

Unit – I 2 Marks

01 What is a project?

A. The term project seems to be a buzzword that means a lot of different things to different people. Anything, for example, from a secretary's "project" to clean out an old filing cabinet to an engineer's "project" to create a multi-million dollar facility. Even these extremes have one thing in common: the application of work or effort to create a new situation or product, where "product" is used in its broadest sense. So a project can be any undertaking with a definite starting point and one or more defined objectives the completion of which spell out the end of the project. It should be added that for one reason or another most projects are restricted by limits imposed on resources (effort, equipment and materials) time and money.

02 Why do I need project management?

A. Another way of asking this question is "What if I don't bother with project management?" The fact is, all projects demand some degree of attention to make them happen. Even the secretary needs to deliberately plan to set aside some time to clean out that filing cabinet, otherwise the job will never get done! Believe it or not exactly the same holds true no matter what the size of the project. Indeed, the bigger the project the more difficult it is to get it started.

But most projects also require some degree of coordination of resources, and unless this is carefully planned either things will be done in the wrong order or there will be constant conflict and crisis. All of which will ultimately consume a lot more resources, time and money than necessary.

03 Why do projects need planning?

A. A fundamental of managing projects is first to plan and then to accomplish. Of course, good project management is a lot more complex as we shall see shortly. In the simplest of terms, if you do not know where you are going you neither know how to get there nor even when you have arrived!. Moreover, it doesn't really matter which road you take nor how long it takes to get there.

So a good project plan is like a route map – the destination is clearly spelled out and the best way to get there is chosen before starting.

04 What level of project management do I need?

A. This is a difficult question to answer because it very much depends on the size, duration and technical complexity of the project, as well as how many people are involved. Some projects have been successfully run by a project manager "keeping it all in his head". That may be fine, but when the project manager falls sick so does the project! If you are managing a project for someone else (your client) then at a very minimum you should plan on ways and means to track the definition of the client's requirements and/or assumptions made, the standard of quality agreed upon that will serve the client's purpose, the time available for completion, and the budget for the work.

As projects increase in size and complexity, increasingly sophisticated systems and procedures are available to track each of these core functions. On even larger projects it may well be necessary to have trained and dedicated staff attending to each function separately.

05 If I am empowered, why do I need project management?

A. If you have been empowered it probably (or should) mean that you have been given the authority and responsibility to undertake the work necessary without constant surveillance and supervisory intervention. It should also mean that you have been given a coherent and articulated vision of the thing to be achieved and, subject to appropriate reporting (accountability), you are left to get on with the job. If you are the only person involved in the work then all you have to worry about is your own time and

resources required to accomplish the task at hand. To do a job well, even that takes personal training and mental discipline.

As soon as others are involved, they are entitled to the same consideration and to share the empowerment process. It means building a committed and coordinated team environment, which is one of the key elements of good project management — successfully managing and coordinating human resources.

The manager who believes that it is their prerogative alone to organize, direct and control the entire project is doomed to poor results. Empowered people work more enthusiastically, respond faster, take a pride in their work and the results show up in the timeliness and quality of the product.

On the other side of the coin, your own empowerment means nothing if those from whom you will need support for the project have not been properly informed, especially in a matrix type of environment as most organizations really are. So check it out. If anyone is not aware of your new authority and responsibility, go back and ask for the situation to be clarified.

06 Is that all there is to project management?

A. That is by no means all. There are many aspects to good project management that require attention. In summary these may be identified as the management of scope, quality, time cost, risk, human resources, contract/procurement and communications.

Each of these eight functional areas, as they are called, will require careful integration. In addition, a successful project is not only one which meets its objectives on paper but is also seen to be successful. In other words it satisfies the customers. The eight functions together with the considerations of integration and stakeholder satisfaction are the ten attributes of effective project management.

07 If I only have a small project, do I really need to bother with all of that?

A. In any project of any size, each of these ten attributes requires some degree of attention. However, the extent of that attention will vary according to the nature and content of the project in question. If you want to reap the satisfaction and recognition of the successful project manager, consider them all! So let's look at each in turn.

08 How important are the stakeholders?

A. The most important stakeholder, of course, is your client or customer. However, that may be more than one person — the sponsor and the user, for example. But there can also be many other stakeholders as in the case of environmentally sensitive or publicly exposed projects. Such situations require special management attention. Even in a simple project, such as introducing an administrative change, there will likely be people who are indirectly affected and who should be considered.

