so as to avoid any gaps in the previous rules and regulations.

Now, after the elapse of five (5) years, the College of Graduate Studies complements its 2007-2011 strategic plans which were replete with great accomplishments. However, the current 2011-2016 plan is based on a new vision during which the University and the College have witnessed considerable evolution.

#### **6-2 Mission:**

Commitment to fostering, supporting and promoting Faculty, learners', and the environment of graduate studies, and work towards providing high quality academic programs and enhance research efforts that aim to more innovation and invention.

#### **6-3 Objectives:**

- 1- Create high quality study programs for adoption, lead continuous development methods and strengthen source of education and communication skills.
- 2- Strengthening and supporting graduate study programs to contribute to the activation and promotion of scientific research in the University.
- 3- Steer studies and graduates studies research and link them with the issues of economic development.

#### **6-4 Analysis of Current Status**

##### **▼ Points of Strength:**

- 1- Provide diverse and range of programs to contribute to satisfying the needs of the society.
- 2- Compatibility, Coherence and Teamwork Spirit.

- 3- Encourage College of Graduate Studies to develop new programs in different disciplines.
- 4- Commitment to annually print the dissertations abstracts manual in both Arabic and English languages.
- 5- Provide graduate study programs by course and for PhD degree by courses and supplementary research in some rare specialties.
- 6- Use of registration computerized systems which have resulted in the provision of an abundance of statistical information that helped in steering the policy of the College.
- 7- The presence of a growing interest, internally and externally, to join the College.
- 8- The availability of many distinguished and unique programs.

**✓ Weakness Points:**

- 1- Slow development and revision of some graduate programs in the Colleges including the weak infrastructure therein, such as laboratories, auditoriums and libraries.
- 2- Inability of the University to build and rehabilitate the colleges' laboratories required for the research provided to students, in particular those pursuing doctoral degree.
- 3- The high cost for bringing foreign expertise to develop graduate studies and increase expertise in scientific research.
- 4- Weak direct linkages of international cooperation with counterpart colleges regionally and globally.
- 5- The building of graduate studies is neither large enough compared to the volume of work nor suitable to accommodate the number of

students, including lack of a library and a lounge for service recipients.

### **6-5 Strategic Objectives and Targets:**

- 1- Develop, revise study programs and foster infrastructures.
- 2- Work on triggering external relations and enhance cooperation with counterpart colleges locally, regionally and globally.
- 3- Attract foreign expertise to participate in enriching graduate study programs and applied scientific research.

### **6-6 Strategic Plans**

- 1- Find a suitable building for the College of Graduate Studies.
- 2- Continue work on developing and revising the present study programs in order to keep pace with the most recent international scientific advances in the relevant area of specialty and add new and modern programs that keep up with the disciplines and trends of the University.
- 3- Solicit the assistance of distinguished professors in rare disciplines who are well recognized at the international level.
- 4- Provide national research projects and implement them to qualify for higher degrees.
- 5- Create external relations to allow exchange of information, conduct research and provide them with funds.
- 6- Construct a library for the College.
- 7- Establish local and regional relations for graduate studies.

- 8- Upgrade the colleges' laboratories as well as the central research laboratory to commensurate with the requirements of the research conducted by graduate students.
- 9- Expansion of the programs of doctoral by courses and supplementary research.
- 10- Develop relationship between the College of Graduate Studies and the Deanship of Scientific Research.

### 6-7 Timeframe for the 2012-2016 Strategic Plan

No.	Description	2012	2013	2014	2015	2016
1-	Building of the College of Graduate Studies					
2-	Library of the College of Graduate Studies					
3-	Video Room					
4-	Open centers for the University					
5-	Various Study Systems					
6-	Colleges' Laboratories					
7-	Central Research Laboratory					
8-	Expansion in the Program of Doctoral by Courses					
9-	Improve and Revise Programs					
10-	Look for Distinguished Professors					
11-	Provide national research projects					

## **Chapter Seven**

### **Outreach Strategy**

#### **7-1 Introduction:**

One of the most important activities undertaken by the University is outreach to local population. Through this program, it efficiently contributes to achieving growth and advancing development which is represented in the development of social concepts to bring about more participation of the community and in the dissemination of knowledge, technical and applied concepts to achieve the required goals.

The concept of community service means to provide services for the benefit of human and the surrounding environment and to utilize the potentials, expertise and resources scattered in the society for its interest, in addition to innovation and implementation of work programs in which all society segments engage in a service that would inevitably bring tangible benefits, not only to the individual, but also to the society at large.

