Module 2 Reading

2.1 **Strategic Planning:** The process of identifying long-term organizational goals, strategies, and resources.

* A strategic plan looks beyond day-to-day activities and focuses on a horizon that is three, five, ten, or more years in the future.
* Starts with a **Mission Statement** that reflects the firm’s vision, purpose, and values. Usually focused on long-term goals.
* A **Critical success factor** is one that must be achieved to fulfill the company’s mission.
* SWOT analysis
  + Strength, Weaknesses, Opportunities, and Threats.
* Systems analyst should be interested in strategic planning because it reflects a higher level of involvement in the project.
* Careful planning assures that:
  + The Project supports business strategy and needs.
  + The project scope is well defined and clearly stated.
  + The project goals are realistic, achievable, and tied to specific statements, assumptions, constraints, factors, and other inputs.

**2.2 Strategic Planning Tools:**

* Word/Excel are traditionally used.
* A more sophisticated approach is to use a CASE tool to define and document the environment.
* Other techniques are mind maps, balanced scorecards, and gap analysis.

**2.3 The Business Case:** Reasons or justifications for a proposal. Must review the company’s overall mission, objectives, and IT needs.

* Answer’s questions like:
  + Why are we doing this project?
  + What is the project about?
  + How does this solution address key business issues?
  + How much will it cost and how long will it take?

**2.4 Systems Requests:** Formal way of asking for IT support.

* Might ask for enhancements for an existing system, correction of problems, replacement of older systems.
* Six main reasons for a system’s request.
  + Stronger Controls – using encryption or a biometric device (retina scanner/face ID).
  + More Support – New products and services often require new levels of IT support.
  + Reduced Cost – current system might be expensive to operate/maintain.
  + Improved Service – improving service to customers or users.
  + More Information – System might produce info that is insufficient/incomplete.
  + Better Performance – Updating hardware to meet performance requirements.

**2.5 Factors Affecting Systems Projects:**

* **Internal Factors**
  + Strategic Plan – overall direction for the firm and has impact on IT projects.
  + Top Managers – initiate large-scale projects. Often result from strategic business goals that require a new IT system.
  + User Requests – more reliance on info systems leads to more requests for IT services.
  + IT dept – Systems projects also come from IT dept. Often make recommendations based on business operations and trends.
  + Existing Systems and Data – Errors or problems in existing systems can trigger system project requests.
  + Company Finances – financial status can affect projects, may postpone, or embark on a new project if doing well.
* **External Factors**
  + Technology – Changing technology is a major force that can force system projects and reshape business ops. See RFID tags and EPCs
  + Suppliers – EDI growth leads to suppliers’ relations being critical. Just-in-time (JIT) inventory systems thanks to EDI. Blockchain – A distributed ledger system (bitcoin).
  + Customers – Customer relationship management (CRM) systems that integrate all customer-related events and transactions.
  + Competitors – Capitalism dude.
  + The Economy – Growth or recession determines system projects
  + Government – Regulatory agencies directly affect the design of projects.

**2.6 Processing Systems Requests:** Most organizations have more requests than it can handle.

* Systems review committee or computer resources committee.
* Systems Request Forms are used to streamline and ensure consistency.
* Most large companies use a systems review committee to evaluate systems requests.
  + Broader viewpoint, a committee can establish priorities better than an individual.
  + Typical committee consists of the IT director and several managers or representatives from other departments.
  + Disadvantages: action on requests must wait until committee meets and members might favor projects requested by their own depts, and internal political differences could delay important decisions.

**2.7 Assessing Request Feasibility**

* First step is to identify systems requests that are not feasible. Then break-down if the request is necessary.
* Feasibility Studies use four main yardsticks.
  + Operational feasibility – proposed system will be used effectively after it has been developed. Example questions:
    - Does management support the project? Do users support the project? Is the current system well liked and used? Is there need for change?
    - Will the new system result in a workforce reduction? If so, what will happen to affected employees?
    - Will users be involved in planning the new system right from the start?
    - Will any risk to the company’s image result?
  + Economic feasibility – Projected benefits outweigh the costs usually considered the **total cost of ownership (TCO).** Estimate costs in following areas:
    - People, including IT staff and users
    - Hardware and equipment
    - Software, including in-house development as well as purchases from vendors.
    - Formal and informal training, including peer-to-peer support
    - Licenses and fees
    - Consulting expenses
    - Facility costs
    - The estimated cost of not developing the system or postponing the project
    - Tangible costs – Expenses that have a specific dollar value.
    - Intangible costs – Items that are difficult to measure in dollar terms, such as employee dissatisfaction.
    - Tangible benefits – benefits that can be measured in dollars.
    - Intangible benefits – advantages that are difficult to measure in dollars but are important to the company.
  + Technical feasibility – technical resources needed to develop, purchase, install, or operate the system.
    - Does the company have the necessary hardware, software, and network resources?
    - Does the company have the needed technical expertise?
    - Does the proposed platform have capacity for fure needs?
    - Will a prototype be required?
  + Schedule feasibility – A project can be implemented in an acceptable time frame.
    - Can the company or the IT team control the factors that affect schedule feasibility?
    - Has management established a firm timetable for the project?
    - What conditions must be satisfied during the development of the system?
    - Will a project manager be appointed?

**2.8 Setting Priorities**

* Systems review committee must establish priorities for the remaining items.
* Dynamic Priorities
  + Agile methodology is prone to rapid changes throughout the system development lifecycle.
  + Factors that affect priority
    - Will the system reduce costs? Where? When? How? By how much?
    - Will it increase revenue for the company?
    - Will it result in more info or produce better results?
    - Will it serve customers better?
    - Will the system serve the organization?
    - Can the project be implemented in a reasonable time period?
    - Are the necessary financial, human, and technical resources available?
* Projects where management has a choice in implementing them are called **discretionary projects.**
* Projects where no choice exists are called **nondiscretionary projects**.

**2.9 The Preliminary Investigation**

* Systems analyst does to study the systems request and recommend action.
* Meetings with key managers, users, and other stakeholders such as the IT staff while planning the investigation.
* Performing the preliminary investigation
  + Understand the problem or opportunity
  + Define the project scope and constraints
  + Perform fact-finding
    - Analyze organization charts
    - Review documentation
    - Observe operations
    - Conduct a user survey
  + Study Usability, cost, benefit, and schedule data
  + Evaluate feasibility
    - Operational
    - Technical
    - Economic
    - Schedule
* Summarizing the Investigation
  + Summarize the results and recommendations, which can be brought to management in a report/presentation. Typical report format:
    - Introduction
    - Systems Request Summary – basis of request
    - Findings – results of the investigation, including description of scope, constraints, and feasibility
    - Recommendations – Summary of the project request and a specific rec
    - Project Roles – Lists people who will be in the project and describes roles
    - Time and Cost Estimates – cost of acquiring and installing the system and cost of ownership.
    - Expected Benefits – anticipated tangible and intangible benefits and a timetable that shows when they are to occur.
    - Appendix – supporting information (interviews, documentation consulted, other info).