09 How do I get started?

A. At one and the same time this step is perhaps the most important and least understood of all the steps in the project management process. Whole books have been written on this topic alone, yet there are a few basic guidelines which are helpful:

1. Make sure you know who is your primary client, to whom you will be reporting on project progress, and from whom you will be receiving direction as the project process evolves.
2. Make sure that you understand your client's goals and objectives and that you will be able to document them in increasing detail as part of developing a project plan which you will eventually be able to execute.

3. Make sure you understand the context of the project — Why is it being done? Why now? What are the implications and consequently the risks that will be faced? Do the delivery date and budget look realistic? What are the tangible and intangible benefits? Does it look like the project is worth doing at all? In short, will it be successful?

4. Document all of this and, together with any assumptions that you may have to make, obtain your client's concurrence. You may well be faced with some hard negotiating to do, but in the end you will have an initiation document which, once approved by the appropriate funding authority, will be your project mandate to proceed and give you the best chance for success.

With this out of the way, you are now off and running and the next steps will be to build a project team, develop a project plan and identify the additional information and resources required for the project. What is a successful project?

A. Since every project has an element of newness about it there will be risks and difficulties to be surmounted. These require decisions and possibly trade-offs between competing project objectives such as cost and time, but in the last analysis, the successful project is one which satisfies the client and the stakeholders, and is seen to do so in its most important dimension, quality. Quality is defined as conformance to requirements.

10 How do I get my project organized?

A. Every project that involves more than one person requires a project team to get the work done. Without doubt, building a motivated project team will be your primary and most critical task, because the success of the project will rely heavily on choosing the right team members and gaining their commitment to the project's objectives. If possible, assembling the project team and dividing the project's scope into manageable pieces (developing a work breakdown structure) should go hand in hand. In this way, help and ideas are obtained in developing the project plan and, as the skills required to execute the project plan become apparent, so can additional people resources be identified and recruited as necessary.

Politically, it will be prudent to utilize the abilities of permanently assigned staff to fulfil these requirements but if there are required skills that are not available, then other sources must be identified and pursued. Many texts have been written on identifying suitable team members, securing their commitment and maintaining their motivation, subjects which are beyond the scope of this presentation. Nevertheless, this part of a project manager's job is probably the most time consuming and, as stated earlier, the most critical. It may also be the most difficult and makes the difference between the effective and the ineffective manager. Remember, projects are built by people!

11 What is a project plan and what does it involve?

A. A well integrated project plan is the primary tool for effective coordination of the work and for tracking and steering progress by appropriate initiatives. It's the key document as a basis of reference. It's like a project bible and is sometimes called the project brief. A project brief may also be required to obtain other approvals such as client commitment to the details, and funding to proceed into subsequent phases of the project-life-cycle.

A good project brief will set out the goals, objectives and scope of the project (its deliverables), how these are to be achieved (technical content), quality (technical standards), any supplementary approvals that may be required (regulatory), design outlines (sketches and block diagrams), the component parts (breakdown structure), who will be responsible for what (team responsibilities), sequence and timing (logic network and schedule), required budget (supporting cost estimate), resources required for implementation (human and material), other resources (space, existing assets, external interfacing), financial considerations (economics and cash flow projections), justification (the impacts and alternatives), and areas of uncertainty (risk), contingency and control plans.

Goals and objectives, by the way, are sometimes used interchangeably but really a goal is an overview statement while an objective is one of the components or stepping stones of which the goal is comprised

12 What is a project life cycle?

A. If a project is well organized, it will progress logically through several phases. There are four standard phases to a typical project. The first two "concept" and "development" involve planning, that is to say, identifying the concept and then developing this concept and the plan to accomplish it as we have discussed. This usually leads to a formal submission of the plan (project brief) at which a go or no-go decision is given on the basis of the plan. If approved, this leads to the second two phases which are the accomplishment phases of implementing and finishing. As the names imply, this means converting ideas on paper to reality and getting the job finished and turned over to the customer.

Of course, different people in different project environments use different names but the principles are the same. Also, projects in different fields may require the four standard phases to be broken down further into stages such as separate feasibility studies; detailed design and working drawings; procurement; construction; training, commissioning and transfer.

