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1. Executive Summary

The IT Strategic Planning topic spans many aspects of business, management and IT fields. From the business perspective, it involves the scanning of the environment, also the mode of being efficient and effective and taking the right decisions. From management perspective, it is in essence a planning activity with an approach that utilized the SWOT and the extended SWOT analysis methods. While the IT aspects of it forms the content around which all the activities revolve.

The challenge of the IT Strategic Planning is the application and execution of the strategic plans. For that, it should be part of a larger process called strategic management.

Strategic management evolved historically from basic financial planning to become a comprehensive process that spans all the managerial and workforce levels. It is a well established and mature methodology, but it needs to be tuned to suit the IT departments residing in governmental entities. Being in the government eliminates the profitability and competition elements of strategic management and adds to it the justification of value, benefits and avoidance of disasters.

The Strategic Management Process is based on four elements: Environmental scanning, Strategy formulation, Strategy implementation and finally Evaluation and control. The four elements are equally important, and the syndrome of focusing on scanning and formulation while neglecting the other elements is very common and hard to overcome. It is important to secure commitment from top management to the whole process, and follow through continuously until the strategy is implemented successfully.

In the process of strategic management, there are some strategies that need to be avoided, some that need to be adopted. For example, the robust execution and control process should be in place, alignment with government agency strategy and operation is required, being customer service driven, documenting and communicating the service catalog and finally learning from own mistakes and the mistakes of others.

IT strategic management is about applying a disciplinary management approach with persistence and patience, and at the same time with high concentration and focus on IT areas and critical elements, of which the most important one is the customers of the IT department.
2. Introduction

This document is a guide to conducting IT strategic planning for the IT departments in the kingdom of Saudi Arabia government. It is a living document, and it will be further developed and regularly reviewed to ensure that it continues to serve the IT department needs in the government.

2.1. Purpose

The purpose of this document is to provide guidance for IT managers in preparing and maintaining IT strategic plans. Its main audience is the IT managers and middle managers who are engaged in the strategic planning process.

2.2. Document Structure

The structure of this document addresses the intention of the reader. It contains three main sections as follows:

1. **Overview of IT Strategic Planning**: This section introduces the strategic planning concepts, principles, and relation to other topics. It is for IT people who want to learn the foundation of strategic planning.

2. **IT Strategic Management Process**: This section describes the IT strategic planning process and tools. It is for the practitioners who want to conduct a complete IT strategic planning exercise.

3. **Best Practices For IT Strategic Planning**: This section describes and justifies briefly the best practices of strategic planning. It is for the IT managers who want to read quickly a summary of recommendations.

2.3. Related Documents

The documents listed below have been used as a reference material to the subject of IT Strategic Planning and they provide details on their designated subjects:

1. Guide to the Documents of IT Best Practices
2. Glossary of Terms for the IT Best Practices
4. Best Practices of IT Organization Design
5. Best Practices for IT Budgeting
6. Best Practices for IT Sourcing Strategies
3. Overview of IT strategic Planning

The purpose of this section is to set the foundation of IT strategic planning. The following diagram depicts the context of IT Strategic Planning and its relation to other fields:

As the diagram depicts, IT Strategic Planning is a result of a profound intersection of Planning, Strategy, and Information technology fields. These three components play an intrinsic role in shaping the IT Strategic Planning process. This section clarifies each one of these components separately to simplify the concepts and to eliminate the confusion in IT Strategic Planning resulted from the industry jargon, the unclear forest of names and the overlapped elements and principles.

3.1. Planning as a Management Practice

Planning is one of the major management activities. It is the first step in the plan-do-check-act management cycle. It is an iterative and ongoing process, and usually performed in parallel with other management activates, like execution, control, tracking, organizing, etc.

Planning has differentiating characteristics; these characteristics describe the planning process, as well as the output of it, which is the plan. These characteristics are described in the following diagram of continuums:
It is wise to determine what kind of planning is required. A manager can use the above diagram to clarify what kind of planning or plan he wants.

Planning applies on almost any field, it aims to fill a gap, to provide a solution to a problem, or respond to a request. It addresses the “how” to move from a problem space to the solution space, or from the current situation to the intended, planned or aspired situation. It also, details how to do something, how to achieve a goal, or meet an objective.

The subject under planning affects the planning activities and the nature of the plans, for example:

<table>
<thead>
<tr>
<th>IT Technology / Engineering / Operational/ Work or Task Oriented</th>
<th>Pure Management / Business Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contains</strong></td>
<td><strong>Goals and objectives, analysis, charts, what need to be done, high level &quot;how-to&quot;, policies, work descriptions, approach, strategy, tactics, assumptions, risks, communications, etc.</strong></td>
</tr>
<tr>
<td>Requirements, specifications, tasks, dependencies, effort, duration, resource assignments</td>
<td></td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td><strong>Project management plan, marketing plan, budget plan, business plan, strategic plan, tracking plans, governance plans</strong></td>
</tr>
<tr>
<td>Project work plan, MS project plan, product development plan, detailed tasks/activity plan, weekly plan</td>
<td></td>
</tr>
</tbody>
</table>
3.1.1. The Importance of Planning

Planning is an indispensable managing tool, it enable manages to execute and control work with visibility and predictability. It also enables measuring of performance and evaluation of work progress and hence, gives the manager the ability to make corrective actions when deviation is discovered. The following summarizes additional planning benefits:

1. Communicate management intent
2. Ensure activities are goal-oriented
3. Monitor execution and progress
4. Enable corrective actions and integration

The planning activity utilizes many management tools, like: Brainstorming, facilitation tools, meetings, interviews and surveys, feedback collection and data gathering techniques, analysis tools and techniques, design and modeling techniques, systems approach, components and unity of systems, visualization techniques, and documentation techniques.

