
The Strategic Plan of the Information Technology Deanship - King Abdulaziz University - Saudi Arabia

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(Received: January 15, 2022; Revised: March 20, 2022; Accepted: May 21, 2022; Available online: December 1, 2022)

Abstract

IT has now become an integral part of modern university life to the extent that various IT institutions are required to act as partners within the academic institutions rather than just providing them with secure and reliable IT infrastructure and services. Thus, in light of these successive accelerating developments, and keeping pace with the vision of the Kingdom of Saudi Arabia 2030 in relation to developing the higher education system that focuses on granting Saudi universities a great deal of administrative and financial independence, the Deanship of Information Technology at King Abdulaziz University works hard to activate its leading role in providing modern technical services for various sectors inside and outside the university through framing and preparing a new strategic vision in line with the changes taking place in the work environment at the university. Essentially, this new vision takes into account the fact that King Abdulaziz University is a research and educational institution at a global level with global interests and with constantly increasing technological environment demands that are vital to support its overall competitiveness and success. By the end of this article, the willingness of our community members to meet and engage in a deep and comprehensive discussion of the strategic strengths, weaknesses, opportunities and threats of the IT environment based on the use of the SWOT approach is in itself a solid evidence of our community's excellent ability to work together towards achieving a set of common ambitious goals. Ultimately, the process of planning and designing the strategic plan allowed participants from all over the campus to interact with each other and reach a common understanding of the university's technological goals and the strategic actions required to achieve those goals namely in relation to supporting innovation in research and education, helping people use technology more effectively, and providing secure services and systems for all the university environment components.

Keywords: Personality Traits, Gender, Customer Knowledge Preference

1. Introduction

Higher education is witnessing an unprecedented demand for technologies that improve the ways of producing, managing, disseminating, accessing and securing knowledge. In this regard, the effective and equitable use of these technologies must be ensured at all levels in King Abdulaziz University. In fact, the rapid and innovative ways in which people communicate and collaborate locally, nationally and internationally are constantly changing the way technologies are designed, acquired, and delivered. Henceforth, it is critical that we continue to lead by utilizing the best practices and capabilities of new information and communication technologies in order to ensure the quality and high standards of our university academic and management practices. This speedy change means that KAU must ramp up, adapt, and manage service delivery in order to meet these evolving demands [1].

On the other hand, King Abdulaziz University highly believes that in our technologically advanced and socially intertwined world, contribution and engagement should include the strategic use of technology to enhance the

educational and social experiences of its students and prepare them for real life, work and citizenship in the twenty-first century. Therefore, and through the implementation of the IT Strategic Plan, we will explore the technology tools, practices, and resources that must be provided and supported to enhance the intellectual, professional and social development of our students, including giving them the technological skills and ethical practices necessary for their career success. Based on this vision and in line with the modern economic trends of the Kingdom of Saudi Arabia under the 2030 Vision, the strategic plan of the Deanship of Information Technology at King Abdulaziz University is a comprehensive process in which resources and capabilities are mobilized to work together in a coordinated manner to make decisions and define the development strategic goals, as well as the paths that should be taken to achieve the university's mission. Basically, this mission is concerned with defining development priorities, setting an implementation plan that aims at achieving change, securing requirements, addressing challenges, and overcoming the problems and difficulties that the plan is expected to face upon its implementation.

Among the most important objectives of the strategic plan is that it lays the foundations and resources needed to achieve the goals, and outlines the course of the plan's sequence, the areas in which it will work, and the detailed programs and projects that it will work on. The preparation of the strategic plan of the Deanship of Information Technology starts with collecting and analyzing information and extracting a clear vision about the strategic factors in the internal and external environments that will greatly affect the activities and technical services that the Deanship will provide over the next two decades [2].