Community outreach is the third pillar in the Mission of the University which includes undergraduate and graduate education, scientific research and community service, and just as there are diversity in the area of teaching and scientific research, also community service is characterized by diversity in terms of themes, size and duration of activity and beneficiaries.

The contribution of the University to community service is stretching along the march of its history and varies according to the diversity of its specialized colleges, centers and institutes, and its effect has increased with the development of the University.

Needless to say that the nature of the diversity of “SUST’s” disciplines and its association with the activities of the community life and its sources of income lend particular significance to its role in servicing the society.

### **7-2 Mission:**

Effective contribution to the development of the society by providing of services through which harnessing knowledge and technologies that contribute to its service and development could be achieved.

### **7-3 Outreach Objectives:**

- 1- Link the University with the community by disseminating knowledge and technologies and conducting research, studies and other activities that contribute to the service of the society and its development.
- 2- Promote awareness among communities on social important issues.
- 3- Engage students in outreach activities starting with the University’s community so as to stimulate the spirits of voluntary work, teamwork and interest in social issues among them.

### **7-4 Strategic Trends for Short Term Community Service:**

- 1- Optimal use of the University’s resources to meet the needs of the society and its challenges.
- 2- Build partnerships with local and regional bodies.

### **7-5 Strategic Challenges in Community Service:**

- 1- Integrate Community Service mission with Training and Research.
- 2- Combat bureaucracy which hampers constructive cooperation activities.
- 3- Assist researchers and learners to put the findings of their research in the form of commodities and public services through publication, policies and adoption programs.
- 4- Meet the emerging needs of the society and the capacity to design community services that are consistent with the updates.
- 5- Sustainability and development of financial resources dedicated to community service.

### **7-6 Analysis of the Current Status of Community Service in the University:**

#### **7-6-1 Areas of Community Service Undertaken by the University:**

The services provided to community by the University cover the following sixteen (16) areas:

- Training courses
- Studies and advisory services
- Workshops
- Conferences
- Exhibits
- Symposiums
- Seminars
- Public lectures
- Festivals & theatrical activities

- Caravans, campaigns and clinics
- Media programs and documentary works
- Special days
- Research made to solve community problems.
- Resolve conflicts, peace-building and sustain peace.

### 7-6-2 Quantitative Indicators of the University's Contribution to Community Services during the Years 2008 to 2010

Activity	No.
Training courses	44
Studies and advisory services	5
Workshops	10
Conferences	3
Exhibits	6
Symposiums	5
Seminars	3
Public lectures	10
Festivals and Theatrical Activities	5
Incubators	2
Caravans, Campaigns & Clinics	10
Media programs and documentary works	10
Service public projects	4
Special days	3
Targeted research	There are targeted research such fighting poda weeds have been conducted and the integrated management of mesquite. However, there is insufficient information on the rest of other projects.
resolve conflicts, peace-building and sustain peace	4

**✓ Points of Strength:**

- Availability of specialized centers and institutes to serve the community.
- The existence of an Information Department to enhance relationship with the community.
- Research implemented by the University to solve community problems.
- The University provides advisory services for the development of the country.
- It has entered into agreements with counterpart institutions and worked hard to promote its relationship with them and activate those agreements.
- Actively participates in graduates' employment programs and endows them with self-employment skills.
- The University provides numerous and varied training programs in all its colleges for capacity-building.

**✓ Weakness Points:**

- Lack of a central plan for community service and the absence of a planning and a comprehensive vision with regard to what is necessary for the University to provide and what could be achieved by colleges, institutes and centers.
- There is no criterion to evaluate community satisfaction with regard to services provided by the University.
- There is no an evaluation process to measure the relationship between the University and the community.

- Lack of a Central Department for Community Service to plan, monitor and administer every activity such as in teaching and scientific research areas.
- Low budget of community service compared to its significant role as being one of the central and fundamental hubs of the university.

## **7-7 Strategic Objectives & Goals**

- 1- Establish close and various relations with the different segments of the community.
- 2- Build partnerships and identify priorities that serve the mutual benefit between the University and its stakeholders partners.
- 3- Cooperate with agricultural, industrial, commercial, cultural sectors and professional groups in strategic activities which serve the development plans and programs.
- 4- Define the activities, objectives, aspirations and commitments of the University toward the community.
- 5- Launch initiatives, provide services and find solutions to challenges facing the community.
- 6- Enhance the role of the University by the provision of specialized services to the community.