The output of planning is a plan. The plan should not be:

1. Speculation or prediction of the future
2. Divergent or inconsistent (in terms of content and level of details)
3. Restricting or constraining
4. Inaccurate, or based on inadequate information
5. Fixed or unchangeable
6. Generic or theoretical
7. Uncommitted to, or of optional responsibility
8. Confidential, confined or secret
9. A result of individual effort that affects other people or team members
10. A result of fast or rush reaction
11. Of future or procrastination nature
12. Ignoring risks, the current situation or the environment
13. Unclear to the audience or the team that will execute it

In order to make the planning activity easier and at the same time robust and reliable, it should be based on the identified goals and their corresponding defined (detailed) objectives. Goals and objectives are different, the following table summarizes the differences:

<table>
<thead>
<tr>
<th>Goals</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad, generic, abstract and high-level</td>
<td>Narrow, specific, precise, and concrete</td>
</tr>
<tr>
<td>Intangible and difficult to measure</td>
<td>Tangible, measurable, and verifiable</td>
</tr>
<tr>
<td>Must be achieved, regardless of the</td>
<td>A way to achieve a goal, can be changed, and less stable</td>
</tr>
<tr>
<td>‘how’, Stable</td>
<td></td>
</tr>
</tbody>
</table>
3.2. **Strategy**

"95 percent of enterprises lack a well-defined business strategy"\(^1\)

Strategy as a term that has been borrowed from the military and adapted for business use. Strategy is one element in a four-part structure. First are the **ends** to be obtained, the end results, or the final achievements. Second are the **strategies** for obtaining them, the ways in which resources will be deployed, distributed, arranged, directed or lead. Third are **tactics**, the ways in which resources that have been deployed are actually used or employed at the time of execution. Fourth and last are the resources themselves, the **means** at our disposal, tools, people, time, money and knowledge.\(^2\)

In order to achieve the end results, strategy is identified first, then the means are allocated according to the strategy, and finally tactics are used during execution.

In identifying strategy, decisions have to be made, and the logical steps to do that are\(^3\):

1. Understanding the problem at hand by framing and shaping its boundaries and scope (setting objectives)
2. Designing and exploring alternatives (Expanding choices). At this step, non-strategic alternatives should be excluded. Strategic issues or decision must be:
   - **Important**: The importance comes from being very relevant and tide to the problem or situation being solved
   - **Impacting**: The impact means affecting many elements in terms of diversity and scale
   - **Directional**: Generic and needs further detailing and planning
   - **Infrequent**: Unusual and do not happen everyday.
3. Comparing alternatives according to properties and priorities
4. Choosing from alternatives (making decisions based on narrowing and synthesizing)

Strategy as a concept is broad and ambiguous topic. Its meaning is contextual and it depends on the situation. Every body must come to his own understanding, definition and meaning of strategy, which depends heavily on the domain or the field it is being used in.

**Strategic Planning**

The strategy and the strategic plan are quite different things. The strategy may be brilliant in content and logic; but the sequence and timing of the plan might be inadequate. The absence of an explicit strategy is frequently the result of a lack of top management involvement.

The strategic planning is important because of:

1. The need to systematically and regularly investigate the **uncertainty** and risks
2. The fast development nature and the continuous change in the **environment**, in addition to that the environment increased **complexity**
3. The fact that most management **decisions** are now dependant on practitioners and subject matter experts and not necessarily on the higher management alone

---

\(^1\) Strategic Analysis Report, 11 December 2002 –Gartner (R-17-3607 / R.Mack N.Frey)
\(^2\) Strategy Definitions and Meanings, © Fred Nickols 2003, All rights reserved
\(^3\) Planning Under Pressure, The Strategic Choice Approach, Copyright © 2005, John Friend and Allen Hickling. All rights reserved, Elsevier Butterworth-Heinemann
3.3. Strategic Management

Strategic management is that set of managerial decisions and actions that determine the long-run performance of an organization. Strategic management evolves in four phases, according to the organization maturity:

<table>
<thead>
<tr>
<th>Description</th>
<th>Term</th>
<th>Used Information</th>
<th>Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Financial Planning</td>
<td>1 year</td>
<td>Internal</td>
<td>Ad hoc, fast, and reactive to budgetary requirements</td>
</tr>
<tr>
<td>Forecast Based Planning</td>
<td>3-5 years</td>
<td>Internal and external</td>
<td>Minimal analysis and estimation, political, and performed by middle management</td>
</tr>
<tr>
<td>Externally Oriented Planning (Strategic Planning)</td>
<td>5 years</td>
<td>Internal and external information</td>
<td>Performed by top management, proactive to environment changes, systematic and long</td>
</tr>
<tr>
<td>Strategic Management</td>
<td>Formally environment scanning (internal and external)</td>
<td>Performed by all managerial levels (as strategic thinking), focused on implementation and integration of multiple strategic plans, interactive, continuous and controlled.</td>
<td></td>
</tr>
</tbody>
</table>

Strategic management helps in providing clearer sense of strategic vision of the organization, sharper focus on what is strategically important and improved understanding of the rapidly changing environment.