13 How much time should planning take?

A. Times taken for individual projects vary considerably often due to circumstances beyond the project manager's control, such as changes in market demand or economic conditions. However, studies have shown that good planning for projects in new surroundings takes roughly the same amount of time as that required for implementation. Ten months of conceptual development and planning is not unreasonable for a project that will take ten months to construct. On the other hand, planning for a well orchestrated plant maintenance shut-down may take several times as long as the shut-down itself.

14 What value does project management add?

A. This is very difficult to answer in traditional accounting terms because the real value is in the quality of the end results and the avoidance of unnecessary delays and costs. In short, stakeholder and customer satisfaction. It's like taking out insurance, no one argues about taking out the right amount of insurance. No one should argue about doing the right amount of project management.

Remember that Murphy, that good old proponent of humorous laws, has said "A poorly run project will take three times as long and cost three times as much as a well run project..." However, he also added "compared to a well run project which only takes twice as long and costs twice as much." For our financial accounting friends, that's a 50% saving right there!

15 Why do projects always seem to take longer than expected?

A. Typically this is because it is relatively easy to assign time allowances to all the activities that have been thought of, but it is the ones that have not been thought of that take the extra time. However, there is also a tendency to be optimistic otherwise the project might not get approved, or "tight schedules" are a means to keep the pressure on the project team. Many delays arise from things that are necessary but were overlooked in preparing the plan. Even more delays are due to risks that were either not fully appreciated or disregarded during planning. The biggest and most damaging delay invariably stems from failing to start promptly the whole project or one or more of its major activities.

16 What if I need more time?

A. A competent and professional project manager is always up front with the sponsor or senior management. The meeting may be uncomfortable but rest assured it will be a lot worse if the situation is left to deteriorate. Besides, there may well be more options for improving the situation available to the sponsor than to the project manager.

17 Why do projects always seem to cost more than expected?

A. Generally this seems to stem from three causes. The first may simply be an overly optimistic cost estimate. Occasionally under-estimating is politically motivated to ensure project approval. Secondly, any schedule delays inevitably translate into added costs for someone. Thirdly, because most people have difficulty in fully understanding plans and specifications, when the sponsor or the users see the physical results of the project they then seek changes which cost significantly more to implement than they would have, had they been made at the planning stage.

18 How do I best control cost?

A. Many people think that they are controlling cost when they approve invoices or sign cheques. In reality, the cost is already long since committed at this stage whether payment is made or not. Cost must be controlled at the planning stage. It costs little to make changes to the plans at this stage but the impact on the final cost can be quite significant. Therefore it is essential to establish realistic cost estimating for every component of the project before it is committed to implementation.

It must also be realized that project costs that are already committed or expended are sunk costs and cannot be controlled further. Only future uncommitted costs can be affected and therefore controlled. Consequently, the primary focus of all project management cost reports should be on estimates of future costs, and hence on the total cost-to-complete of each component of the work.

19 What if I need more money?

A. The same applies here as in Question 17. However, the options that are open will depend on how far the project has already advanced. Generally there are two options. The first is to seek and obtain more project funding. The second is to reduce the scope of the project. Theoretically, a third option is to reduce the quality of some of the components of the project. However, this is not recommended as the impacts are usually marginal at best and at worst may lead to significantly greater costs during the subsequent life of the product.

More innovative and frequently very successful is to develop an alternative and more cost-effective solution to one or more of the project's objectives. There are techniques for doing this, such as value analysis, a technique which usually involves broad and expert consultations.

20 Can surprises be reduced?

A. Yes, definitely! By their very nature, projects are uncertain business and uncertainty can lead to both risk and opportunities. Consequently, a very important part of a project manager's job is management of risk (Risk Management). The idea is to move potential uncertainties away from risk (i.e. adverse time and cost implications) and towards opportunity (that will enhance the project and make it more successful). To do this, potential risks must first be identified and preferably grouped in some way, analysed and then appropriate defensive responses initiated such as workarounds, or insurance. Failing that, prepare contingency plans as a precaution.

