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| TRINITY INTERNATIONAL COLLEGE |
| CASE STUDY 3 |
| ANALYSIS |



**ANALYSIS**

* First SDLC phase where we begin to understand in depth about need for system changes.
* Divided into two phases:

1. Requirement Determination
2. Requirement Structuring

**DETERMINING SYSTEM REQUIREMENTS**

* Collection of information is the most important thing for system analysts
* Accurately understanding the user requirements will help the developers to give a perfect system design within limited budget and time.

**CHARACTERSTICS OF GOOD SYSTEM ANALYST**

* Impertinence: asks question about what exists and what might exist too in future
* Impartiality: finds best solution to a problem or opportunity
* Relax constraints: eliminates feasibility, assuming everything is possible
* Attention to detail: fitting everything together for proper functioning of system
* Reframing: every system is different and needs a creative approach

**TRADITIONAL METHODS FOR DETERMING SYSTEM REQUIREMENTS**

1. INTERVIEWING AND QUESTIONAARIES

* The personal interview is generally recognized as the most often used fact-finding technique. Interviews are the fact-finding techniques whereby the systems analysts collect information from individuals through face-to-face interaction.
* There are two types of interviews: unstructured and structured. Unstructured interviews are conducted with only a general goal or subject in mind and with few, if any, specific questions. Structured interviews on the other hand are conducted with a set of specific questions to ask the interviewee.
* Questionnaires are special purpose documents that allow the analyst to collect information and opinions from the respondents. The document can be mass-produced and distributed to respondents, who can then complete the questionnaire on their own time.
* There are two formats of questionnaire, free-format and fixed-format. Free-format questionnaire offer the respondent to record the answer in the space provided after the questionnaire.

1. DIRECTLY OBSERVING USERS

* Interviewing involves getting people to recall and convey information they have about organizational processes and the information systems that support them. People, however, are not always reliable, even when they try to be and say what they think is the truth.
* The intent behind obtaining system records and direct observation is the same, however, and that is to obtain more first hand and objective measures of employee interaction with information systems. In some cases, behavioral measures will more accurately reflect reality than what employees themselves believe.
* Employees who know they are being observed may be nervous and make more mistakes than normal. On the other hand, employees under observation may follow exact procedures more carefully than they typically do. They may work faster or slower than normal.

1. ANALYZING PROCEDURES AND OTHER DOCUMENTS

* Methods for determining system requirements can be enhanced by examining system and organizational documentation to discover more details about current systems and the organization they support.
* One type of useful document is a written work procedure for an individual or a work group. The procedure describes how a particular job or task is performed, including data and information used and created in the process of performing the job

**CONTEMPORARY METHODS FOR DETERMINING SYSTEM REQUIREMENTS**

1. JOINT APPLICATION DESIGN

* Team Based Approach for defining the requirements for new or modified systems
* It collects requirements side by side as per business needs while developing new information systems for a company that means JAD involves the client or end-users in designing and development process.
* The following is a list of typical JAD participants:

1. JAD Session Leader: The JAD leader organizes and runs the JAD. He or she remains neutral on issues and does not contribute ideas or opinions, but rather concentrates on keeping the group on the agenda, resolving conflicts and disagreements, and soliciting all ideas.
2. Users: The key users of the system under consideration are vital participants in a JAD. They are the only ones who clearly understand what it means to use the system on a daily basis.
3. Systems analysts: Members of the systems analysis team attend the JAD, although their actual participation may be limited. Analysts are there to learn from users and managers, not to run or dominate the process.
4. PROTOTYPING

* Prototyping is a repetitive process in which analysts and users build a rudimentary version of an information system based on user feedback
* The goal with using prototyping to support requirements determination is to develop concrete specifications for the ultimate system, not to build the ultimate system.

**RADICAL METHOD FOR DETERMINING SYSTEM REQUIREMENTS**

1. BUSINESS PROCESS RENGINEERING

* The overall process by which current methods are replaced with radically new methods is referred to as business process reengineering (BPR).
* The idea behind BPR is not just to improve each business process but, in a systemsmodeling sense, to reorganize the complete flow of data in major sections of an organization to eliminate unnecessary steps, combine previously separate steps, and become more responsive to future changes.

1. IDENTIFYING PROCESSES TO REENGINEER

* A first step in any BPR effort is to understand what processes need to change, what are the key business processes for the organization. Key business processes are the structured set of measurable activities designed to produce a specific output for a particular customer or market.
* BPR, therefore, requires you first to understand those activities that are part of the organization’s key business processes and then to alter the sequence and structure of activities to achieve radical improvements in speed, quality, and customer satisfaction.

1. DISRUPTIVE TECHNOLOGIES

* Once key business processes and activities have been identified, information technologies must be applied to improve business processes radically. Hammer and Champy suggest that organizations think “inductively” about information technology.