Strategic management has now evolved to the point that its primary value is in helping the organization operate successfully in a dynamic, complex environment. It also demands that the company become a learning organization—an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights.

Governance

The governance refers to the relationship between the stakeholders, the decision makers and the top management in determining the direction and performance requirements of the organization.

Compared to Strategic Planning, the later addresses the execution and alignment aspects of governance, with focus on being driven by the business strategy and governance procedures.

The following table summarizes the differences between the two:
Table 4 - Comparison between IT Strategy and Governance

<table>
<thead>
<tr>
<th></th>
<th>IT Strategy</th>
<th>Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature</td>
<td>Guiding, planning, and risk minimizing</td>
<td>Controlling, reporting, and top management commitment (authority and responsibility for decisions)</td>
</tr>
<tr>
<td>Purpose</td>
<td>Guarantee execution according to performance requirements</td>
<td>Guarantee performance on business level</td>
</tr>
<tr>
<td>Who is responsible for it</td>
<td>IT top management and the IT staff</td>
<td>Minister, Mare, Board of Directors, Government Agency top Management, and the IT top Management</td>
</tr>
<tr>
<td>Addresses</td>
<td>How IT Strategy is being planned and executed</td>
<td>Alignment with Business (Government Agency Strategy) and IT Strategy</td>
</tr>
<tr>
<td>Driven By</td>
<td>Governance direction, IT and environment situation</td>
<td>Business direction and performance requirements and business management commitment</td>
</tr>
<tr>
<td>Level</td>
<td>Lower level, execution, and IT achievements</td>
<td>High level, projects and major business achievements</td>
</tr>
</tbody>
</table>

It is important to clarify that IT Strategy and Governance are not totally separate things, they overlap in terms of setting direction, high level decisions, and the role of the IT Management.

3.4. IT Strategic Planning

The information technology shapes the IT Strategic Planning in terms of the functional areas that need to be covered. The following diagram depicts a framework of IT in a layered perspective, this view can be used to cover all the functional aspects in IT strategic planning:
1. **The Technology layer**

The technology layer addresses the various components of enterprise technology in the department. The technology layer consists of the following blocks:

- **Application infrastructure**: focuses on describing the current applications deployed in government agency, as well as improving this infrastructure to optimize utilization
- **System infrastructure**: addresses hardware and software assets (the physical aspects) of the IT department
- **Network infrastructure**: consists of all aspects of the department’s network infrastructure, such as topology, traffic profiles, hosting and connectivity

2. **The Organization Layer**

The organization layer is utilized to assess the human components of the IT department in relation to government agency. This layer consists of the following elements, or blocks:

- **Regulatory**: concentrates on all regulatory issues pertaining to the IT department within the government agency
- **Human resources**: includes knowledge management, skills assessment, job design, career paths, recruiting and human resource management
- **Organization**: describes and assesses the IT department organization structure (Please refer to the [Best Practices of IT Organization Design](#))

3. **The Process Layer**

All the business processes concerning the IT department addressed in the process layer. The blocks in the process layer are:

- **Planning**: which includes all administrative aspects of planning and control for the projects and the operations of the IT department
- **Service management**: focuses on the managing the delivery of IT services and the support of these services within government agency
- **Security management**: includes the assessment of current security policies and procedures
Best Practices for IT Strategic Planning

- Sourcing; concentrates on the methods of sourcing in the department
- Business Process Management (BPM); which includes the assessment, modeling, enhancement or re-engineering of all the current processes in the IT department such as change management and data management

4. The Service Layer

The service layer focuses on the assessment of all the services provided from the IT department. This layer should be formalized as a Service Catalog, in which all services that are offered by the IT department are documented and communicated to the customers. Service level agreements or operational level agreements are also captured, this will help the customers to understand how they can benefit from the IT department's services.

Finally, Quality Assurance and Strategic Management are recommended as part of the IT framework, and they should be considered on all layers.
4. **IT Strategic Management Process**

Strategic planning is a process that applies to any field or domain. However, this section explains how strategic management (the larger view of Strategic Planning) is performed as an integrated approach in the IT field and in the governmental IT departments.

The Basic Model of Strategic Management Process relies on four basic elements:

1. Environmental scanning
2. Strategy formulation
3. Strategy implementation
4. Evaluation and control

The figure below shows the interaction between these elements:

![Figure 4 - Strategic Management Basic Elements](image)

**Preparing for the Strategic Management Process**

This management process is the responsibility of the IT Manager, but he should create a team of strategic planners and analysts to help him in it.

The prerequisites of this process are:

1. Dedicated IT manager and a supporting team. If the IT manager does not have qualified people to help him, he will have to do all the steps himself.
2. Documented Government Agency Strategy. If it does not exist, the IT manager should ask for it, or meet with top management and create it with them. Otherwise, he will be forced to make assumptions, communicate them to the top management, and proceed with the IT Strategic Management Process.

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4 The approach and content is heavily based on Thomas L. Wheelen and J. David Hunger book, “Strategic Management and Business Policy.” Copyright © 2004 by Pearson Prentice Hall, all rights reserved.
4.1. **Environmental Scanning**

Environmental scanning is the monitoring, evaluating, and capturing of information from the external and internal environments. Its purpose is to identify **strategic factors**, those external and internal elements that will determine the future of the IT department.