## **7-8 Proposed Activities for the Plan**

### **7-8-1 Implementation of the following programs:**

- Evaluate jobs market for graduates.

- Arrange exhibitions and Employment Days e.g. (The University's Products Fair).
- Establish forums to discuss national public issues.
- Establish Incubator graduates.
- Training and capacity-building programs.
- Publicize information activities through newspapers with wide circulation, radio and TV channels to acquaint others with the activities carried out by the University.
- Establish a Unit for the transfer of technology and be tasked with acquainting the private and public sectors with the applied research outcomes that could be adoptable on commercial scale.
- Lead a dialogue, along with national and regional initiatives about the environment and development challenging issues in which the University can play a major and leading role.
- Award scholarships to communities, groups and areas according to quantitative and qualitative needs.
- Engage students in community service, initially by spreading the culture of community service among them and establishing mechanisms for the implementation of programs, and give students the option for participation.
- Implement Symposiums, seminars and workshops.
- Arrange and convene local, regional and international conferences.
- Arrange fairs and festivals.
- Dispatch convoys and campaigns.
- Implement Special Days.

### **7-8-2 Phases of the Implementation of Community Service Programs:**

**First:** Definition- classification- and developing mechanisms for the implementation of programs.

**Second:** Design and implement community service programs.

**Third:** Encourage students to spend time in servicing the community before graduation.

## **7-9 Mechanism for Implementation and Following-up Plan**

### **7-9-1 Establish a Unit for Community Service**

Establish a Unit for Community Service reporting directly to the Vice-Chancellor. The Unit shall coordinate activities related to community service and is considered the mechanism for community service in the University.

- The Unit is considered the first phase for framing the activities of community service which is expected to develop in a larger administrative framework to commensurate later with the size, diversification and development of its tasks.
- The Unit shall be formed in the initial phase from a coordinator and a secretariat. The coordinator is the primary responsible figure for the implementation of the Unit's tasks and shall conduct contacts with the staff assigned to perform this job in Colleges, Institutes and Centers.

#### **The Unit shall perform the following functions:**

- 1- Coordinates functions of community service between Colleges and Institutes through the deputy deans or those assigned to fulfill this task.
- 2- Endeavors to provide funds required for joint activities and research programs for community service.

- 3- Works towards coordinating scholarships granted by the University within the framework of the community service.
- 4- Keeps record and conduct media activities for community activities provided by the University.
- 5- Participates in the promotion of the role of incubators related to community service in the University.
- 6- Administers community service programs in the University, follows up and evaluates plan.
- 7- Intensifies and promotes the relationship between the University and the community and responds to its needs using various methods and activities.
- 8- Contributes to the development of human resources through continuous education and training.
- 9- Provides professional and scientific assistance.
- 10- Disseminates scientific and technological culture among the various sectors of the community.
- 11- Communicates research and studies' findings to beneficiaries.
- 12- Contributes to the provision of advisory service in the areas of the University's competence.
- 13- Keeps in touch with the community and creates bilateral and multilateral partnerships.
- 14- Expands the number of beneficiaries in community service.
- 15- Create community service awards.
- 16- Innovates new and diverse programs to meet the needs and aspirations of the community and instill a sense of social

in academic concepts.

- 17- Engages students in community service programs starting with the University's society so as to promote the spirit of charity work and teamwork and gives attention to community issues.

### 7-8 Timeframe for the 2012-2016 Strategic Plan

Activity	2012	2013	2014	2015	2016
Establish a Unit for Community Service					
Appoint a coordinator					
Assign a Secretary					
Organize educational programs, raise awareness of the concept of community service among the University staff and students					
Develop work programs					
Frame coordinating relationships between Colleges and Centers					
Develop a detailed plan					
Conduct training sessions in Colleges and Centers					
Arrange an exhibition that showcases the University products					
Create Peace programs and conflict resolution					
Arrange scientific and cultural					

Hold an open day and exhibits for community service					
Link alumni with microfinance programs					
Connect beneficiaries with the University incubators					
Announce a competition in research for community service.					
Hold a training session relating to (Community issues)					
Dispatch convoys to areas affected with conflicts and adverse environmental conditions					
Arrange an international scientific conference					
Design programs to engage students in community service					
Evaluate the administrative structure of the Community Service Unit					
Hold seminars addressing the various community issues					
Upgrade incubators in quantity and quality					
Establish a specialized center for training and development					
Build new relationships with private sector institutions and companies in training and capacity-building					
Arrange training courses for					

