MANAGEMENT

PRINCIPLES AND APPLICATIONS

UNIT-2

PART-XXIII

EVALUATION OF AN APPROPRIATE DECISION SUPPORT SYSTEMS

The DSS design and development process involves input from every aspect of the business process that is going to be affected within the firm. Business executives and managers should familiarize themselves with DSS so that they can more accurately communicate their needs and requirements, making it easier for the formulation of deliverables, outline of capabilities, outcomes, needs and what decisions should be supported by the proposed DSS.

The following steps can be used as a methodology to evaluate, design and implement a DSS

(i) Firm's strategic Focus

First and foremost, the organization wishing to deploy a DSS needs to clearly outline its strategic focus within the industry, with relevant emphasis on future objectives and the direction in which the firm is moving. This will in turn provide the basis for information requirements and scalability of the DSS and will give a

framework for the project team charged with designing and implementing the system.

(ii) Creating an Evaluation Team

Using a multi-disciplinary team approach with individuals from database, networking, communications, accounting, etc. a project team should be selected based that will backgrounds and expertise. This team will perform an initial analysis provide the blueprint for the rest of the project. Team formation (forming, norming, storming and performing) and group dynamics are key aspects, which ensures optimal performance of the team as a whole. Consequently, the following issues should be considered during this important phase of the project:

- Specify roles and delegate responsibilities

- Anticipate and manage time commitment

- Choose appropriate leadership

- Create a charge/direction for the team with a clearly defined methodology

(iii) Defining Requirements

The more the team know about DSS categories, the better they will be able to fine-tune the specifications of the system and select the appropriate type of the Decision Support Systems. A multi-disciplinary team approach is necessary with feedback from all relevant stakeholders who are involved in the implementation of the DSS. Team members should be made responsible to necessary communicate with other members of the organization who will be affected by the selected DSS and they

should try to express all the relevant needs from different players in the firm. It is crucial to elicit "buy-in" from all individuals who will use or will be affected by the Decision Support Systems since non-compliance by some parties might dilute the strength of the system.

- Issues to consider:
- ➢ What functions will managers perform, now and in the future, with the DSS?
- ➢ What controls and security are needed?
- ➢ What are the operational performance requirements?
- ➢ What is the design concept?
- ➢ How does it fit into the current architecture and network layout?

(iv)System Design and Evaluating Products/Alternatives

- Clearly specify deliverables
- Include a preliminary evaluation of both products and vendors available
- "off-the-shelf" DSS are hard to find and most organizations have to adopt a specific DSS to suite their individual business needs
- Functional screening and detailed review based on predetermined specifications and criteria:

- ➢ Cost, design, support and installation issues should be addressed separately and as a whole
- ➢ Is the "package" compatible with the needs of the company?
- ➢ Hardware and software requirements

- Includes performance evaluation:

  ➢ Can the system handle heavier loads?

  ➢ What is the scalability (horizontal and vertical)?

  ➢ What are the direct and indirect costs?

  ➢ Stability, reliability and consistency of system?

  ➢ Quality of information provided: timely, accurate, reliable, unbiased?

  ➢ Restrictions of systems

  ➢ Capabilities of system

  ➢ After implementation support? Costs involved?

(v) Negotiating with Vendors

Review vendors according to product offerings, reputation in industry, financial stability, experience in similar projects/systems. Also clarify issues such as

- Service contract

- Price of package

- Time frame of deliverables

- Review vendors offerings and compare with other vendors

- Vendors involvement with implementation/deployment of system

- Training of users and after implementation support.

(vi) Conclusion

DSS can be extremely beneficial to any organization's overall performance However, DSS can also be the cause of great confusion, misperception and even inaccurate analysis-these systems are not designed to eliminate "bad" decision DSS are there to facilitate a manager in making operational decisions, but the ultimate burden of responsibility lies with the manager. Managers can sometimes be over-optimistic in their expectations of a DSS and develop a unrealistic reliance on the system (Power, C.J; Caveat Emperor). Also, if managers continue to ask the "wrong" questions (queries), the benefit of the systems is already partially lost. When managers have preconceived notions and misconceptions about certain operational function, a DSS can magnify the harm by justifying the manager's position simply because of the logic of the managers' queries or because the manager draw the wrong conclusion about a certain output. Users of the DSS should be "critical" consumers and never replace the systems functions with their own "clinical reasoning".

A holistic understanding of all the models, templates and abstractions that the Decision Support Systems are built on will give managers a better understanding of how to approach opportunities, challenges and threats within the organization.

The design methodology for Decision Support Systems provides the foundation on how the systems fits into the operations of the firm and how it can enhance quality decisions for managers. This area of analysis, design and implementation should be viewed with almost a superstitious awe, since failure to produce, the right system can lead to more damage than good if managers are unaware of the implicit logical layout of their system.

However, Decision Support Systems remains a tool that can provide firms with a sustainable competitive advantage and in many industries a robust Decision Support Systems are the rule rather than the exception.

As technologies evolve, Decision Support Systems will change and adapt to the challenges of the new economy and firms should thus continuously be aware of new landscapes that are being formed and streamline their Information Systems applications with current industry trends and technological advancements.