4.1.1. **External Environmental Scanning**

The simplest way to conduct environmental scanning is through SWOT analysis. The external environment consists of variables (Opportunities and Threats) that are outside the organization and not typically within the control of top management.

Many external factors from different areas affect the IT departments in the government; these factors can be Economic, Technological, Political-legal, and Sociocultural. These factors come from different areas:

1. Suppliers of services and products
2. IT Customers (Can be addressed by the customer satisfaction assessment), and apply on citizens, businesses, and other governmental agencies/departments (G2C, G2B, and G2G)
3. The government and its agencies

The following table can be used as a tool to summarize the output of the external environmental scanning activity in search of Opportunities and Threats (the table entries are filled with examples of opportunities):

<table>
<thead>
<tr>
<th>Area</th>
<th>Category</th>
<th>Strategic Factor</th>
<th>Importance (1-10)</th>
<th>Impact (1-10)</th>
<th>Weighted Priority = (Importance X Impact)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers (G2C)</td>
<td>Economic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sociocultural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technological</td>
<td>Requires enhancements</td>
<td>3</td>
<td>6</td>
<td>3*6=18</td>
<td>Threat</td>
</tr>
<tr>
<td></td>
<td>Political-legal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customers (G2B)</td>
<td>Economic</td>
<td>Strong</td>
<td>4</td>
<td>5</td>
<td>20</td>
<td>Opportunity</td>
</tr>
</tbody>
</table>

---

5 This table capture the Opportunities and Threats together, the notes column specifies each of them. It is possible to eliminate this column by separating the opportunities and threats into separate tables.
<table>
<thead>
<tr>
<th>Area</th>
<th>Category</th>
<th>Strategic Factor</th>
<th>Importance (1-10)</th>
<th>Impact (1-10)</th>
<th>Weighted Priority (= \text{Importance} \times \text{Impact})</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technological</td>
<td>Advanced</td>
<td>6</td>
<td>8</td>
<td>48</td>
<td>Opportunity</td>
<td></td>
</tr>
<tr>
<td>Customers (G2G)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Strong</td>
<td>5</td>
<td>6</td>
<td>30</td>
<td>Opportunity</td>
<td></td>
</tr>
<tr>
<td>Sociocultural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technological</td>
<td>Advanced</td>
<td>8</td>
<td>9</td>
<td>72</td>
<td>Opportunity</td>
<td></td>
</tr>
<tr>
<td>Political-legal</td>
<td>Contractual constraints</td>
<td>9</td>
<td>6</td>
<td>54</td>
<td>Threat</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political-legal</td>
<td>influencing</td>
<td>8</td>
<td>7</td>
<td>56</td>
<td>Opportunity</td>
<td></td>
</tr>
</tbody>
</table>

### 4.1.2. Internal Environmental Scanning

The internal environment consists of the variables (Strengths and Weaknesses) which are relatively controllable. The focus of the internal scanning is the department resources, value chain, organization and structure.

The IT department can be analyzed in terms of the following areas:

1. The IT Services
2. The Organization Structure
3. The Work Functions including projects, operations, and recurring [Value Chain]
4. Resources in terms of assets, skills, competences and knowledge
5. IT department culture, focusing on values, expectations, and beliefs
6. Technology infrastructure (Hardware and Software)
7. IT department precedent strategy, the strategy of the Government and the strategy of the Government Agency

The following table can be used to summarize the Strengths and Weaknesses as follows (the table entries are examples for clarification):

Table 6 - Internal Environmental Scanning for Strengths and Weaknesses

<table>
<thead>
<tr>
<th>Area</th>
<th>Strategic Factors</th>
<th>Importance (1-10)</th>
<th>Impact (1-10)</th>
<th>Weighted Priority = (Importance X Impact)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services</td>
<td>High customer satisfaction</td>
<td>8</td>
<td>8</td>
<td>64</td>
<td>Strength</td>
</tr>
<tr>
<td>Organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value Chain</td>
<td>Projects: need robust control</td>
<td>9</td>
<td>10</td>
<td>90</td>
<td>Weakness</td>
</tr>
<tr>
<td>Value Chain</td>
<td>Operations: stable</td>
<td>8</td>
<td>6</td>
<td>48</td>
<td>Strength</td>
</tr>
<tr>
<td>Value Chain</td>
<td>Recurring: needs planning</td>
<td>7</td>
<td>7</td>
<td>49</td>
<td>Weakness</td>
</tr>
<tr>
<td>Resources</td>
<td>understaffed</td>
<td>9</td>
<td>10</td>
<td>90</td>
<td>Weakness</td>
</tr>
<tr>
<td>Technology</td>
<td>Hardware: up to date</td>
<td>5</td>
<td>9</td>
<td>45</td>
<td>Strength</td>
</tr>
<tr>
<td>Technology</td>
<td>Software: up to date</td>
<td>5</td>
<td>9</td>
<td>45</td>
<td>Strength</td>
</tr>
<tr>
<td>Technology</td>
<td>Applications: high maintenance</td>
<td>9</td>
<td>9</td>
<td>81</td>
<td>Weakness</td>
</tr>
<tr>
<td>Technology</td>
<td>Network: unstable</td>
<td>10</td>
<td>10</td>
<td>100</td>
<td>Weakness</td>
</tr>
<tr>
<td>Strategic</td>
<td>Previous IT Strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic</td>
<td>Government Strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic</td>
<td>Government Agency Strategy: unmet objectives</td>
<td>10</td>
<td>9</td>
<td>90</td>
<td>Weakness</td>
</tr>
<tr>
<td>Values</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The focus in the environmental scanning is the current situation as is, without drifting into how it should be, or how we like it to be. Its data should be captured as it exists in the current moment.

