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Information Systems Analysis

*Topic 6:
Organisation-Oriented and People-Oriented IS
Methodologies*

Objectives

- Define and explain the term organisation-oriented IS methodology
- Identify the types of organisation-oriented IS methodologies
- Identify advantages, disadvantages of organisation-oriented IS methodologies
- Define the term people-oriented IS methodology
- Identify the types of people-oriented IS methodologies
- Identify the advantages, disadvantages of people-oriented IS methodologies
- Define and explain the abbreviation ETHICS
- Define and explain the term Agile methodology
- Evaluate the organisation-oriented IS, ETHICS, Agile methodology

Organisation-Oriented IS Methodology

- In the main, refers to the hard approach analysis methodologies, such as SSADM.
- A combined hard/soft approach, such as Multiview can also be used for analysis.

Types of Organisation-Oriented IS Methodologies

- Can include the following methodologies that have been looked at so far:
 - SSADM
 - Multiview (to an extent)

Application of Organisation-Oriented IS Methodologies

- Can be applied to all projects – large or small but is perhaps more appropriate for complex and large-scale projects.

Advantages of Organisation-Oriented IS Methodologies

- Each step of SSADM needs to be completed before progression onto the next one and this aims to ensure that all procedures associated with each step are undertaken.
- It is easy to measure progress by referring to the objectives defined for each step.
- It ensures thorough planning and scheduling.

Disadvantages of Organisation-Oriented IS Methodologies

- There is a lack of flexibility, e.g. if the requirements are not specified correctly or change later in the project, it can be expensive to repeat the requirements stage or it may not be possible to return to this stage.
- There is often limited user involvement as this method tends to concentrate on the technical requirements.
- A project can often take longer to deliver than other methods that allow stages in a project to be repeated, e.g. the Agile methodology.

People-Oriented IS Methodology

- Refers to the soft approach to the analysis of information systems, such as SSM
- A combined hard/soft approach, such as Multiview could also be used

Types of People-Oriented IS Methodologies

- Multiview
- ETHICS
- RAD/RSD
- JAD
- Agile

Application of People-Oriented IS Methodologies

- Can be applied to all projects but is particularly suited to smaller-scale projects that are more people-oriented than technology-oriented.

The ETHICS Methodology - 1

- Refers to the:
Effective
Technical
Human
Implementation of
Computer-based
Systems
- It focuses on the interaction of technology and people and aims to produce work systems which are technically efficient and offer greater job satisfaction.

The ETHICS Methodology - 2

- Considers job satisfaction to be as important as technical considerations and assesses this with the following five measurements:
 - *Knowledge Fit*
 - *Psychological Fit*
 - *Task-Structure Fit*
 - *Efficiency Fit*
 - *Ethical Fit*

The ETHICS Methodology - 3

- ***The Knowledge Fit:***
 - assesses whether or not an employee's job allows them to use and develop their skills and knowledge
- ***The Psychological Fit:***
 - assesses whether or not an employee's job allows them to further their achievements, recognition, advancement or status
- ***The Ethical Fit:***
 - assesses whether or not the values or philosophy of the employer are compatible with those of the employee

The ETHICS Methodology - 4

- ***The Task-Structure Fit:***

- assesses whether or not a job meets an employee's requirements for variety, interest, feedback, task identity and autonomy and if the job is demanding and fulfilling
- assesses the effect of technology. Simplification and repetitiveness can reduce fulfilment.

- ***The Efficiency Fit:***

- assesses whether or not the job offers financial rewards and incentives and if work controls and supervisory controls are acceptable to an employee

The ETHICS Methodology - 5

- Social objectives and alternatives are concerned with what are the most important social issues related to the system.
- Examples of social issues might be:
 - taking pressure off staff who have too much paperwork
 - ensuring better communication between staff
 - developing better training and career progression
 - reducing boring and repetitive tasks

The ETHICS Methodology - 6

- However, these social objectives and alternatives can be expensive and time-consuming and the analyst needs to consider:
 - What are the costs of the alternatives, in money, time and in terms of work disruption?
 - What are the benefits of the alternatives, in the short, medium and long term?
 - Do the benefits outweigh the costs?
 - Which alternative represents the best value in meeting the social objectives?

Rapid Methodology (RAD/RSD)

- Refers to ***Rapid Analysis Development / Rapid System Development***
- A people-oriented methodology that is similar to SSADM but encourages more user involvement, particularly user participation in the specification review
- The feedback of the analysis and specification tends to focus on the user interface rather than the functionality of the system.

Joint Application Design (JAD)

- Involves users in the analysis process by making them responsible for listing their requirements and informing the analyst of them
- The analyst develops an alternative list of specifications, which are evaluated and discussed with user representatives.
- A final list is then agreed.

Agile Methodology

- It encourages teamwork and accountability
- It attempts to align analysis and development with user needs and the goals of the organisation

Advantages of People-Oriented IS Methodologies

- Although there may be problems with the current system, staff may fear that a new system will cause disruption and lower staff morale. Therefore, identifying the strong points of a system and ensuring that they are retained will affect job satisfaction and quality of working life, which in turn will benefit output and productivity.

Disadvantages of People-Oriented IS Methodologies

- It is not always easy for users to define and explain what they require from a system.
- Users may be unable to participate in the analysis process due to work commitments.

Summary

This topic cover:

- Types of organisation-oriented Information Systems methodologies
- Their advantages and disadvantages
- Potential effectiveness
- People-oriented Information Systems
- Their advantages and potential effectiveness
- ETHICS, its purpose and potential
- Agile methodology, its purpose and potential

References

- Avison D. and Fitzgerald G. (2002). *Information Systems Development: Methodologies, Techniques and Tools*, 3rd Edition. McGraw-Hill Education