UNIT 15: PROJECT SCHEDULING

UNIT STRUCTURE

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15.1 LEARNING OBJECTIVES

After going through this unit, you will be able to –

- understand Project scheduling
- learn about system failure
- explain Project management chart
- develop Project management software

15.2 INTRODUCTION

In the previous unit, we discussed various implementation issues of a system. In this unit, we will discuss about project scheduling.

Project-task scheduling is a noteworthy project planning action. It comprises deciding which activity would be taken up when. A software project manager does the following to schedule a project. It is to identify all the functions required to complete a project. In the beginning, a project manager always defines the project-related activities. Let's say, if you are acting as a project manager for a software development project at KKHSOU, then you should define the project-related activities as follows:

i) Plan schedule management

ii) Defining the workflow diagram, activities, and sequence of activities

such problems, and what steps to take when they come. They should be provided with troubleshooting lists of possible problems along with the solutions, and in case of extraordinarily difficult problems, they should be provided with names and telephone numbers of individuals to contact.

User Training:

End user training is a vital part of the implementation phase because they are the one who will be finally using the software. They will be the first one to face any kinds of problems, failures or malfunctions. So, it becomes utmost important to train them, make them aware of not only the easier and user-friendly portions but also of the different risks and pressure points of the systems. They should also be trained to perform basic or common troubleshooting.

Training Methods

Instructor-led training: To carry out instructor-led training, both trainers and trainees have to meet at the same time, but not necessarily at the same place. The training session could be one-on-one or collaborative. It is of two types:

- **Virtual Classroom**: In this training, trainers must meet the trainees at the same time, but they can be located at different places. The primary tools used here are: video conferencing, text based Internet relay chat tools, or virtual reality packages, etc.
- **Normal Classroom**: The trainers must meet the trainees at the same time and at the same place. The primary tools used here are blackboard, overhead projectors, LCD projector, etc.

Self-Paced Training: In this case, there is no requirement for the trainers and the trainees to meet at the same place or at the same time. The trainers will create some learning courses and provide them to the trainees who will study these courses by themselves at their own convenience. It is of two types:

- **Multimedia Training**: In this training, courses are presented in multimedia format and stored on CD-ROM.

- **Web-based Training**: In this training, courses are often presented in hyper media format and developed to support internet and intranet. It is more interactive then multimedia based training as it provides the necessary information only when the user wants it by clicking the appropriate hyperlink.

14.4.2 File Conversion

When the process of transferring the software from the old system to the new systemis carried on, files may be required to be converted one format into another. For example, file in Microsoft Access format may be required to be converted into SQL format. The main concern here is that when the old files are copied to the new system, the files should remain intact and should produce identical files without any loss of information. The files to be transferred are first determined, and then the required data is converted. A file comparison program may be used to verify the accuracy of the file. Sometimes, the vendor's staff or an outside agency is paid to perform this file conversion process.

Test Files creation

To test the accuracy of files being transferred to the new system, we create test files on the old system, which are then copied on to the new system and finally tested. The test file should offer the following:

- Predictable results
- Previously determined output results for checking
- Printed results in seconds
- Simplified error handling routines
- Ability to build from a small number of records.

Systems are prone to errors.So, to control frauds and detect mistakes, an audit trail can be established.

They will be the first one to face any kinds of problems, failures or malfunctions. So it becomes utmost important to train them, make them aware of not only the easier and user-friendly portions but also of the different risks and pressure points of the systems. They should also be trained to perform basic or common troubleshooting.

Ans. to Q No6: In virtual classroom, the trainers need not be present at the same place as the trainees because the training can be performed by using tools like video conferencing, text based Internet relay chat tools, or virtual reality packages, etc.

Ans. to Q No7: Self-paced training does not require the trainers and the trainees to meet at the same place or at the same time because here the trainers can create learning courses and provide them to the trainees, who will study the courses by themselves at their own convenience. It is of two types: Multimedia Training and Web-based Training.

Ans. to Q No8: Along with the conversion of files and different forms, sometimes the physical facilities may also be required to be changed. For example, the new system might require the hardware to be kept under constant monitoring; so cameras, monitors and barriers might have to be installed in the existing physical-facility.



14.8 MODELQUESTIONS

Q1. Explain why conversion is important and what are the different conversion methods?

Q2. What is significance of Training in the Implementation process? Who are the people required to train and how you will train them?

Q3. What are the different training methods available? Briefly explain them.

Q4. Explain what is File conversion and Test Files creation?

Q5. Explain in detail the activity network for conversion.

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- Listing all the new documents and procedures that are required.
- Identifying the controls to be used in each activity.
- Identifying the responsibility of person for each activity.
- Verifying conversion schedules.