The output of the preceding steps is four tables. Covering the assessed strategic factors

---

6 This table capture the Strengths and Weaknesses together, the notes column specifies each of them. It is possible to eliminate this column by separating the strengths and weaknesses into separate tables.
4.2. **Strategy Formulation**

Strategy formulation is the development of long-range plans for the effective management of environmental opportunities and threats, in light of the IT department strengths and weaknesses. It includes defining the IT department Vision/mission, specifying achievable goals and objectives, developing strategies, and setting policy guidelines.

4.2.1. **Review of Vision and Mission**

Visions, goals and strategies are typically established using a three to five year timeframe, while action plans rarely exceed a schedule of one to two years. IT strategies should, nevertheless, be revised on a yearly basis to incorporate possible adjustments in the IT department’s prioritizations and essential technological shifts and possibilities.

In reviewing the vision, the focus is the future. The IT Vision is a picture of the intended future of the IT department. To what extent is its time? Or how large or small the scale of the vision? All of that depends on the IT department top management view of the future of the department.

In reviewing the mission, the focus is the present. The Mission is what the purpose behind the existence of the IT department NOW. It focuses on actions and purposefulness of every planned action.

4.2.2. **Creating a Candidate Set of Strategic Goals**

This step generates a set of candidate strategic goals. Strategic brainstorming and decision making takes place in this step based on an extended SWOT matrix. This tool is very useful for generating lists of strategic alternatives that can be easily overlooked or forgotten by the strategic decision makers. In this step, the extended SWOT matrix is used to generate candidate strategic goals:

<table>
<thead>
<tr>
<th>Internal Strengths (S)</th>
<th>External Weaknesses (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; List major Strengths from the internal environmental scanning table &gt;</td>
<td>&lt; List major Weaknesses from the internal environmental scanning table &gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities (O)</th>
<th>SO Strategies</th>
<th>WO Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; List major Opportunities from the external environmental scanning table &gt;</td>
<td>Generate strategies here that use strengths to take advantages of opportunities</td>
<td>Generate strategies here that take advantages of opportunities to overcome weaknesses</td>
</tr>
</tbody>
</table>

---

Using tables (5) and (6), the following table represent an example:

### Table 8 - Extended SWOT Example

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>Strengths (S)</th>
<th>Weaknesses (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Factors</strong></td>
<td>&lt; List major Strengths from the internal environmental scanning table &gt;</td>
<td>&lt; List major Weaknesses from the internal environmental scanning table &gt;</td>
</tr>
<tr>
<td><strong>Threats (T)</strong></td>
<td>ST Strategies</td>
<td>WT Strategies</td>
</tr>
<tr>
<td>&lt; List major Threats from the external environmental scanning table &gt;</td>
<td>Generate strategies here that use strengths to avoid threats</td>
<td>Generate strategies here that minimizes weaknesses and avoid threats</td>
</tr>
</tbody>
</table>

**Opportunities (O)**

1. Economic strength of business customers
2. Advanced technology of business customers
3. Economic strength of suppliers
4. Advanced technology of suppliers
5. Influencing power of the government in political and legal issues

**SO Strategies**

1. [1,1] Charge the services provided to business customers
2. [2,2] Introduce advanced services

**WO Strategies**

1. [1,1] [1,3] Hire project managers on behalf of business customers
2. [1,4] [2,4] Upgrade the Network
3. [1,5] Replace the applications with new one with less maintenance
4. [4,2] Outsource recurring work or automate it

**Threats (T)**

1. Technology weakness in customers/Citizens
2. Legal/Contractual constraints with suppliers

**ST Strategies**

1. [1,2] utilize operations in teaching/training customers

**WT Strategies**

1. [2,1] Implement robust subcontract management process and project control

The output of this activity is the set of strategic goals in the SO, WO, ST, and WT entries in the extended SWOT table.
4.2.3. Alignment with the IT Strategic Framework

Alignment and integration should be done as early as possible. In this step, the candidate strategic goals are verified, mapped and categorized to be inline with those of the government agency and the generic direction of the government.

The IT strategic Framework can be used to classify those identified candidate strategic goals into their corresponding functional areas in the IT framework.

The IT Strategic functional areas in the IT framework (as described in Figure -3 : Comprehensive IT Framework) are:

- **Processes**
  - Business Process Management
  - Sourcing
  - Service Management
  - Security Management

- **Organization**
  - Organization Structure
  - Budgeting
  - Human resources management

- **Operations**

- **Projects**

- **Procurement**

- **Logistics**

- **IT Strategy, which contains on high level**
  - Infrastructure (HW, SW, Network)
  - Applications
  - Services

The impact of the candidate strategic goals can span more than one functional area, and hence will be a valuable input to the strategic planning of each of these areas.

This step is completed when similar preliminary strategic goals are added per the functional areas identified above. These goals are also mapped (vise versa) into the extended SWOT matrix in order to achieve a comprehensive coverage and mapping of all possible strategic goals. This can go on two to three iterations, until a stable set of strategic goals are established.

