

Information – A Key Resource
oFuels business and can be the critical factor in determining the success or failure of a business
oNeeds to be managed correctly
oManaging computer-generated information differs from handling manually produced data
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Developing and Documenting Software
oActivity:–System analyst works with programmers to develop any original software–Works with users to develop effective documentation–Coders design, code, and remove syntactical errors from computer programs–Document software with procedure manuals, online help, Frequently Asked Questions (FAQ) and Read Me files
oOutput:–Computer programs–System documentation
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Identifying Problems, Opportunities, and Objectives
oActivity:–Interviewing user management–Summarizing the knowledge obtained–Estimating the scope of the project–Documenting the results
oOutput: –Feasibility report containing problem definition and objective summaries from which management can make a decision on whether to proceed with the proposed project
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Need for Systems Analysis and Design
oInstalling a system without proper planning leads to great user dissatisfaction and frequently causes the system to fall into disuse
oSystems analysis and design lends structure to the analysis and design of information systems
oUser involvement throughout a systems project is critical to the successful development of computerized systems
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The Impact of Maintenance
oMaintenance is performed for two reasons –Remove software errors, and–Enhance existing software
oEnhance software for three reasons–Include additional features–Address business changes over time–Address hardware and software changes
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Determining Human Information Requirements
oActivity:–Interviewing–Sampling and investigating hard data–Questionnaires–Observe the decision maker's behavior and environment–Prototyping–Learn the who, what, where, when, how, and why of the current system –who (the people who are involved), what (the business activity), where (the environment in which the work takes place), when (the timing), and how (how the current procedures are performed) of the business under study.
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Determining Human Information Requirements
oOutput:–Analyst understands how users accomplish their work when interacting with a computer–Begin to know how to make the new system more useful and usable–The analyst should also know the business functions– Have complete information on the people, goals, data and procedure involved
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Need for Systems Analysis and Design
Systems analysis and design, as performed by systems analysts, is used to understand what people need to be able to systematically analyze data input or data flow, process or transform data, store data, and output information in the context of a particular organization or enterprise.
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Systems Development Life Cycle (SDLC)
oThe systems development life cycle is a phased approach to solving business problems
oDeveloped through the use of a specific cycle of analyst and user activities
oEach phase has unique user activities
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Designing the Recommended System
oActivity:–Design procedures to accurately enter data–Design the human-computer interface (HCI)–Design files and/or database–Design backup procedures
oOutput–Model of the actual system
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Roles of the Systems Analyst

- oThe analyst must be able to work with people of all descriptions and be experienced in working with computers
- oThree primary roles:
 - Consultant
 - Supporting Expert
 - Agent of change

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Qualities of the Systems Analyst

- oProblem solver
- oCommunicator
- oStrong personal and professional ethics
- oSelf-disciplined and self-motivated

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Analyzing System Needs

- oActivity:
 - Create data flow diagrams
 - Complete the data dictionary
 - Analyze the structured decisions made
 - Prepare and present the system proposal
- oOutput:
 - Recommendation on what, if anything, should be done

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Implementing and Evaluating the System

- oActivity:
 - Train users
 - Plans the conversion from old system to new system
 - Review and evaluate system
- oOutput:
 - Trained personnel
 - Installed system

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Furthermore, systems analysis and design is used to analyze, design, and implement improvements to the computerized information systems that support users and the functions of businesses. As an outside consultant, you will rely heavily on the systematic methods discussed throughout this text to analyze and design appropriate information systems for users working in a particular business.

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Testing and Maintaining the System

- oActivity:
 - Test the information system
 - System maintenance
 - Maintenance documentation
- oOutput:
 - Problems, if any
 - Updated programs
 - Documentation

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As the supporting expert, you are not managing the project; you are merely serving as a resource for those who are managing it. If you are a systems analyst employed by a manufacturing or service organization, many of your daily activities may be encompassed by this role.

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Consultant

A systems analyst frequently acts as a systems consultant to humans and their businesses and, thus, may be hired specifically to address information systems issues within a business. In this role, an analyst draws on professional expertise concerning computer hardware and software and their uses in the business. As an analyst, you are an agent of change whenever you perform any of the activities in the systems development life cycle (discussed in the next section) and are present and interacting with users and the business for an extended period (from two weeks to more than a year).

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Figure 1.1 The Seven Phases of the Systems Development Life Cycle

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Supporting Expert

Another role that you may be required to play is that of supporting expert within a business for which you are regularly employed in some systems capacity.

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Maintenance Impact

- oOver time the cost of continued maintenance will be greater than that of creating an entirely new system
- oAt that point it becomes more feasible to perform a new systems study

Systems analysts seek to identify and solve the right problems by performing a thorough analysis of the client's system. It also means that outside analysts are at a disadvantage because an outsider can never know the true organization culture. In addition, you will rely on information systems users to help you understand the organizational culture from others' viewpoints.

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Agent of change

The most comprehensive and responsible role that the systems analyst takes on is that of an agent of change, whether internal or external to the business.

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Such hiring can be an advantage

because outside consultants bring with them a fresh perspective that people in an organization do not possess. Copyright (C) 2019, 2014, 2011 Pearson Education, Inc. Copyright (C) 2019, 2014, 2011 Pearson Education, Inc. Hence, you must interact with users and management (if they are not one and the same) from the very beginning of your project. Without their help, you cannot understand what they need to support their work in the organization, and real change cannot take place Copyright (C) 2019, 2014, 2011 Pearson Education, Inc. Copyright (C) 2019, 2014, 2011 Pearson Education, Inc. Your presence in the business changes it. As a systems analyst, you must recognize this fact and use it as a starting point for your analysis.