# Introduction to System Analysis

Chapter-3

## The Role of System Analyst

# Where does System Analyst come from?

- A **systems analyst** is an information technology (IT) professional who specializes in analyzing, designing and implementing information systems.
- suitability of information systems, their intended outcomes and interact with end users, software vendors and programmers
- who uses analysis and design techniques to solve business problems using information technology.
- may serve as change agents who identify organizational improvements needed, design systems to implement those changes, and train and motivate others to use the systems
- familiar with a variety of programming languages, operating systems, and computer hardware platform
- responsible for developing cost analysis, design considerations, staff impact amelioration, and implementation timelines.

# What does he do?

- Identify, understand and plan for organizational and human impacts of planned systems, and ensure that new technical requirements are properly integrated with existing processes and skill sets.
  Plan a system flow from the ground up.
- Interact with internal users and customers to learn and document requirements that are then used to produce business requirements documents.
- Write technical requirements from a critical phase.
- Interact with software architect to understand software limitations.
- Help programmers during system development, e.g. provide data flow

# Preparing for case as a system analyst general business knowledge

## Required Skills for an Analyst

An analyst must possess various skills to effectively carry out the job. Mainly the skills can be divided into two types.

1. Communication Skill
2. Technical Skill

Both are required for system development.

# Communication Skill

- Communication skills deal with relationships and the interface of the analyst with people in business.
- They are useful in establishing trust, resolving conflict and communicating information.
- Analyst must have the ability to articulate and speak the language of the user and a knack for working with virtually all managerial levels in the organization. Communication is not just reports, telephone conversations and interviews.
- It is people talking, listening, feeling and reacting to one another, their experience and reactions.
- He must be capable of identifying problems and assessing their ramifications having a grasp of company goals and objectives and showing sensitivity to the impact of the system on people at work.

# Technical skills

Technical skills focus on procedures and techniques for operations analysis, system analysis and computer science.

**Technical skills include:**

**Creativity-**helping users model ideas into concrete plans and developing candidate systems to match user requirements.

**Problem solving**- reducing problems to their elemental levels for analysis, developing alternative solutions to a given problem and delineating the pros and cons of candidate systems.

**Project management-** includes scheduling, performing well under time constraints, coordinating team efforts and managing costs and expenditures.

**Dynamic interface**- blending technical and nontechnical considerations in functional specifications and general design

**Questioning attitude and inquiring mind**-knowing the what, when, why, where, who, and, how a system works.

**Knowledge** of the basics of the computer and the business function

# Role of the System Analyst

1. The multifaceted roles of analyst are

- change agent,
- monitor, architect,
- psychologist,
- salesperson,
- motivator and
- politician.

# Change Agent

- The analyst may be viewed as an agent of change. A candidate system is designed to introduce change and reorientation in how the user organization handles information or makes decisions.
- It is important, user accept change. Analyst can secure user acceptance is through user participation during design and implementation.
  the systems analyst may select various styles to introduce change to the user organization.
- persuader (the mildest form of intervention) to imposer (the most severe intervention).

# Change Agent

- In between there are the catalyst and the confronter roles.
- When the user appears to have a tolerance for change the persuader
  when drastic changes are required, necessary to adopt the confronter or even the imposer style.
- No matter what style is used,
  the goal is same: to achieve acceptance of the candidate system with a minimum of resistance.

# Investigator and monitor

- the analyst collect and put together all the information to determine why the present system does not work well and what changes will correct the problem.
- This work is similar to that of an investigator- extracting the real problems from existing systems and creating information structures that uncover previously unknown trends that may have a direct impact on the organization.
- Related to the role of investigator is that of monitor. To undertake and successfully complete a project, the analyst must monitor programs in relation to time, cost, and quantity. Of these resources, time is the most important.
- If time “gets away”, the project suffers from increased costs and wasted human resources. Implementation will also get delayed.

# Architect

- As architect an analyst must create detailed physical design of candidate system.
- He aids users in formalizing abstract ideas and provides details to build the end product-the candidate system.

# Psychologist

- The analyst **plays the role of a psychologist** in the way he reaches people interprets their thoughts, assesses their behavior, and draws conclusions from these interactions.
  Understanding inter functional relationships is important.
- It must be aware of people‟s feelings and be prepared to get around things in a graceful way.
- The art of listening is important in evaluating responses and feedback.

# Salesperson

- Selling change can be crucial as initiating change.
- Selling the system actually takes place at each step in the system life cycle.
- Sales skills and persuasiveness are crucial to the success of the system.