When preparing the strategic plan, all stakeholders are involved in its development through the workshop that is being held because of our strong belief in its clear impact in reaching more objective plans and in the ability to achieve the desired goals. Indeed, the fact that the strategic plan stems from them would help raise their morale. After defining the general strategic plan of the Deanship of Information Technology, it will be transformed into an operational plan for a period of five years in which the necessary development projects are identified, each project budget is estimated, and implementation responsibilities and requirements are determined. In addition, it sets a time plan for the implementation and follow-up mechanisms. The consulting team will participate in following up the implementation of the operational plan to ensure that it achieves the set strategic objectives, and then make the appropriate adjustments when needed. This project will be implemented through a main workshop and subsequent successive meetings with the strategic planning team appointed by the Deanship to set the strategic plan, design the operational projects, and follow up their implementation.

2. Literature Review

2.1. The Elements of Strategic Planning

The strategic plan of the Deanship includes the following elements that are prepared according to the mechanisms specified in this guide, as shown below:

2.1.1. Organizing the Planning Process

The strategic planning process includes foundational steps that begin with preparing/reviewing studies, and then proceeding to define SMART goals for the Deanship, on the basis of which a plan is drawn up to achieve these goals within a specific time frame, which is the strategic scope of this plan. Next, comes the step of designing the plan and programming its operations into initiatives with specific goals (and objectives). This includes programs and projects that require the mobilization of resources and directing them towards producing a realistic and achievable strategic plan. All these tasks are in line with the modern economic trends of the Kingdom of Saudi Arabia under the 2030 Vision and the National Transformation Program 2020, and in preparation for the upcoming development of the higher education system, which will give Saudi universities a quite large degree of administrative and financial independence. In later stages, the responsibility and tasks of the Deanship would shift from preparation to following

up the implementation of the strategic plan [5]. This is performed through evaluating the strategic plan successes, addressing its failures, ensuring the adherence to its path and timeline at the level of each stage and project program, monitoring any deviations that may occur, making the required corrections, and then analyzing and considering the lessons learned from them.

2.1.2. The Initial Steps

The preparation for the strategic planning process and the development of the plan, with its initiatives and practical activities, is carried out in two phases:

- 1) The stage of forming a planning framework that organizes the work of the Deanship and its relations with all university authorities.
- 2) The stage of selecting the working team, who will be responsible for preparing the Deanship's strategic plan, following up on its implementation and evaluation, and monitoring deviations and the need for their correction.

These steps also include the implementation of the following:

- 1) Establishing an operating system for the unit that defines the roles of the planners and organizes their interventions throughout the course of the plan.
- 2) Training the working team on work planning skills.
- 3) Informing the executive leadership about what the plan is and their role in it either in terms of planning or implementation.

3. Methodology

3.1. The Mechanism of Preparing the Plan

The planning process can be divided into five stages that reflect the development of the strategic plan through a general future vision as seen by the Deanship, as well as an applied work that seeks to achieve the goals of this vision as follows:

- 1) The planning process starts with foundational stages centered around the need to set a clear vision for the future of the Deanship, its reality, and prospects for its future work based on the university's strategic plan.
- 2) The next stage of the planning process includes building the starting points of the strategic plan. It revolves around identifying the reality from which the plan will be launched to achieve the goals of the strategic vision of the Deanship within a certain time frame. This would include the analysis of the internal and external environments of the Deanship that comprises both the analysis of technical conditions and the analysis of the relevant parties, to come up with the four-way analysis of the strengths, weaknesses, opportunities and challenges.
- 3) The following step is called defining the strategic and achievable goals within the timeframe of the plan, and then subdividing it into a set of sub-goals that define the parameters of the way to reach, stage by stage, the achievement of the planned strategic goals. The operational objectives are prioritized through two criteria: **(1)** the impact of the objective and **(2)** the ease of its implementation.
- 4) Identifying the method of performance measuring through the preparation of measurement indicators and target values. Therefore, the projects through which the Deanship aspires to achieve the objectives of its strategic plan are identified, and a mechanism is established to monitor the implementation, which includes

setting performance indicators and metrics to follow up on the progress of the plan and make the needed adjustments, corrections and improvements necessary to ensure that it reaches these goals [6-8].