21 What is a task manager?

A. Terminology in the project business is very confusing. Different people and different organizations use different names to mean different things in different circumstances and there is no well established set of standard definitions. Generally there is a hierarchical set of words which run from top to bottom as follows: Program, Project, Function, Process, Activity and Task. Interestingly, although the leader of any one of these may have different names, the management concepts involved are virtually identical. Moreover, the role of the leader of a particular task may be just as important to the overall success of a project as another apparently higher up the chain.

22 How do I get resources?

A. We must presume that the requisite planning as discussed in Question 12 has been completed and the resulting plan approved for implementation. In that case, the required resources needed for the project must be secured by means of commitments. If the resources concerned are people from within the organization then a release must be obtained for some or all of their time to be contributed to the project. Equally, it will be necessary to get their willing participation in (i.e. commitment to) the project.

If the resources in question are of the material kind it may be necessary to procure them by negotiating internal agreements, obtaining approval for the issue of purchase orders, or by following established procedures to enter into agreements and contracts. Such contracts then represent legal and financial obligations of the project and ultimately of the sponsoring organization.

23 How do I organize and apply resources?

A. The first and most important step in the implementation phase is to re-visit the project plan (or the project brief) and to make sure that it is still up-to-date. No doubt new information or a better understanding of the project will now be available. In any case, the plan will most likely require further detail, and one of the best ways of getting people started and organized is to have them review their part of the work (work package) and to set about coordinating it with each of the other parts.

In this way a comprehensive and detailed plan can be built up by a team of people who each understand their participation and responsibility and are committed to the success of the project. Each party must then be instructed by the project manager to proceed as agreed and to apply their particular resources accordingly.

24 What do project managers do?

A. First of all a project manager must take responsibility for leading the project effort towards the stated and agreed upon goals and objectives of the project. He or she must also have a very clear idea of what constitutes the successful conclusion of the project and work towards that end.

Along the way, the project manager has a number of duties to fulfill such as helping the sponsor to understand the details of the project where changes (scope changes) may be required, planning and contingency planning, scheduling, communication (technical and project public relations) progress reporting, coordination and supervision. All of this must be carried out as necessary to ensure the proper and efficient execution of the work by all those involved.

25 What communication do I need?

A. Communication is perhaps one of the most important functions of a project manager and yet sometimes the least understood. Without people there is no activity, but without communication there is no action! Consequently, communication must be relevant, reliable and timely. It must inform in both technical and non-technical terms and above all, it must be concise and understandable to avoid mistakes and waste of time.

A. There are many sources of help such as books, educational programs, active societies and the Internet. But why not just pick up the phone and talk to your nearest project management association? They will be pleased to offer guidance and maybe even to participate.

Unit 1: Introduction to Projects

1. Types of Plans

Operational Planning

“Operational plans are about how things need to happen,” motivational leadership speaker Mack Story said at LinkedIn. “Guidelines of how to accomplish the mission are set.”

This type of planning typically describes the day-to-day running of the company. Operational plans are often described as single use plans or ongoing plans. Single use plans are created for events and activities with a single occurrence (such as a single marketing campaign). Ongoing plans include policies for approaching problems, rules for specific regulations and procedures for a step-by-step process for accomplishing particular objectives.

Strategic Planning

“Strategic plans are all about why things need to happen,” Story said. “It’s big picture, long-term thinking. It starts at the highest level with defining a mission and casting a vision.”

Strategic planning includes a high-level overview of the entire business. It’s the foundational basis of the organization and will dictate long-term decisions. The scope of strategic planning can be anywhere from the next two years to the next 10 years. Important components of a strategic plan are vision, mission and values.

Tactical Planning

“Tactical plans are about what is going to happen,” Story said. “Basically at the tactical level, there are many focused, specific, and short-term plans, where the actual work is being done, that support the high-level strategic plans.”

Tactical planning supports strategic planning. It includes tactics that the organization plans to use to achieve what’s outlined in the strategic plan. Often, the scope is less than one year and breaks down the strategic plan into actionable chunks. Tactical planning is different from operational planning in that tactical plans ask specific questions about what needs to happen to accomplish a strategic goal; operational plans ask how the organization will generally do something to accomplish the company’s mission.

Contingency Planning

Contingency plans are made when something unexpected happens or when something needs to be changed. Business experts sometimes refer to these plans as a special type of planning.