Provide training courses on microfinance					
Provide training courses for the acquisition of self employment skills for graduates					
Hold different guidance programs					
Establish new graduates incubators					
Provide advisory services for national development programs					
Establish a Unit for the transfer of technology					
Establish a regional workshop					
Hold specialized seminars					
Conduct specialized training courses					
Hold special days					
Upgrade Community Service Unit to a department					
Dispatch scientific and cultural convoys					
Arrange festivals and fairs					
Deliver public lectures					

## **Chapter Eight**

### **Strategy of Financial Resources**

#### **8-1 Introduction**

Financial resources remain the "lifeblood" of any business. Meeting the objectives of any plan or strategy largely depends on the provision of adequate financial resources at the right time and in the right place.

Finance Department is one of the most important executive departments in SUST responsible for the proper utilization of financial resources and use it in the most efficient way. Administratively it reports to the University Principal. This Department is responsible for the completion of all financial procedures, planning, implementation, and monitoring processes relating to expending from the University's annual approved budget, collection of revenues and properly register all transactions in its accounting ledgers in order to prepare final accounting statements in an orderly and systemized manner at the end of each fiscal year which leads to attain the overall strategic objectives of the University. Among its duties is to draw up plans and programs to augment, develop financial resources and ensure proper utilization.

It is known that financial resources are the corner stone for the implementation of any strategic plan. Enclosed herewith is the financial strategy for the period from 2012 through 2016. It constitutes a realistic strategy based on the current and future actual revenues and expenditures. It also contains any unforeseen changes that may occur in self and governmental revenues and expenditures of first quarter during the strategy period and the processing transactions that may demand to allocate a certain amount during the 2012-2016 strategic period in addition to the capital goods that may require expend an amount of..... during the period instead of the estimated amount of..... for the various development projects.

### **8-2 Mission:**

Develop and enhance financial resources with proper utilization using best financial, administrative and technical practices with a sound and fast performance and in a highly efficient manner.

### **8-3 Objectives:**

- 1- Administer the University funds efficiently and with the requisite speed.
- 2- Control warehouse movement and promote the required strategies for follow-up.
- 3- Revitalize investment process, develop and increase revenues.
- 4- Improve work performance and develop workforce skills.
- 5- Update all services and finance aspects in the various departments and divisions in the university.

### **8-1 Current Status Analysis:**

- 1- Government underfunding and irregular supply of funds beside lack of funding required for new job opportunities and promotions.
- 2- Failure to pay arrears of employees from the differences in payroll structure, travel tickets and cash in-lieu for a number of years amounting to about 60.000.000 SDG.
- 3- Difficulty in obtaining funds required for establishing new colleges.
- 4- Difficulty in obtaining funds required for the development of the University's infrastructures.
- 5- Meager financial resources allocated for applied scientific research.

cost of its financial requirements.

- 7- The big number of special admission students, beside diploma, graduate studies and distance learning students and the like which assists in diversifying the University's resources to finance the various activities of the University.
- 8- The existence of policies to adopt decentralized system with regard to good stewardship of existing funds in the University which enables to optimal utilization of its resources.
- 9- The existence of constraints that hinder the implementation of the decentralized system.
- 10- The existence of an institutional structure and transparency in the preparation of budgets for colleges institutes and centers.
- 11- Lack of financial resources does not enable the optimal implementation of the budget.
- 12- The initiation of the computerization of finance system.
- 13- Diversity of the University expenditures and the various aspects of unexpected and pressing expenses.
- 14- Policies and financial procedures in the University depend on rules and regulations issued by the Ministry of Finance and by the application of finance standards issued by it, noting that its financial procedures are subject to internal and external audit.
- 15- Poor knowledge of some internal and external auditors with regard to the nature and aspects of financial expense in the University.

### **✓ Points of Strength:**

- 1- The presence of clear fiscal Rules, regulations and policies.
- 2- The presence of approved annual budgets with commitment to present them for statutory audit.
- 3- The ability of the University to finance them from its own resources at a high degree.
- 4- Commitment to institutional and professional aspects in the utilization of the University various resources.
- 5- The presence of investment plans.
- 6- Transparency in fiscal activity.
- 7- The existence of a strategic plan, a five-year, annual, quarterly and monthly plans for cash flow.
- 8- Use of scientific research results in fiscal and administrative decision-making.