In addition to the basic strategic plan, it is necessary to develop complementary plans to support the basic plan, including an institutional support plan that comprises developing the organizational structure and institutional work methods in a manner that is appropriate and/or helps facilitate the implementation of the plan.

3.2. The Stages of Strategic Planning

The stages of strategic planning are divided into several sections, where strategic planning depends mainly on the stage of preparation, analysis, implementation, and finally the stage of control. Its detailed elements are as following:

3.2.1. Definition of the Message

The message is what the Deanship aspires to do, and a definition of the frameworks through which it will work to achieve its primary goal within a certain time range (3 to five years).

3.2.2. The Content of the Message

The Message expresses the purpose of the Deanship and the scope and methods of its work based on three main components:

- 1) Purpose statement, which includes defining the results to be achieved.
- 2) Action Statement, which includes the activities, projects and service programs through which the Deanship is working to achieve its goals, and the scope of these actions (in time, place, etc.).
- 3) Values Statement, which includes a definition of the corporate culture prevailing in the Deanship, and the behavioral standards associated with the employees' practices.

3.2.3. Definition of the Vision

The vision is a future perspective of the situation that reflects aspirations towards what you want to achieve within a specific and foreseeable timeframe (3 to 5 years). It copes with the modern economic trends of the Kingdom of Saudi Arabia in light of the Saudi 2030 Vision and the National Transformation Program 2020, and in preparation for the upcoming development of the higher education system, which will grant Saudi universities a higher degree of administrative and financial independence.

3.2.4. The Content of the Vision

Building a vision requires:

- 1) The ability to analyze the future based on accurate realistic data.
- 2) A careful study of the current reality of the Deanship, the services it provides, the tasks under its management, and its development requirements. On the other hand, the founding process needs a clear vision of:
 - a) The features of the Deanship future that it aspires to reach.
 - b) Its future image and the role it designates for itself.

3.2.5. Definition of The Values

The prevailing values in the Deanship, and among employees in general, have a great impact on the behavior of officials and employees. This effect appears clearly in the convictions that the employee has about his/her reality and his/her position at work. This appears in his/her general behavior and in the attitudes and practices at work.

3.2.6. Values and Behaviors

Identify, in general, the most influential values, understand them, and determine how to deal with them, as they are the gateway to make a positive change in the planning performance in terms of increasing the applicability of the strategic plan and improving the chances of success in achieving its goals. In a later step, the values, convictions and practices of each influential party are classified according to the strength of their expected impact on the effectiveness of the implementation of the strategic plan, and thus its success in achieving its objectives. In conclusion, we highly stress that there are some obstacles that can hinder the success of the strategic plan, which are:

- 1) Not understanding how to develop a strategic plan, as strategic planning requires a different type of thinking.
- 2) Failure to maintain strategic focus and leadership, which impedes the implementation process and management. Thus, focus must be maintained in order to achieve all the components of the strategic plan.
- 3) The lack of a joint commitment across the university, as it is necessary to impel the contribution of all the university members in the strategic planning process.
- 4) As the strategic plan is not part of the university's prevailing actual culture, all university members have to realize the importance of this strategic plan.

3.3. Phases of the SWOT Analysis

The SWOT analysis, the Quadruple SWOT Matrix, or the Quadruple Analysis Tool is one of the leading strategic analysis tools. It is an analytical method that helps identify the weaknesses and strengths and realize the type of threats and the nature of the available opportunities affecting the enterprises. SWOT analysis is one of the important systems for preparing and designing strategies for the business sector by presenting a set of short or long- term plans. The four-way analysis is also a means of not only analyzing the environment in which the strategic plan will be developed and implemented but also a data platform on which to build the strategic planning process. In its internal section, it deals with the Deanship's institutional strengths and weaknesses. In its external section, it focuses on the opportunities available in the external environment and the challenges arising from it. This process has been called a Quadruple Analysis (Strength, Weaknesses, Opportunities, Threats (SWOT)) as it relates to the study of the internal environment of the Deanship, including the elements of strength and weakness, and the external environment, including the opportunities it presents and the risks and challenges it presents to the Deanship. Accordingly, the quadruple analysis is the entrance to the planning process, through which the available resources and the development needs that the planners need to take into account when developing the strategic plan are identified, and the external environment in which the plan will be implemented with all its opportunities and challenges. Several techniques are used in this analysis process as part of the quadruple analysis and its most useful strategic planning methodology [9].