Contingency planning can be helpful in circumstances that call for a change. Although managers should anticipate changes when engaged in any of the primary types of planning, contingency planning is essential in moments when changes can’t be foreseen. As the business world becomes more complicated, contingency planning becomes more important to engage in and understand.

Project Management

The successful project management is all about structure, control, sufficient attention to detail and continuously driving action. The role of the project manager is to understand enough project management to apply its structure and ensure that project is successfully completed within the time and cost required.

The things you must do as a project manager are:

1. Ensure there is a clear understanding why a project is being done, and what it will produce.
2. Plan the project – to understand how long it will take and how much it will cost.
3. Manage the project – to ensure that as the project progresses, it achieves the objectives you have defined within the time and cost specified.
4. Complete the project properly – to make sure everything produced by the project is of the quality expected and works as required.

Caution A clear understanding of the project is necessary before a project is initiated and implemented. Project Management has emerged because the characteristics of our turn-of-the-century society demand the development of the new methods of management. Of the many forces involved, three are paramount:

1. The exponential expansion of the human knowledge;
2. The growing demand for a broad range of complex, sophisticated, customized goods and services; and
3. The evolution of worldwide competitive markets for the production and consumption of goods and services.

All three forces combine to mandate the use of terms to solve problems that used to be solvable by individuals. These three forces combine to increase greatly the complexity of goods and services produced plus the complexity of the process used to produce them and all this in turn leads to the need for more sophisticated systems to control both outcomes and processes.

As the techniques of project management were developed, the use of project organization began to spread. Private construction firms found that project organization was helpful on smaller projects, such as the building of a warehouse or an apartment complex. Automotive companies used project organization to develop new automobile models. Both General Electric and Pratt & Whitney used project organization to develop new jet aircraft engines for airlines, as well as the Air Force. Project management has even been used to develop new models of shoes and ships.

More recently, the use of project management by international organizations, and especially organizations producing services rather than products, has grown rapidly. Advertising campaigns, global mergers, and capital acquisitions are often handled as projects, and the methods have spread to the non-profit sector. Functions, weddings, fund drives, election campaigns, parties, recitals etc all make use of the principles of project management. Most striking has been the widespread adoption of project management techniques for the development of computer software.

2. List out Project Manager and his Responsibilities?

According to Project Management Institute (PMI): “Project Management is the application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder needs and expectations”.

Project Management is quite often the province and responsibility of an individual project manager. This individual seldom participates directly in the activities that produce the end result, but rather strives to maintain the progress and productive mutual interaction of various parties in such a way that overall risk of failure is reduced.

A project manager is often a client representative and has to determine and implement the exact needs of the client based on knowledge of the firm he/she is representing. The ability to adapt to the various internal procedures of the contracting party, and to form close links with the nominated representatives, is essential in ensuring that the key issues of cost, time, quality and above all client satisfaction, can be realized. Any type of product or service - buildings, vehicles, electronics, computer software, financial

services, etc. - may have its implementation overseen by a project manager and its operations by a product manager.

The project manager needs to be an HRD expert who can motivate the workforce by training and promoting leadership among them, and boost their morale by incentives and promotions. He has to be conversant with the principles of organisation, and be a good judge of people who has the ability to place the right man in the right job at the right time.

Social issues: A project can only be successful when there is no conflict between the management and the local populace. Right from the acquisition of the project land to recruitment to organisation to infrastructural facilities, the management has to interact with the social fabric of the locale. It can only ensure a smooth functioning at the project site if there is a 'cooperational', and not a 'confrontational' environment. The management can display its cordiality to the locals by, for instance, recruiting 'the sons of the soil' in the workforce, which will not only be conducive to reciprocal cordiality of the populace, but might actually make good business sense in employing labour that is familiar with the locale and the conditions prevalent at the project site.

3. Functions of Project Manager?

The functions are as follows:

1. Developing a unique product or process and manage change.
2. Identification of the need for project.
3. Finding different alternatives of the project.
4. Developing a plan of action.
5. Training operators.
6. Establishment of quality assurance cell to control quality.
7. Incorporation of changes as and when needed while implementing project.
8. Selection of suitable equipment.
9. Finding suitable financial resources.
10. Assessment of alternatives and obtaining approval to proceed.
11. Measuring performance of the project.
12. Transfer of material, funds and settling all accounts after completion of project.
13. Monitoring progress and reporting to higher authorities.
14. Closing all records, submission of final report and transfer of responsibility after completion of specified project.