### **✓ Weakness Points:**

- 1- Weak implementation of the full computerization of various fiscal activities.
- 2- Inadequacy of financial resources required to cover the necessary expending aspects.
- 3- Migration of qualified accountants to other countries and to private sector.
- 4- Government underfunding.
- 5- Reliance of the University in financing on students study fees.
- 6- Weak commitment to strategic plans and fiscal plan set to finance capital activities and development projects.
- 7- Inappropriateness of the building of Finance department to perform its duties as required.

## **8-5 Executive Summary of the Strategic Plan of Financial Resources for the Years 2012-2016**

The strategic vision of financial resources is exemplified in its endeavors to continue the creation of a developed work environment that takes into account the actual the needs of the University. This vision and its strategic axes have been identified to all sectors of Finance Department in terms of priorities, objectives, initiatives, methodology of work, measurement and development of accounting performance within the policy measures and the strategic plan of the University.

Finance Department is the fundamental bedrock of the University responsible for the implementation of these agendas as it represents its financial arm. It strives to create the requirements and financial resources to utilize them within the areas and projects to achieve best results in accordance with the governmental excellent performance benchmarks. Finance Department has kept pace with this contemporary strategic trend through the formulation of a new vision represented in the formation of a developed fiscal framework that has been set up in accordance with fiscal standards and the formulation of a sound fiscal policy to facilitate the achievement of the objectives outlined in the University's strategy as a whole.

For this ambitious task to succeed, Finance Department has developed an integrated and comprehensive strategic plan for the coming ten (10) years- 2012-2016 which included the general and detailed frameworks of the objectives, goals and the identified strategic initiatives until the year 2016 to guarantee the activation of mechanisms of the improvement of the governmental performance

methodology for the preparation of budgets on the basis of activities and outcomes, in addition to upgrading the electronic fiscal systems and the building of an integrated database for the fiscal policy of the University with regard to government expenditure in investment and operational areas. The formulation of the strategic plan of the financial resources has relied on the axes and trends, strategic priorities of the University and the strategic role of Finance Department within the framework of the agendas of the government public policy in a way that guarantees the achievement of targets and the ambitions of the main stakeholders in obtaining best financial services and contribution to achieve higher rates of performance and financial stability.

The formulation of the strategic plan of financial resources has reflected the strategic requirements and needs of the University, and it looks forward to participate seriously and effectively in playing a leading and distinguished role in the building of a sustainable development in the light of the methodology of work and the outstanding implementation. For these reasons, Finance Department reaffirms its full commitment and determination to support the initiatives that are in line with the University's general policy.

#### **8-6 Strategic Objectives and Goals of Financial Resources:**

The Strategic plan of Financial Resources for the years 2012-2016 aim to the following:

- 1- The realization of the financial resources vision.
- 2- Provision of an advanced framework and a wise fiscal policy to put its vision into action.
- 3- Develop and implement the financial resource system across the University to achieve support and assistance in the strategic distribution of the financial resources.

to Finance Department regulations and analytical systems.

- 5- Central planning and coordination of the University's fiscal affairs at total and partial levels with regard to budget and the strategic scheme.
- 6- The efficient implementation of the University's financial policy and its rules and regulations and to maintain financial integrity.
- 7- Improvement of the daily performance monitoring system for fiscal services, protect financial assets of the University to ensure the continuity of fiscal power, internal and cost control.
- 8- Facilitate internal evaluation process and submit recommendations to ensure the full control, and provision of audit and budgetary mechanisms for the implementation of important processes across the University and its centers.
- 9- Ensure the integrity and accuracy of financial records and create financial resources for each Unit in the University so as for them to achieve self- sufficiency.
- 10- Speed up the process of decision-making and utilize financial resources in an efficient manner according to studies and fiscal notes.
- 11- Create the appropriate environment for Finance Department employees and achieve job satisfaction.

### **8-7 Strategic Plan of Finance Department for the period from 2012 to 2016**

- 1- Give attention to promote and diversify financial resources and use a methodology for the preparation of annual budgets based on activities and outcomes.
- 2- Establish a Quality Control Division.

- 3- Design and implement the Electronic archive project.
- 4- Use of Internet via the University's website to follow up workers' various dues.
- 5- Transfer all workers' dues to banks.
- 6- Construct an integrated building for Finance Department.