# Motivator

- A candidate system must be well designed and acceptable to the user.
- The analyst role as a motivator becomes obvious during the first few weeks after implementation and during times when turn over results in new people being trained to work with the candidate system.
- The amount of dedication it takes to motivate users often taxes the analyst‟s abilities to maintain the pace.

# Politician

- In implementing a candidate system, the analyst tries to appease all parties involves.
- Diplomacy and finesse in dealing with people can improve acceptance of the system.
- In as much as a politician must have the support of his or her constituency,
- so is the analyst‟s goal to have the support of the users‟ staff.
- He or she represents their thinking and tries to achieve their goals through computerization.

# MIS and System Analysis

- System analysis plays central role in the development of the MIS.
- Since the MIS is a corporation of the various systems, a systematic approach in its development helps in achieving the objective of the MIS.
- Each system within the MIS plays a role which contributes to the accomplishment of the MIS objective.
- The tools of the system analysis and the method of development enforce a discipline on the designer to follow the steps strictly as stipulated.
- The possibility of a mistake or an inadvertence is almost ruled out.
- The system analysis with its structural analysis and design approach ensures an appropriate coverage of the subsystems.
- The data entities and attributes are considered completely keeping in view the needs of the systems in question and their interface with other systems.

# MIS and System Analysis

- The systems analysis begins with the output design which itself ensures that the informationneeds are considered and displayed in the appropriate report or screen format; thesubsequent design steps are taken to fulfill these needs.
- The MIS may call for an open system design. In such a case while making the systems analysis and design, the aspect of open system design is considered and necessary modification are introduced in the designed the information system.
- The user‟s application in the system development ensures the attention to the smaller detailsin the design. The users actively come out with their requirements automatically ensuring that the users are met more precisely.
- The systems analysis and designs, as a tool of the MIS development, helps in streamlining the procedures of the company to the current needs of the business and information objectives. New transactions, new documents, new procedures are brought in to make thesystem more efficient before it is designed.

# WHAT IS BUSINESS ANALYST

- BA refers to any person who is responsible for performing the business analysis functions for IT system development projects such as
- analyzing business needs,
- facilitating the elicitation of user requirements,
- documenting and prioritizing the business requirements,
- verifying the major project deliverables,
- business reengineering opportunities and workflow from business perspective,
- and facilitating effective communication between business and IT sides.

# IMPORTANCE OF AND NEED FOR A Business Analyst ROLE

(a) During IT system development, communication gap often exists between IT staff and business users due to differences in knowledge, skills, background and orientation. Users may not understand the IT terminology and technical solutions while IT staff may not understand the business terminology, functions, processes and environment, leading to difficulties in eliciting real business needs and understanding of requirements as well as affecting the design of the proposed system. The situation becomes even more challenging if the IT project is utsourced, where more communication and collaboration issues may arise especially when the external IT contractor is not familiar with the Government environment and the business processes. Therefore, a BA role is important and needed to be instituted in the IT project organization to improve the collaboration between users and IT staff throughout the SDLC.

# IMPORTANCE OF AND NEED FOR A Business Analyst ROLE

(b) At project initiation stage before the formation of a project team, BA can help explore improvement opportunities of current state by developing sound business cases to justify the investment of IT project and produce a clear project scope and estimation. BA role is especially helpful in scoping and planning of large-scale projects at project initiation stage.

(c) Where the demand and resources justify, a permanent establishment of the BA role is recommended to aid in future system maintenance, support and enhancement.

# BENEFITS OF HAVING DEDICATED BA

BA serves as the bridge between the business users and the technical IT people. Its presence will contribute significantly to the success of IT projects. The anticipated benefits of having a dedicated BA include the following:

i) More able to deliver a clear project scope from a business point of view;

ii) More able to develop sound business cases and more realistic estimation of resources and business benefits;

iii) More able to make a better project scoping, planning and management in costs and schedule especially for large-scale IT projects;

# BENEFITS OF HAVING DEDICATED BA

iv) More able to produce clear and concise requirements, which in turn provide clearer and more accurate tender requirements if the project is outsourced.

v) More able to elicit the real business needs from users, and effectively manage user expectations and changes; vi) More able to improve the quality of design for the proposed IT system so that it is able to meet real user needs and achieve the anticipated benefits;

vii) More able to ensure the quality of the system developed before passing on to end-users for review and acceptance; and

viii) More competent to arrange the comprehensive and quality test on the delivered systems or functions and provide feedback to the technical IT people

# Thank you