4. Explain PM as a Profession?

Not all project managers are equally competent. Not all project managers have the ability to run programs, establish PMOs, strategically align project portfolio's, recover big projects, or manage

risk effectively. Not every doctor is capable of heart surgery. But doctor's get paid for being doctor's, have demonstrated considerable training and understanding, have spent thousands of hours mastering their jobs. Doctor's are professionals.

By any definition, Project Management is a profession.

It should be obvious to the reader that project management is a demanding job. Planning and controlling the complexities of a project's activities, schedule, and budget would be difficult even if the project had the highest claim on the parent organization's knowledge and resources, and if the PM had full authority to take any action required to keep the project on course for successful completion. Such is never the case, but all is not lost because there are tools available to bring some order to the chaos of life as a PM—to cope with the difficulties of planning and the uncertainties that affect budgets and schedules. Also, as we have indicated, it is possible to compensate for missing authority through negotiation. Mastering the use of project management tools requires specialized knowledge that is often acquired through academic

preparation, which is to say that project management is a profession. The profession comes complete with career paths and an excellent professional organization.

The Project Management Institute (PMI) was founded in 1969. By 1990, the PMI had 7500 members. It grew to 17,000 by 1995, but five years later membership had exploded to more than 64,000. By November 2009, the PMI had more than 300,000 members worldwide. The exponential growth of the PMI is the result of the exponential growth in the use of projects and PMs as a way of getting things done.

Example: A senior vice president of an international chemical firm installed project management as a way of controlling the workloads on his technical specialists and on a few overloaded facilities—project management having tools to handle the allocation of scarce resources. In another instance, a new CEO of a large hospital mandated that all non-routine, one time operations be managed as projects so that she could have information on the nature and status of all such activities.

5. How you Selection of a Project Manager?

The Selection of Project Manager depends on following points:

Problem Solving Skills

1. Does this person have a history of being able to solve complex problems? Does this person have the attitude that a problem is an opportunity to learn?

Personal Leadership Style

1. Does this person have the communications and people skills appropriate for the mix of people who will be required on this project?
2. Will this person encourage project team members to bring up problems rather than play the blame game?
3. Does this person have excellent time management skills?

Notes 2. Is this person experienced in working in similar organizations and is that experience transferable to this project?

3. Does this person know the politics of our organization and have the savvy to navigate these situations?

Skills and Knowledge

1. Does this person have adequate knowledge about the subject of this project?
2. If some of these skills are weak is there support available in the organization to offset the problem?
3. Does this person have adequate technical skills for this project?
4. Does this person have the skills understand the root causes of potential problems and keep them from reoccurring?

Project Management Experience

1. Has this person led projects of similar scope, size, length and priority?
2. Is this person on a growth track to lead more complex projects?

Fitting Projects into Parent Organisation

Earlier in this unit we referred several times to problems caused by the way projects are organized and fit in as a part of the parent organization. It is now time to deal with this subject. It would be most unusual for a PM to have any influence over the interface between the project and the parent organization. This arrangement is a matter of company policy and usually is decided by senior management. The nature of

the interface, however, has a major impact on the PM's life, and it is necessary that the PM understand why senior managers make what appears to be the worst of all possible choices for the interface.

More on "Why Projects?"

Before examining the alternative ways in which a project can interface with the organization, it is useful to add to our understanding of just why organizations choose to conduct so much of their work as projects. We spoke above of project-oriented firms. In addition to the managerial reasons that caused the rapid spread of such organizations, there were also strong economic reasons. First, devising product development programs by integrating product design, engineering, manufacturing, and marketing functions in one team not only improved the product, it also allowed significant cuts in the time-to-market for the product.

Example: In the 1990s, Chrysler Motors (now owned by Fiat) cut almost 18 months from the new product development time required for design-to-street and produced designs that were widely rated as outstanding. This brought new Chrysler models to market much faster than normal in the automotive industry. Quite apart from the value of good design, the economic value of the time saved is immense and derives from both reduced design labor and overhead, plus earlier sales and return on the investment— in this case amounting to hundreds of millions of dollars. The same methods were used to enable General Motors to redesign and reimage their Cadillac and Buick models in response to the sharp decline in demand during the steep business downturn of 2008. This same process also allows a firm to tailor special versions of standard products for individual clients.