### **8-8 Mechanism for the Implementation of the Plan**

A committee shall be formed to follow up on the implementation of the plan on quarterly, semi annually and annually basis provided that the mechanism be subject to standardized methods and accurate assessment to know the extent of compliance with the implementation of the plan and to identify deviation and reasons thereof for rectification and enhance strength points of the plan and control it.

### **Government Funding from 2012 through 2016:**

### **8-9 Strategy for the Following Years**

<b>Years</b>	<b>Salaries</b>	<b>Arab Professors' Salaries</b>	<b>Procurement of Goods &amp; Services</b>	<b>Total</b>
2012	<u>42,911,639</u>	<u>21,415</u>	<u>138,562</u>	<u>43,071,616</u>
2013	<u>43,000,000</u>	<u>21,415</u>	<u>138,562</u>	<u>43,159,977</u>
2014	<u>45,150,000</u>	<u>22,486</u>	<u>145,490</u>	<u>45,317,976</u>
2015	<u>46,053,000</u>	<u>22,935</u>	<u>148,400</u>	<u>46,224,335</u>
2016	<u>46,974,060</u>	<u>23,394</u>	<u>151,368</u>	<u>47,148,822</u>

## Chapter Nine

### Infrastructure Strategy

#### 9-1 Introduction:

Infrastructure is the backbone of the University because of its fundamental role in the positive contribution to achieve its objectives in teaching, scientific research and the provision of information and is considered one of the fundamental components for rating the University and for being recognized academically at all levels. For this reason, the University has developed real frameworks to lay the effective foundations for the promotion of its infrastructure through a specified time frame for the implementation of plan.

#### 9-2 Mission:

Maintain and develop the infrastructure and its integration with services and facilities to keep up with the basic activities in the University and for the continuous adaptation to meet the emerging needs of the University community.

#### 9-3 Objectives:

- 1- Determine the status of the infrastructure to identify its trend and to where it should turn, and the surest path to reach the required target.
- 2- Approve the strategic plan to be a basic tool for the Administration to promote services process and identify shortfalls and vulnerabilities and adopt it as a tool for long term planning.

- 3- Benefit from the expertise of employees working in this field.
- 4- Use the specialized technical units in the University (Engineering/Maintenance Unit) to achieve the required quality, reduce cost which may result in savings that could be used in the implementation of other projects.
- 5- Utilize modern technologies, enhance electronic teaching and rehabilitate laboratories and classrooms in order to obtain ISO certification.
- 6- Improve the quality of maintenance and operation of the facility and equipment.
- 7- Adhere to safety rules and ascertain the efficacy and adequacy of its infrastructures for servicing the University community.
- 8- Actual use of modern technology in the development of infrastructures.
- 9- Achieve balanced development between colleges and various departments in the University, taking into account the priorities of basic services.
- 10- Upgrade infrastructures to promote scientific research and graduate studies.
- 11- Provide human resources required for administering and maintaining infrastructure.
- 12- Qualify Engineering Department to obtain ISO certification.

#### **9-4 Analysis of Current Status:**

##### **✓ Points of Strength:**

- 1- Optimum use of the available potentials in a manner that meets the current need without affecting the progress of the educational process.
- 2- Cope with technological developments in some spheres of infrastructures.
- 3- A need for a maintenance division specialized in the maintenance of infrastructure in some locations in the University.
- 4- The need for a specialized department to perform infrastructures services.

##### **✓ Weakness Points:**

- 1- Inefficient and inadequate rehabilitation provided to human cadres responsible for maintenance services and supervising infrastructures, in particular, technicians responsible for the maintenance of infrastructure's different aspects.
- 2- Lack of facilities required for students such as (halls, laboratories, workshops) which is represented in the necessary devices and equipment required for work, specially the new devices such as projectors and work aids.
- 3- Misuse which leads to unnecessary recurrent maintenance.
- 4- Lack of an efficient plan for the development of the infrastructures.
- 5- Lack of an integrated system for the infrastructures in the University as a whole.

instead of longer-term strategic planning.

- 7- Non adherence to specified standards for students' services and public facilities in the University.
- 8- Non activation of total quality management as an administrative system in the infrastructure planning process.
- 9- Failure of most infrastructures to keep pace with development in the sphere of IT and contemporary techniques. (Halls and public facilities).
- 10- Lack of job satisfaction among employees working in the area of infrastructures.

