3.

Information is now considered a key resource and must be managed the same as any other key resource of an organization.

Decision makers now understand that information is not just a byproduct of doing business

Needs to be managed correctly. Costs are associated with the production, distribution, security, storage, and retrieval of all information. Its strategic use for positioning a business competitively should not be taken for granted.

With the availability of networked computers, along with access to the Internet and the WWW we are in the midst of an information explosion. The managing of computer-generated

7.

Eliminates the tedium of necessary operational transactions and reduces the time once required to perform them manually.

TPS are boundary-spanning systems that permit the organization to interact with external environments.

It is essential to the day-to-day operations of business that Transaction processing systems function smoothly and without interruption.

8.

OAS – support data workers, who do not usually create new knowledge but rather analyze information so as to transform data or manipulate it in some way before sharing it with, or formally disseminating it throughout, the organization and, sometimes beyond.

KWS – support professional workers such as scientists, engineers, and doctors by aiding them in their efforts to create new knowledge and by allowing them to contribute it to the organization or to society at large.

(CAD) Computer Aided Design - Automates creation, revision of products, and services

Virtual Reality - Interactive software creates simulations of real world activities

Investment workstations - Special work station to access and manipulate massive amounts of financial data

9.

MIS – Support management functions of organization. Transaction processing systems are a subset of management information systems. MIS includes a wider spectrum which includes decision analysis and decision making.

Management information systems use a database which contains both data and models that help the user interpret and apply the data. The product produced by Management information systems is that used in decision making.

DSS – Much like an MIS except that it emphasizes the support of decision making in all its phases, although the actual decision is still left up to the decision maker. Closely tailored to the person or group using them.

ES – Uses the approaches of AI reasoning to solve the problems put to them by business and other users. These systems select the best solution to a problem or a specific class of problems.

Expert systems consist of:

knowledge base

inference engine – connects the user with the system by processing requests

user interface

10.

ESS – Help executives to make decisions at the strategic level by providing graphics and communication support technologies in accessible places. They help executives address unstructured decision problems by creating an environment which helps them think about strategic problems in an informed way.

GDSS – aids in group collaboration permitting group members to interact with electronic support such as polling, questionnaires, brainstorming, and scenario creation. Can be used to minimize negative group behaviors – lack of participation, domination by vocal group members, and “group think” decision making.

CSCWS – This is the more general term for group decision support systems.

11.

As new technologies are adopted they will need to be integrated with traditional systems. Systems analyst will be using these new technologies in helping people work to integrate ecommerce applications into traditional businesses or as they begin entirely new ebusinesses.

14.

Instituting ERP requires enormous commitment and organizational change.

Generally systems analysts server as consultants to ERP endeavors that use proprietary software.

To properly design, install, maintain, update, and use a ERP package, analysts as well as some users require vendor training, support, and maintenance.

15.

Analysts are being called to design a plethora of new systems and applications.

May be asked to develop under the standard called Bluetooth.

Intelligent agents are software that can assist users with tasks in which the software learns preferences from of users over time and then acts on those preferences.

Microsoft is developing software based on Bayesian statistics and decision making theory in combination with monitoring a user’s behavior concerning the handling of incoming information. Referred to as notification manager software that also places a dollar value on each piece of incoming information.

16.

A movement to create, distribute, share and modify software which is not proprietary.

It’s not a monolithic movement instead it has been categorized into four community types:

Ad hoc

Standardized

Organized

Commercial

The four communities in turn differ from each other on six key dimensions:

General structure

Environment

Goals

Methods

User community

Licensing

18.

The systems analyst systematically assesses how users interact with technology and business function by examining the inputting of information with the intend of improving organizational processes.

The analyst needs to play many roles, balancing several at the same time.

Consultant: Advantage – can bring with them a fresh perspective that other people in an organization do not possess.

Disadvantage – true organizational structure can never be known to an outsider.

Supporting expert:

Draws on professional expertise concerning computer hardware and software and their uses in the business.

Serves as a resource for those who are working on and managing other projects

Agent of change:

A person who serves as a catalyst for change, develops a plan for change, and works with others in facilitating that change.

19.

The successful systems analyst must possess a wide range of qualities.

Problem solver – views the analysis of problems as a challenge and enjoys devising workable solutions.

Communicator – capable of relating meaningfully to other people over extended periods over time. Need enough computer experience to program, to understand the capabilities of computers, glean information requirements from users, and communicate what is needed to programmers.

Strong personal and professional ethics – they need to shape their client relationships

Self-disciplined and self-motivated – must be able to coordinate other people as well as innumerable project resources.

22.

HCI is that aspect of a computer that enables communications and interactions between human and computer. Implementing HCI into SDLC implies emphasizing people rather than the work to be done or the IT that is involved.