Project Management Team

We have mentioned the project team several times in the foregoing sections. Effective team members have some characteristics in common. Only the first of these is usually taken into account:

1. They must be technically competent. This is so obvious that it is often the only criterion applied. While the functional departments will always remain the ultimate source of technological problem solving for the project, it requires a technically competent person to know exactly when additional technical knowledge may be required by the project.
2. Senior members of the project team must be politically sensitive. It is rarely possible to complete a project of reasonable size and complexity without incurring problems that require aid from the upper echelons of executive row; that is, from a project champion (Pinto and Slevin, 1989). Getting such aid depends on the PM's ability to proceed without threatening, insulting, or bullying important people in the functional groups. To ensure cooperation and assistance, there is a delicate balance of power that must be maintained between the project and the functional departments, and between one project and others.
3. Members of the project team need a strong problem orientation. This characteristic will be explained in more detail shortly. For now, take the phrase to mean that the team's members should be concerned about solving any problems posed by the project, not merely about those sub problems that concern their individual academic or technical training.
4. Team members need a strong goal orientation. Projects are uncomfortable environments for people with a 9 to 5 view of work. In particular, neither project teams nor PMs can succeed if their focus is on activity rather than results. On the other hand, the project will not be successful if the project team dies from overwork. One project team member of our acquaintance was bemoaning a series of 60+ hour weeks. "They told me that I would work about 50 hours in an average week. I've been on this project almost 18 months, and we haven't had an average week yet."
5. Project workers need high self-esteem. Project members who hide mistakes and failure are disasters waiting to happen. Team members must be sufficiently self-confident and have sufficient trust in their fellow team members (Lencioni, 2002) that they can immediately acknowledge their own errors and point out problems caused by the errors of others. PMs should note that "shooting the messenger" who brings bad news will instantly stop the flow of negative information. The result is that the golden rule we stated above, "Never let the boss be surprised," will be violated, too.

Did u know? Are you doing a project? A project is a temporary endeavour with a specific result or objective. If your project has no end in sight and/or no clear scope, then what- ever it is you're doing may be important, but it's not a project. You'll have a hard time showing your team that they're being successful.

6. What are all the Phases of Project Management?

Dividing a project into phases makes it possible to lead it in the best possible direction. Through this organisation into phases, the total work load of a project is divided into smaller Components, thus making it easier to monitor. The following paragraphs describe a phasing model that has been useful in practice. It includes six phases:

Initiation Phase

The initiation phase is the beginning of the project. In this phase, the idea for the project is explored and elaborated. The goal of this phase is to examine the feasibility of the project. In addition, decisions are made concerning who is to carry out the project, which party (or parties) will be involved and whether the project has an adequate base of support among those who are involved.

In this phase, the current or prospective project leader writes a proposal, which contains a description of the above-mentioned matters. Examples of this type of project proposal include business plans and grant applications. The prospective sponsors of the project evaluate the proposal and, upon approval, provide the necessary financing. The project officially begins at the time of approval.

Questions to be answered in the initiation phase include the following:

- (a) Why this project?
- (b) Is it feasible?

- (c) Who are possible partners in this project?
- (d) What should the results be?

(e) What are the boundaries of this project (what is outside the scope of the project)? In the initiation phase, the project partners enter a (temporary) relationship with each other. To prevent the development of false expectations concerning the results of the project, it makes sense to explicitly agree on the type of project that is being started:

- (a) a research and development project;
- (b) a project that will deliver a prototype or 'proof of concept'; and
- (c) a project that will deliver a working product.

The choice for a particular type of project largely determines its results.

Example: A research and development project delivers a report that examines the technological feasibility of an application. A project in which a prototype is developed delivers all of the functionalities of an application, but they need not be suitable for use in a particular context (e.g. by hundreds of users). A project that delivers a working product must also consider matters of maintenance, instructions and the operational management of the application.