#### **9-5 Strategic Objectives and Goals:**

- 1- Develop structural plans for the various Universities' campuses to meet the academic, students and employees needs as per the universities' new standards.
- 2- Prepare a job structure for technical and engineering cadres.
- 3- Prepare plans for periodic maintenance and rehabilitation process and adherence to those plans.
- 4- Establish qualified units to implement emergency and urgent maintenance works.
- 5- Develop training plans and programs to improve efficiency, and qualify personnel working on technical and professional jobs.
- 6- All construction, rehabilitation and maintenance works must be carried out in accordance with the approved standards and through the Engineering Department.

#### **9-6 Infrastructures' Strategic Plan:**

- 1- Construct the required classrooms to meet the needs of the strategic plan.
- 2- Rehabilitate laboratories, workshops, studios, libraries and electronic libraries.

- 3- Construct all requirements of the required services in order to create a safe and positive environment in the University.
- 4- Create and develop the external environment of the University's various university campuses.

## 9-7 Infrastructure Strategy 2012-2016

Axis	2012	2013	2014	2015	2016
<p><b>Lecture Halls:</b> One (1) in the Veterinary Complex to accommodate (150) students.</p> <p><b>College of Graduate Studies Halls:</b> One (1) in the College of Forestry and one (1) in the College of Textile Engineering</p> <p><b>Seminars Hall</b> (1) College of Physical Education &amp; Sports</p>					
<p><b>Scientific Laboratories &amp; Studios:</b> Three (3) laboratories with the capacity of 50 students: (2) in the Western Campus and (1) at the College of Textile Engineering.</p> <p><b>Computer Laboratories:</b> College of Physical Education &amp; Sports/Communication Science/Music &amp; Drama</p>					
<p>(1) Studio in the College of Communication Science (1) In Plastic Engineering</p> <p><b>Computer Laboratories:</b> Veterinary Medicine Complex</p>					
<p>(1) Studio in the College of Music (1) Chemistry Laboratory in the College of Engineering (1) A hall for food processing in the College of Agricultural Studies.</p> <p><b>Computer laboratories:</b> College of Water &amp; Environmental Engineering</p>					
<p>(1) Physics laboratory for the College of Engineering (1) Chemistry laboratory for the College of Textile Engineering</p> <p><b>Computer Laboratories:</b> College of Textile Engineering</p>					
<p>(1) Laboratory for the College of Agricultural Studies. (1) Veterinary Medicine Complex</p> <p><b>Computer Laboratories:</b> (1) College of Medical Radiologic Sciences</p>					
<p><b>Workshops:</b> Expand workshops to accommodate 200 students</p>					
<p>A Production workshop at the College of Textile Engineering</p>					
<p>(1) in the College of Water &amp; Environmental Engineering</p>					

<p><b>Libraries &amp; e-Libraries</b> Expand the library to accommodate 300 additional students</p>
<p><b>e-Library</b> (1) Textile/Forestry/ Radiologic Sciences</p>
<p>The beginning of the Central Library E-Libraries: (1) at the College of Languages (1) at the College of Music</p>
<p>(1) Reading library at the College of Engineering <b>E-Libraries:</b> Agricultural Studies/Physical Education</p>
<p>(1) Reading library at the College of Veterinary Medicine <b>E-Libraries:</b> Western Campus</p>
<p>(1) Reading library at the College of Agricultural Studies <b>E-Libraries:</b> Central Campus</p>
<p><b>Offices:</b> Rehabilitate a floor at Scientific Affairs/ An Office at the College of Engineering</p>
<p>(10) offices at the College of Agricultural Studies</p>
<p>(10) offices at the College of Agricultural Studies/ College of Communication Science</p>
<p>(10) at the College of Water &amp; Environmental Engineering</p>
<p>(8) at the College of Textile Engineering</p>
<p><b>Fencing the existing gardens:</b></p>
<p>(2) At Western Campus (4) at the Veterinary Medicine Complex (2) at the College of Petroleum Engineering (4) at the College of Engineering (1) at the College of Music</p>
<p>(4) at the College of Graduate Studies (4) at the College of Communication Science (2) at the College of Engineering</p>
<p>(4) at the Veterinary Medicine Complex (4) at the College of Forestry &amp; Range Sciences</p>
<p>(4) at the College of Physical Education (4) at the College of Textile Engineering</p>
<p>(4) at the College of Water &amp; Environmental Engineering</p>
<p><b>Cafeterias:</b> Rehabilitate the cafeteria of the College of Communication Science/Medical Radiologic Sciences. Expansion of the cafeteria at the College of Textile Engineering and the College of Forestry &amp; Range Sciences</p>
<p>Rehabilitate the cafeteria located at the College of Physical Education Rehabilitate the cafeteria of the College of Agricultural Studies</p>
<p>Rehabilitate the cafeteria of the College of Veterinary Medicine</p>
<p>Rehabilitate the cafeteria of the College of Physical Education and the College of Technology</p>
<p>Rehabilitate cafeterias at the Central Campus</p>