3.3.1. The Quadruple Analysis Methodology

The work of the Quadruple Analysis is not limited to just issuing a list of internal strengths and weaknesses, and the opportunities and challenges that arise from the external environment, but it should be supplemented with an analysis of the circumstances, causes and results associated with the items of this list. It is necessary for the analysis to be comprehensive and integrated, and to come out with a preliminary conception of required measures to increase the chances of the plan success in achieving the goals for which it was set. The main challenge facing the development of

the plan is to work on matching strengths with available opportunities to ensure the success of the initiatives, transforming the weaknesses into strengths, transforming internal obstacles into challenges, and challenges into development opportunities. Figure 1 is a presentation of the quadruple analysis methodology, which occupies the heart of the strategic planning process, where the quadruple analysis can be prepared using the following perspectives: financial resources - organizational resources - beneficiaries - operations [10].

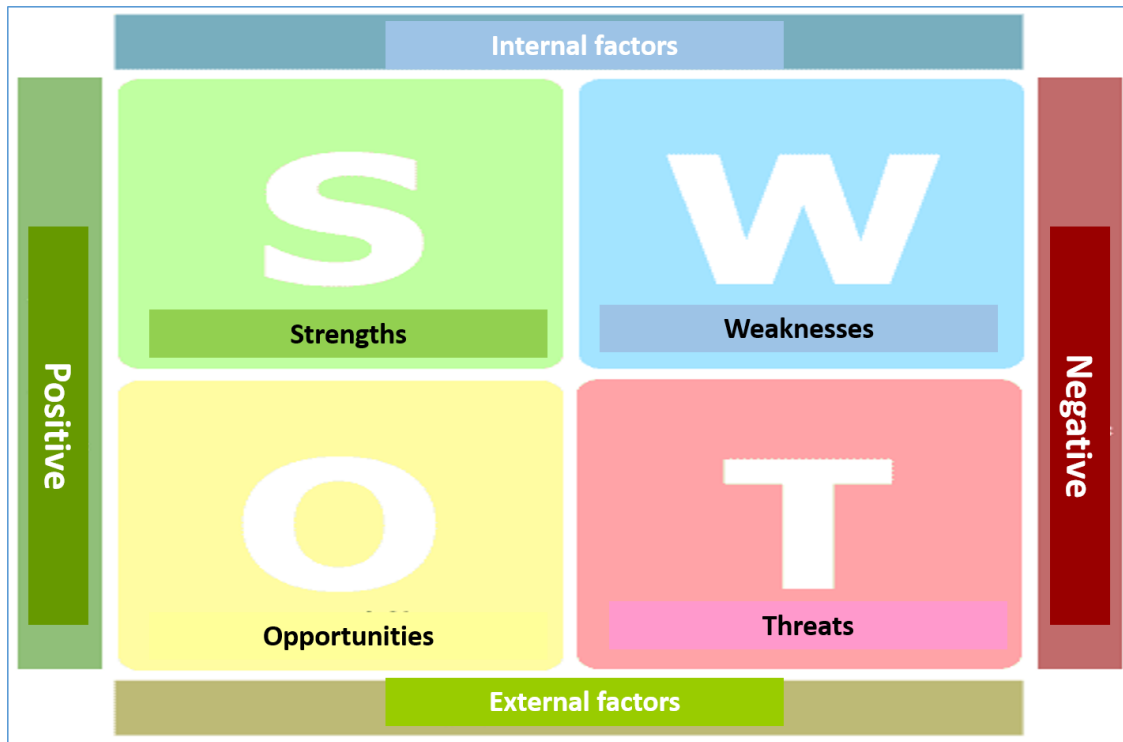


Figure. 1. Quadruple Analysis Methodology

3.4. The Importance of the SWOT Analysis

The SWOT analysis is one of the most important tools for strategic analysis. It is considered the first stage of preparing and designing plans within organizations. It also helps people take and make decisions that affect their lives. Indeed, it is an easy and very important method that should be utilized and not ignored in the work environment. The importance of SWOT analysis is summarized according to the following points:

- 1) The SWOT analysis helps know all the strengths that can be used to deal with threats and obstacles, and also provides the appropriate means to take advantage of the available opportunities, and reduces the restrictions resulting from the elements of weakness affecting the efficiency of the organization's work.
- 2) The SWOT analysis contributes to providing appropriate treatments for complex strategic cases via reducing the volume of information involved in the development of the decision-making process.
- 3) The SWOT analysis provides the organization with the ability to choose the best systems and review all data and information.
- 4) The SWOT analysis supports the organization in reaching the best types of planning that help achieve goals.
- 5) The SWOT analysis is keen to overcome the barriers and obstacles affecting the change processes and to clarify the nature of the constraints that prevent the continuity of change.

- 6) The SWOT analysis provides information on all its components, including threats, strengths, opportunities, and weaknesses in order to implement a useful analysis of the organization.
- 7) The SWOT analysis provides the possibility of obtaining new and modern solutions to the problems, effective decision-making. In addition, it enhances the role of exchanging ideas and communication between individuals. The SWOT analysis provides appropriate recommendations that help in preparing feasibility studies for projects.

4. Result

4.1. Strategic Plans

The success of the basic strategic plan is measured by achieving its goals. An operations plan must be drawn up to organize the supervision of the implementation of the strategic plan, and to allow for an assessment of progress on its path and to check the reasons for deviating from its goals, in preparation for taking the necessary steps for correction and to reach again the targeted results.

4.2. Alternative and Contingency Plans

Alternative and contingency plans are the result of an analysis process of the potential risks that may obstruct, impede, or deviate the plan from its original path and prevent the achievement of its goals. They are pre-arranged plans. The preventive planning process helps anticipate the upcoming risks and prepare to confront them, deal with them as much as possible, and reduce their consequences and effects. Alternative plans deal with emerging problems that could not be taken into account when developing the original strategic plan. These cases are related to the occurrence of a variable that prevents the continuation of the program or project, as planned. The planner's job in this case is to work on finding alternatives that allow resuming/continuing work on the planned program or project in order to achieve the goals set for it, and its successor to the strategic plan in general. In addition, resorting to the development of alternative plans to the basic strategic plan takes place in two cases:

- 1) If the basic plan was found to be defective and unsuitable for achieving the targeted results during the implementation.
- 2) In response to profound shifts in the plan's environment that render it inappropriate and/or weak.

At that time, it is necessary to reconsider the hypotheses, foundations and goals of the plan in order to make it more realistic and in response to the profound changes taking place in the plan's environment. This is done at some stage in the implementation of the plan. However, this is an extreme case, which can be ruled out with a correct understanding of the data and indicators, good preparation of the plan, and the mobilization of appropriate resources to ensure the successful implementation of the plan and the achievement of its established goals. Therefore, in anticipation of such cases, the potential risks should be taken into account when preparing the basic plan, and to anticipate the most likely and serious variables, by preparing alternatives to the disruptive elements that ensure the continuity of work in accordance with the directives of the basic plan and to achieve its goals.

4.3. List of strategic initiatives and projects implemented by the Deanship of Information Technology

The Deanship of Information Technology at King Abdulaziz University has implemented the strategic plan that supports the mission, vision and values. It is aligned horizontally and vertically across the university while integrating environmental scanning and resource allocation and development. It effectively implements coordinated work projects that improve the university's programs and services, as well as working on measurable projects and externally measuring performance to support KAU's commitment to being a high-performance and world-class university. During the planning process, university leaders implement practices that encourage excellence,

innovation, agility, assessment, and engagement to continually improve performance. The following tables summarize the proposed strategic plan initiatives and projects, followed by a description of each initiative with its projects.