The following table categorized the strategic goal in a map according to their functional areas:

<table>
<thead>
<tr>
<th>Strategic Goals</th>
<th>Functional Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1,1] Charge the services provided to business customers</td>
<td>Budgeting, Projects</td>
</tr>
<tr>
<td>[2,2] Introduce advanced services</td>
<td>Operations, Services</td>
</tr>
<tr>
<td>[1,1] [1,3] Hire project managers on behalf of business customers</td>
<td>Budgeting, Human resources management</td>
</tr>
</tbody>
</table>
4.2.4. Selecting the strategic Goals Based on Strategic Directions

The candidate strategic goals are prioritized and examined by identifying its associated risks, together with possible tactics in order to assess there feasibility for success.

In this step, priorities and directions speak louder than anything else. Tough decisions need to be made, taking into consideration conflicting and contradicting directions. For example, what direction will have the largest effect, ‘cost efficiency or effectiveness’, ‘organizing the internal house or achieving quick wins.’ (Quick windex direction is adopted when there is a need to show progress and visible results as early as possible, in order to get support, or prove the value and benefits of long-term effort)

Such strategic directions emerge from the extended SWOT analysis indirectly, and they are more generic than strategic goals. They form the base for the business policy, they also respond to threats and weaknesses and to the requirements of the IT governance in general.

Regardless of the approach used to decide on the strategic goals, each resulting strategic goal must be evaluated against four criteria:

1. Independent and can be met alone, regardless of other strategic goals
2. Feasible and have a very good probability of success
3. Comprehensive in addressing its subject or area
4. Consistent with other strategic goals, without contradictions

When prioritizing goals, it is important to group them according to their nature as projects, operations or recurring work. Since the nature of the goal defines how it should be compared and to what other specific goals it is being compared to. Special attention should be given to goals of project nature due to their size, formality and the visibility of their results.

The output of this step is a set of justified, evaluated and chosen strategic goals.

4.2.5. Defining the Strategic Objectives

Defined objectives are described as SMART. SMART Stands for Specific, Measurable, Achievable, Relevant/Realistic, and Time specific. The SMART objectives are described in the following table:
Table 10 – SMART Objectives

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific</td>
<td>Clear end result or achievement</td>
</tr>
<tr>
<td>Measurable</td>
<td>Measurement criteria and source of verification for the end result</td>
</tr>
<tr>
<td>Achievable</td>
<td>A high description of how to achieve it, or the needed behavior to achieve it</td>
</tr>
<tr>
<td>Relevant</td>
<td>Justification and relevance to goals, or vision/mission</td>
</tr>
<tr>
<td>Realistic</td>
<td>A condition or constraint coupled with expected extent or quality criteria</td>
</tr>
<tr>
<td>Time specific</td>
<td>Effort in time, schedule, and dependencies</td>
</tr>
</tbody>
</table>

Each goal might breed one or more defined objective. The focus in this step is to formalize the strategic goal as a set of defined objectives, keeping a record of traceability between the both.

Reaching this point, where we have a set of defined strategic objectives is a major milestone in strategic planning. It means we know what we are trying to accomplish, and why. From this point forwarded, the focus shifts to the “how to” aspects of strategic planning, and to focus on the execution and control of the detailed plans.

4.2.6. Policy Guidelines

A policy is a broad guideline for decision making that links the formulation of strategy with its implementation. The IT Department should use policies to make sure that employees throughout the department/government agency make decisions and take actions that support the organizations vision/mission and the strategic goals and objectives.

4.2.7. Documenting the IT Department Strategy

The Strategy should be summarized under the following sections:

- Vision and Mission
- Strategic Goals
- Defined Objectives
- Department Policy/s

Regardless of how these subjects have been identified, they need to be summarized, in clear and simple writing. This will facilitate communicating the strategy to the IT department staff.

It is recommended to formalize this documentation as the master IT Department strategy. This document can be used as an input to other planning activities like: Budgeting, Sourcing, Programs/Projects, Yearly work plans, etc…

4.2.8. Communicating the master IT Department Strategy

Having the master IT Department Strategy is a major milestone, because it defines the strategy, the direction and the generic approach. Communicating it should involve all the people who are affected by the strategy either directly or implicitly. This includes:
1. The team participating with the strategic planning
2. People who were interviewed and provided information
3. People who are affected by the results of the strategy either positively in negatively
4. Higher management, like the management of the government agency

Communicating the strategy will enable people to give feedback, and to validate the strategy as a whole. It also helps in getting commitment, support, and buy-in from the stakeholders.
4.3. Strategy Implementation

Strategy implementation is the process by which strategies and policies are put into action through the development of projects, budgets, and operations’ procedures. This process might involve changes within the overall culture, structure, and/or management system of the IT department.

Middle and lower level managers typically conduct the planning for implementation of strategy with review by top management. Sometimes referred to as operational planning. Strategy implementation often involves details and short-term decisions. The following steps summarizes the Strategy Implementation steps:

1. Staff the master IT Department Strategy: each defined objective is assigned to a strategic planner. It is better to assign related strategies as a group of objectives to one person or team rather than distributing them amongst the team. A suggested grouping of objectives are listed below (They will be called sub-strategy group):
   a. Projects: Please refer Project Management Guidelines
   b. Budgets: Please refer to Budgeting Guidelines
   c. Procurement: Please refer to Procurement Guidelines
   d. Procedures: Please refer to Operations Guidelines
   e. Sourcing: Please refer to Sourcing Guidelines

2. Create management plans for each sub strategy group. These plans are strategic because they are aligned with the master strategy and they present the “plan” aspects of it. All the plans complement each other to form the IT Department Strategic Plans
   Each Management Plan clarifies the:
   a. Measuring of progress and Performance Tracking
   b. Corrective actions and tactical alternatives

3. Create Action/work plans: Each assigned person will create a detailed work / task oriented plans, clarifying tasks, deliverables, effort, duration, dependencies, etc.