Ans. to Q No3: Parallel Conversion: In Parallel conversion, both old and new systems are used simultaneously. If in case the new system fails then the old system will provide a fallback, thus providing a greater sense of security. Here the cost may increase as we have to keep on running both the systems.

Direct Cutover Conversion: In Direct cutover conversion, the old system is completely replaced by the new system. Since there is no fallback, it requires meticulous planning as we have to ensure that the new system works at all cost. The advantage is that the benefit and utilities of the new system can be realized immediately.

Ans. to Q No4: Even if a software product is well designed and technically superior, but if the people who are supposed to use it do not know how to use it, then the software may turn out to be a failure. So, the intended people who will actually use the software should know how to use it, what their specific roles will be, and what the system will do or will not do under different conditions.

Ans. to Q No5: Training Systems Operators: As software can have different constraints and limitations, so the systems operators must be trained properly so that they can graciously handle all kinds of outcomes and issues. The operators should be acquainted with all the common types of errors or anomalies that might occur, they should know how to recognize such problems, and what steps to take when they come. They should be provided with troubleshooting lists of possible problems along with the solutions, and in case of extraordinarily difficult problems they should be provided with names and telephone numbers of individuals to contact.

User Training: End user training is a vital part of the implementation phase because they are the one who will be finally using the software.

14.4.3 Forms and Displays conversion

During this activity, old forms and displays are withdrawn and new ones are instituted. Various controls are implemented to ensure the system's reliability, integrity and security.

14.4.4 Conversion of Physical Facilities

Along with the conversion of files and different forms, sometimes the physical facilities may also be required to be changed.For example, the new system might require the hardware to be kept under constant monitoring; so cameras, monitors and barriers might have to be installed in the existing physical facility.

14.4.5 Conversion of Administrative Procedures

This includes scheduling, determining job priorities on the system, and implementing personnel policies for managing the system. The administrative personal / supervisor are trained to handle various emergencies and procedures. They are taught how to collect information and present them to the management.



EXERCISE

1. Training users is a trivial part of Implementation process. (True or False)
2. Training of System operators but training of users is not required. (True or False)
3. In instructor-led training, it is necessary that both trainers and trainees should always be present at the same place. (True or False)
4. In _____, there is no requirement for the trainers and the trainees to meet at the same place or at the same time.



CHECK YOUR PROGRESS

Q4: Why is training the users of the system important?

Q5: How do you train Systems operators and end-users?

Q6: Why in virtual classroom, the trainers need not be present at the same place as the trainees?

Q7: Why self-paced training does not require the trainers and the trainees to meet at the same place or at the same time?

Q8: Why sometimes conversion of physical facilities might be required?



14.5 LET US SUM UP

- Conversion is the part of the implementation plan where the process of transferring the software from the old system to the new one occurs.
- If we have a proper conversion plan then it will provide understandable and structured approach to improve the communication between management and project team.
- Conversion plan contains description of all the activities that must occur during implementation of the new system.
- There are four methods of conversion: Parallel Conversion, Direct Cutover Conversion, Pilot Approach and Phase-In Method.
- The activity network for conversion consists of the following sections: Training, File Conversion, Forms and Displays conversion, Conversion of physical facilities and Conversion of Administrative Procedures.
- If proper training is not imparted to the people who are supposed to use it, then the software may become a failure.
- Systems operators and end-users should be trained properly so that they can graciously handle all kinds of outcomes and issues.

- There can be instructor-led as well as self-paced training methods.
- The main concern of file conversion is that when the old files are copied to the new system, the files should remain intact and should produce identical files without any loss of information.
- Along with the conversion of files and different forms, sometimes the physical facilities may also be required to be changed.



14.6 FURTHER READINGS

1. Wixom, B. H., Roth, R. M., (2008), Systems Analysis and Design, Wiley Publishing
2. Kendall, K. E., Kendall J. E., (2019), Systems Analysis and Design, Pearson



14.7 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q No1: Conversion is the portion of the implementation plan where the process of transferring the software from the old system to the new one occurs. If we have a proper conversion plan then it will provide understandable and structured approach to improve the communication between management and project team. The users, project managers, software developers and other engineers meet and review the project plan, the system test documentation and the implementation plan. Once the conversion plan is approved, files are converted, parallel processing between the existing and the new systems is initialized and results of computer runs from the new system are saved. After conversion is completed, parallel processing is discontinued, implementation results are documented and the new system becomes operational.

Ans. to Q No2: Conversion plansinclude the following activities:

- Naming all files for conversions.
- Identifying the data requirements to develop new files during conversion.