4.3.1. At the Beneficiaries Level

These proposed initiatives and projects work to achieve the goals of the beneficiaries directly from the university's technology systems, this is described in table 1, table 2 described financial level, table 3 described internal operations

Table. 1. Projects work to achieve the goals of the beneficiaries directly from the university's technology systems

The strategic goal	The initiative	The project
Application and development of management and electronic transactions	e-portal development initiative (I6)	Portal infrastructure development
		Portal application development
		Apply global standards for website rankings
		Hosting the website with third parties
		Increase the number of files
		Increasing the number of published research
		Providing workshops for faculty members
		Coordinators training
		Increase the number of external links
		Increase the number of pages on the web
		Increase the capacity of the connection
	Research Applications Initiative (I7)	Research and Scientific Information System
		Creation of a research and scientific applications management unit
		Research institute system
		joint supervision system
	Academic Application Development Initiative (I4)	Prepare the Banner infrastructure system
		The Banner System Application
	E-Management Application Development Initiative (I5)	Preparing the infrastructure for the ERP - SAP system
		ERP – SAP System
	Campus Smart Technologies Application Initiative (I8)	computing cloud
		virtual terminals
		mobile user apps

Supporting decision-making with smart knowledge	Smart Decisions Initiative (I12)	Design and implementation of decision support systems and performance indicators
		Preparing the technical infrastructure of the performance management system
		Training of information management staff with standards and indicators

4.3.2. At the Financial Level

Table. 2. Projects work to achieve the goals of the financial directly from the university's technology systems

The strategic goal	The initiative	The project
Providing consultancy and technical services to develop self-resources	Self-resources development initiative (I11)	Building a directory of advisory and technical services for the Deanship
		Communication with clients

4.3.2. At the Level of the Internal Operations

These proposed initiatives and projects seek to implement the goals of developing the processes and environment for providing technology services to its users.

Table. 3. Projects seek to implement the goals of developing the processes and environment for providing technology services to its users

The strategic goal	The initiative	The project
Efficient project management and outsourcing	Project Management Initiative (I15)	Project management office creation project
Adopting standard methodologies for technical support and application development	Software development environment improvement initiative (I 14)	Software Development Operations, Policies, and Methodologies Manual
		Prepare tools and software development environment
		Prepare manuals for electronic systems
		Training the systems users
	Technology Services Development Initiative (ITIL) (I13)	Help Desk system
		Technical Asset Management
Building an integrated technical and institutional architecture	Institutional Architectural Initiative (I9)	The second stage of the archiving system
		Choosing the right frame, components, and training
		Building services, operations, and structuring architecture

		Building systems and processes architecture
Enhance technical support and effective communication with beneficiaries and partners	Knights of Technology Initiative (I10)	Training major systems users
		Strengthening the role of sector coordinators

5. Conclusion

KAU's advanced technology environment is of strategic importance for its academic mission since information technology is of an indispensable presence and an essential factor for world-class research, educational practices and essential operations to our globally integrated university community. In this planning effort, university-wide working groups are tasked with making recommendations on seven technology-related topics that are central to supporting KAU's mission and strategic priorities: Living and Learning, Research Computing Support, Communications and Infrastructure, Administrative and Business Systems, Information Technology Security and Support Models, Procurement and Licensing Online, Web and Mobile Presence. Based on the analysis of our current environment conducted by these working groups and by observing closely the goals outlined in the KAU Strategic Plan, we have identified three main goals for this new IT planning cycle: **Goal 1:** Helping people use technology more effectively. **Goal 2:** Providing safe services and systems everywhere. **Goal 3:** Supporting innovation in research and education. This current plan outlines specific strategies to achieve these goals. However, the rapidly changing nature of the technology industry requires that any planning approach should include an ongoing survey of the technology environment and an ongoing course correction.

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