4. Conduct a comprehensive review cycle of all the produced plans

The output of this step is a set of management and work plans that complement the Master IT Department Strategy. Those plans are used for execution and control of the IT Strategy.
4.4. Evaluation and Control

Although evaluation and control is the final major element of strategic management, it’s crucial as it pinpoints weaknesses in the implemented strategic plans and thus stimulate the entire process to begin again.

For evaluation and control to be effective, IT managers must obtain clear, prompt, and unbiased information from their team. Using this information, managers compare what is actually happening with what was originally planned in the formulation stage.

The evaluation and control process ensures that the department is achieving what it set out to accomplish. It compares performance with desired results and provides the feedback necessary for management to evaluate results and take corrective actions as needed. The following diagram depicts this process:

![Figure 5 - Control Process](Image)

1. **Determine what to measure.** Top managers and operational managers need to specify what implementation processes and results will be monitored and evaluated. The processes and results must be capable of being measured in a reasonably objective and consistent manner. The focus should be on the most significant elements in a process (the ones that account for the highest proportion of expense or the greatest number of problems). Measurements must be found for all important areas, regardless of the difficulty of measuring them.

2. **Establish standards of performance.** Standards used to measure performance are detailed expressions of strategic objectives. They are measures of acceptable performance results. Each standard usually includes a tolerance range, which defines acceptable deviations. Standards can be set not only for final output, but also for intermediate stages of deliverables.

3. **Measure actual performance.** Measurements must be made at predetermined times, and they should be based on clear, prompt, and unbiased information from the performing team.

4. **Compare actual performance with the standard.** If actual performance results are within the desired tolerance range, the measurement process stops here.

5. **Take corrective action.** If actual results fall outside the desired tolerance range, action must be taken to correct the deviation. The following questions must be answered then:
   i. Is the deviation only a chance fluctuation?
   ii. Are the processes being carried out incorrectly?
Best Practices for IT Strategic Planning

iii. Are the processes appropriate to the achievement of the desired standard? Action must be taken that will not only correct the deviation, but will also prevent its happening again.

iv. Who is the best person to take corrective action?

Top management is often better at the first two steps of the control model than it is in last three follow-through steps. It tends to establish a control system and then delegate its implementation to others. In order to succeed in Evaluation and Control, IT managers need to follow through these steps by assigning a responsible and accountable owner from middle management with a clear and formal reporting/communication plan.
5. Best Practices and Success Factors

5.1. Align Strategy with Government Agency Strategy

Justification: The diagram above clarifies how the IT strategy connects with many aspects in the containing government agency. As a best practice, verify that every strategic decision is traced into and is aligned with a government agency objective or need.

The diagram also clarifies the result of the alignment between different aspects as follows:

1. Aligning the government agency strategy with the IT department strategy implements the IT Governance
2. Aligning the IT Department Strategy with the value chain of project and operations produces the infrastructure requirements
3. Aligning the value chain with the agency operations is guaranteed by delivering of IT services
4. Finally, aligning the agency strategy with its operations produces a strategy for possible IT applications and automation needs

It is important to clarify that the four aspects should be integrated and aligned, the one to one alignment (although visible and justifiable) is not adequate.

This alignment should take place in the environmental scanning and strategy formulation stages.

5.2. Prioritize to be Customer Centric/Service Oriented

Justification: Consider the customer in each management and planning activity. This will make the IT service effective and beneficial. Customers are the end users of the IT department services and infrastructure. Prioritizing for customer service comes in the
form of putting his needs and requirements above other considerations, like policies, procedures, and formal processes. This does not necessary mean that they should be broken and ignored, it means that they should be tailored and tuned to accommodate for his needs.

5.3. Create a Service Catalog as a Formal Service Offering

Justification: The service catalog serves as a brochure of the offerings of the IT department. It informs the customers of the benefits they are currently getting or can get from the IT department. This will enhance the awareness of IT, the utilization of IT assets, and the support form the customer to the IT department when needed. The later is very crucial to the IT department especially when it is justifying a budget, or seeking cooperation from its end users. Happy customers will be engaged, involved, and supportive to the IT department development efforts.

The IT service catalog should contain:
- Description of the service
- Value and benefit of the service
- When the service is provided, for example working hours, or 24X7 or occasionally
- Who is providing the service, for example service desk, call center, department manager, network experts, project managers, etc.
- How the service can be requested
- What is expected form the customer to respond to the service request
- How the customer can escalate if he didn't receive the service as expected

Preparing the service catalog is performed after the strategy formulation.

5.4. Adopt Continuous Feedback and Learning Process

Justification: As the IT department develops strategies, projects and the like, it is often recommended to go back and revise or correct decisions made earlier.

For example, poor performance (as measured in evaluation and control) usually indicates that something has gone wrong with either strategy formulation or implementation. It could also mean that a key variable, such as economical change was ignored during environmental scanning and assessment.