Adopting HCI principles examines a variety of user needs:

physical or ergonomic factors

usability factors

pleasing, aesthetic and enjoyable aspects

behavioral aspects

HCI can be thought of as a human-centered approach that puts people ahead of organizational structure

23.

Critical to the success of the rest of the project, because no one wants to waste time addressing the wrong problem.

Problems – generally the reason the analyst was called in in the first place.

Opportunities – situations that the analyst believes can be improved through the use of computerized information systems.

Objectives – how can the business reach its objectives by addressing specific problems or opportunities.

24.

Determining human needs of the users involved.

Uses activities to pose and answer questions concerning human-computer interaction:

What are the users strengths and limitations?

Trying to understand what information users need to perform their jobs.

Who – the people who are involved

What – the business activity

Where – the environment in which the work takes place

When – the timing

How – how the current procedures are performed

Why – why the system uses the current system

25.

Data Flow Diagrams – chart the input, processes, and output of the business’s functions in a structured graphical form.

Data dictionary – lists all the data items used in the system, as well as their specifications.

Structured decisions made – those for which the conditions, condition alternatives, actions, and action rules can be determined.

Structure decision methods:

structures English

decision tables

decision trees

System proposal – summarizes what has been found

about users

usability and usefulness of current system

provides cost/benefit analysis of alternatives

makes recommendations on what (if anything) should be done

The recommendation or solution is based on the analysts individual qualities and professional training and their interaction with users.

26.

Uses the information collected earlier to accomplish the logical design of the information system:

designs procedures for users to help them accurately enter data

provides for users to complete effective input to the information system

devises the human-computer interface

designs files or databases that will store the data needed by decision makers

designs output (onscreen or printed)

designs controls and backup procedures

27.

The analyst uses structure charts and pseudocode to communicate to the programmer what needs to be programmed.

Documentation includes:

procedure manuals

online help

Web sites

“Read Me” files

Because users are involved from the beginning, the documentation should address the questions they have raised and solved jointly with the analyst.

28.

Testing should take place first with sample data and then with actual data.

Testing is done by both the programmers and the analyst

The maintenance started here is carried out routinely through the life of the system.

updates may be performed via a vendor site on the Web.

29.

Training users to handle the system.

System conversion – converting files from old formats to new ones, or building a database, installing equipment, and bringing the new system into production.

Actually evaluation takes place during every phase.

30.

Computer programs must be modified and kept up to date.

Reasons for enhancing existing software –

users request additional features

business changes over time

hardware and software change

31.

Computer programs must be modified and kept up to date.

Reasons for enhancing existing software –

users request additional features

business changes over time

hardware and software change

32.

Area under the curve represents the total dollar amount.

Eventually maintenance exceeds the cost of a creating a new system. At that point a new systems study should be untaken.

34.

Increasing analyst productivity –

automates the drawing and modifying of diagrams

automates the sharing of work thus reducing the time to collaborate with group members

facilitates interaction among team members by making diagramming a dynamic, interactive process.

Improving Analyst-User Communication – CASE tools foster greater, more meaningful communication among users and analysts.

Integrating Life Cycle Activities – integration of activities through the underlying use of technologies makes it easier for users to understand how all the life cycle phases are interrelated and interdependent.

Accurately Assessing Maintenance Changes – enable users to analyze and assess the impact of maintenance changes.

35.

Upper CASE support analyst and designers

Lower CASE support programmers and workers who must implement the systems design via Upper CASE.

36.

All the information about the project is stored in the CASE repository. From the CASE repository analysis reports can be produced to show where the design is incomplete or contains errors.

The repository is a collection of records, elements, diagrams, screens, reports, and other information.

By modeling organizational requirements and defining system boundaries the analyst can visualize how the project meshes with other parts of the organization.

37.

CASE code generation has several advantages:

1. Quicker than writing computer programs.

2. Time spent on maintenance decreases.

3. Code can be generated in more than one computer language.

4. Cost-effective for tailoring systems purchased from third-party vendors.

5. Generated code is free from computer program errors.

39.

Generally works well in situations where complicated information systems are undergoing continuous maintenance, adaptation, and redesign.

40.

Agile approach - Has specific philosophy, practices and values to address rapidly changing user requirements

Prototyping – offered as a response to the long development times associated with the SDLC approach and to the uncertainty often surrounding user requirements.

ETHICS – a sociotechnical methodology combining social and technical solutions.

Project champion approach – adopts the strategy of involving one person from each area affected by the system to ensure the system’s success.

Soft Systems Methodology – a way to model a world that is often chaotic by using “rich pictures”.

Multiview – a way to organize and use elements of several competing methodologies.