<b>Lounges:</b>
Equip the lounge for female students at the College of Forestry Range Sciences/Western Campus with the required items
rehabilitate the lounge located at the College of Technology/Agricultural Studies
Construct two(2) lounges at the Western Campus
Rehabilitate the lounge located at the College of Water & Environmental Engineering
Construct a lounge at the College of Business Studies/ Physical Education and rehabilitate the lounge located at the Students' Union Club
<b>Mosques:</b>
Construct a Mosque at the College of Communication Science
Rehabilitate the mosque of the College of Physical Education & Sports
Expansion of the students' Mosque at the Southern Campus
Expansion of the Mosque at the College of Textile Engineering
Rehabilitate the Students' Union Mosque at the Western Campus
<b>Bathrooms:</b>
Build bathrooms for students with special needs at the College of Engineering/Veterinary Medicine Complex/Communication Science
(10) bathrooms for female students at the Western Campus
(10) bathrooms for female students at the College of Textile Engineering
(10) bathrooms for female students at the College of Water & Environmental Engineering
(10) bathrooms in the Central campus
<b>Ablution Taps ( Wudu Washers):</b>
Wudu Washers at the Western Campus equipped with 30 taps & (4) at the College of Engineering.
(2) Wudu Washers at the College of Communication Science equipped with 10 taps.
(1) Wudu Washer at the College of Radiologic Sciences equipped with 15 taps.
(2) Wudu Washers at the College of Water & Environmental Engineering equipped with 20 taps.
(1) Wudu Washer equipped with 30 taps.
(1) Wudu washer equipped with (20) taps at the College of Music & Drama
(1) Wudu Washer equipped with 20 taps at the Veterinary Medicine Complex & the College of Animal Production Science.
(1) Wudu Washer equipped with 15 taps at the College of Textile Engineering.
(1) Wudu Washer equipped with 15 taps at the College of Forestry & Range Science.

**Urinals:**

Urinals at the colleges of Music/ Veterinary Medicine Complex/Engineering

(20) urinals at the College of Physical Education

(20) Urinals at the College of Textile Engineering

(20) Urinals at the College of Medical Radiologic Sciences/ College of Agricultural Studies

(20) Urinals at the College of Water & Environmental Engineering (20) at the College of Forestry & Range Science

**Parking Lots:** in the Northern & Southern Areas of the Western Campus  
College of Engineering: Western & Southern Areas

**Parking Lots** at the College of Music & Drama- Northern & Western Areas

Indoor parking lot at the Veterinary Medicine Complex/ Textile Engineering

Indoor parking lot at the College Water & Environmental Engineering

College of Agricultural Studies/Central Campus

**Football Playgrounds**

Rehabilitation of the football fields at the Colleges of Forestry & Range Science and the College of Agricultural Studies.

**Basketball Courts:**

Build a basketball court at the Colleges of Engineering/Communication Sciences

**Football Playgrounds**

Rehabilitation of the football field at the Colleges of Textile Engineering

**Basketball Courts:**

A basketball court at the Colleges of Veterinary Medicine Complex

**Volleyball Courts:** at the Colleges of Veterinary Medicine Complex/ Agricultural Studies

**Football Playgrounds:** at the Colleges of Veterinary Medicine Complex

**Basketball Courts:**

Build a basketball court at the College of Textile Engineering

**Volleyball Court:** at the College of Textile Engineering

**Basketball Courts:**

the College of Physical Education & Sports  
Veterinary Medicine Complex

**Volleyball Court:** Rehabilitation of the Volleyball courts at the College of Physical Education & Sports

Veterinary Medicine Complex

**Medical Treatment Units:** Construct MTUs at the Colleges of Communication Sciences & Textile Engineering

Construct MTUs at the Colleges of Communication Sciences & Textile Engineering

Rehabilitation of MTU at the Southern Campus

Veterinary Medicine Complex

Rehabilitation of MTU at the College of Agriculture

College of Medical Radiologic Sciences