If the IT department adapts a continuous feedback and learning process, it will enhance its capabilities as a learning organization/department in:
- Solving problems systematically
- Experimenting with new approaches
- Learning from their own experiences and past history as well as from the experiences of others
- Transferring knowledge quickly, efficiently, and effectively
5.5. Strategy Implementation-Lessons Learned

A survey of 93 fortune 500 U.S. firms revealed that over half of the corporations experience the following ten problems when they attempted to implement a strategic change. These problems are listed below in order of frequency:

1. Implementation took more time than originally planned
2. Unanticipated major problems arose
3. Activities were ineffectively coordinated
4. Competing activities and crises took attention away from implementation
5. The involved employees had insufficient capabilities to perform their jobs
6. Lower-level employees were inadequately trained
7. Uncontrollable external environmental factors created problems
8. Department managers provided inadequate leadership and direction
9. Key implementation tasks and activities were poorly defined
10. The information system activities were not monitored adequately

5.6. Execution and Control Strategies

In designing a control system, top management should remember that controls should follow strategy. Unless controls ensure the use of the proper strategy to achieve objectives, there is a strong likelihood that substandard side effects will completely undermine the implementation of the objectives. The following guidelines are recommended:

1. Control should involve only the minimum amount of information needed to give a reliable picture of events. Too many controls create confusion. Focus on the strategic factors by following the 80/20 rule: monitor those 20% of the factors that determine 80% of the results.
2. Controls should monitor only meaningful activities and results, regardless of measurement difficulty. If cooperation between divisions is important to corporate performance, some form of qualitative or quantitative measure should be established to monitor cooperation.
3. Controls should be timely so that corrective action can be taken before it is too late. Steering controls, controls that monitor or measure the factors influencing performance, should be stressed so that advance notice of problems is given.
4. Long-term and short-term controls should be used. If only short-term measures are emphasized, a short-term managerial orientation is likely.
5. Controls should aim at pinpointing exceptions. Only those activities or results that fall outside a predetermined tolerance range should call for action.
6. Emphasize the reward of meeting or exceeding standards rather than punishment for failing to meet standards. Heavy punishment of failure typically results in goal displacement. Managers will “fudge” reports and lobby for lower standards.

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9 See footnote – 1
5.7. Strategies to Avoid

**Justification:** There are some false strategies that do not apply regardless of the situation; these strategies have proven themselves as strategies to fail. They include:

- Doing everything at once altogether
- Follow blindly without assessing the applicability to the IT department specific conditions
- Quitting or abandoning previous efforts if no results or achievement are made
- Rushing and creating short-cut solutions to intrinsic and chronic problems
- Postponing Quality

These strategies should be avoided especially in the strategy formulation phase.

5.8. Strategic Planning Checklist

The following table represents a checklist for the Strategic Management process:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Performed or Not</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental Scanning</strong></td>
<td></td>
</tr>
<tr>
<td>Identified external strategic factors (Opportunities, Threats)</td>
<td></td>
</tr>
<tr>
<td>Identified internal strategic factors (Strengths, Weaknesses)</td>
<td></td>
</tr>
<tr>
<td>Defined importance and impact for strategic factors</td>
<td></td>
</tr>
<tr>
<td>Prioritized the strategic factors</td>
<td></td>
</tr>
<tr>
<td><strong>Strategy Formulation</strong></td>
<td></td>
</tr>
<tr>
<td>Reviewed vision and mission</td>
<td></td>
</tr>
<tr>
<td>Produced candidate set of strategic goals using the extended SWOT</td>
<td></td>
</tr>
<tr>
<td>Mapped resulting strategic goals to functional areas</td>
<td></td>
</tr>
<tr>
<td>Prioritized and selected the strategic goals</td>
<td></td>
</tr>
<tr>
<td>Produced strategic objectives</td>
<td></td>
</tr>
<tr>
<td>Created policy guidelines</td>
<td></td>
</tr>
<tr>
<td>Documented the IT department strategy</td>
<td></td>
</tr>
<tr>
<td>Communicated the IT department strategy</td>
<td></td>
</tr>
<tr>
<td><strong>Strategy Implementation</strong></td>
<td></td>
</tr>
<tr>
<td>For each sub-strategy group:</td>
<td></td>
</tr>
<tr>
<td>Assigned an owner</td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Performed or Not</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Created management plans</td>
<td></td>
</tr>
<tr>
<td>Created work plans</td>
<td></td>
</tr>
<tr>
<td>Conducted comprehensive review of all strategic plans</td>
<td></td>
</tr>
<tr>
<td><strong>Evaluation and Control</strong></td>
<td></td>
</tr>
<tr>
<td>Defined measurement</td>
<td></td>
</tr>
<tr>
<td>Defined measurement standards and thresholds</td>
<td></td>
</tr>
<tr>
<td>Defined performance measurement policy and process</td>
<td></td>
</tr>
<tr>
<td>Defined corrective actions</td>
<td></td>
</tr>
<tr>
<td>Assigned and owner for the performance measurements process</td>
<td></td>
</tr>
</tbody>
</table>
6. Appendix I – Methodologies Used

This document made use of the following standards and methodologies:

1. **Balanced Scorecard Performance Tracking Methodology**
2. **COBIT v4.0 - Control Objectives for Information and related Technology (COBIT®)**
3. **PMI - Project Management Institute Standards, Project Management Body of Knowledge PMBOK Version 3**
4. **ITIL-Information Technology Infrastructure Library™**
5. **PRINCE2® (Project in Controlled Environment )**
6. **PCM (Project Cycle Management) from the European Commission and EuropeAid Cooperation Office**