Definition Phase

After the project plan (which was developed in the initiation phase) has been approved, the project enters the second phase: the definition phase. In this phase, the requirements that are associated with a project result are specified as clearly as possible. This involves identifying the expectations that all of the involved parties have with regard to the project result. How many files are to be archived? Should the metadata conform to the Data Documentation Initiative format, or will the Dublin Core (DC) format suffice? May files be deposited in their original format, or will only those that conform to the Preferred Standards be accepted? Must the depositor of a dataset ensure that it has been processed adequately in the archive, or

is this the responsibility of the archivist? Which guarantees will be made on the results of the project? The list of questions goes on and on.

The list of requirements that is developed in the definition phase can be used to make design choices. In the design phase, one or more designs are developed, with which the project result can apparently be achieved. Depending on the subject of the project, the products of the design phase can include dioramas, sketches, flow charts, site trees, HTML screen designs, prototypes, photo impressions and UML schemas. The project supervisors use these designs to choose the definitive design that will be produced in the project. This is followed by the development phase. As in the definition phase, once the design has been chosen, it cannot be changed in a later stage of the project.

In a young, very informal company, the design department was run by an artist. The term design department was not accurate in this case; it was more a group of designers who were working together. In addition, everyone was much too busy, including the head of the department.

One project involved producing a number of designs, which were quite important to the success of the project. A young designer on the project team created the designs. Although the head of the design department had ultimate responsibility for the designs, he never attended the meetings of the project team when the designs were to be discussed. The project leader always invited him, and sent him e-mails containing his young colleagues sketches, but the e-mails remained unanswered. The project leader and the young designer erroneously assumed that the department head had approved the designs. The implementation phase began. When the project was nearly finished, the result was presented to the department head, who became furious and demanded that it be completely redone. The budget, however, was almost exhausted.

Development Phase

During the development phase, everything that will be needed to implement the project is arranged. Potential suppliers or subcontractors are brought in, a schedule is made, materials and tools are ordered, and instructions are given to the personnel and so forth. The development phase is complete when implementation is ready to start. All matters must be clear for the parties that will carry out the implementation.

In some projects, particularly smaller ones, a formal development phase is probably not necessary. The important point is that it must be clear what must be done in the implementation phase, by whom and when.

Implementation Phase

The project takes shape during the implementation phase. This phase involves the construction of the actual project result. Programmers are occupied with encoding, designers are involved in developing graphic material, contractors are building, and the actual reorganization takes place. It is during this phase that the project becomes visible to outsiders, to whom it may appear that the project has just begun. The implementation phase is the doing phase, and it is important to maintain the momentum.

In one project, it had escaped the project teams' attention that one of the most important team members was expecting to become a father at any moment and would thereafter be completely unavailable for about a month. When the time came, an external specialist was brought in to take over his work, in order to keep the team from grinding to a halt. Although the team was able to proceed, the external expertise put a considerable dent in the budget.

At the end of the implementation phase, the result is evaluated according to the list of requirements that was created in the definition phase. It is also evaluated according to the designs.

Example: Tests may be conducted to determine whether the web application does indeed support Explorer 5 and Firefox 1.0 and higher. It may be determined whether the trim on the building has been made according to the agreement, or whether the materials that were used were indeed those that had been specified in the definition phase. This phase is complete when all of the requirements have been met and when the result corresponds to the design.

Follow-up Phase

Although it is extremely important, the follow-up phase is often neglected. During this phase, everything is arranged that is necessary to bring the project to a successful completion. Examples of activities in the follow-up phase include writing handbooks, providing instruction and training for users, setting up a help desk, maintaining the result, evaluating the project itself, writing the project report, holding a party to celebrate the result that has been achieved, transferring to the directors and dismantling the project team.

The central question in the follow-up phase concerns when and where the project ends. Project leaders often joke among themselves that the first ninety per cent of a project proceeds quickly and that the final ten per cent can take years. The boundaries of the project should be considered in the beginning of a project, so that the project can be closed in the follow-up phase, once it has reached these boundaries. It is sometimes unclear for those concerned whether the project result is to be a prototype or a working product. This is particularly common in innovative projects in which the outcome is not certain. Customers may expect to receive a product, while the project team assumes that it is building a prototype. Such situations are particularly likely to manifest themselves in the follow-up phase. Consider the case of a software project to test a very new concept.

There was some anxiety concerning whether any results would be produced at all. The project eventually produced good results. The team delivered a piece of software that worked well, at least within the testing context. The customer, who did not know much about IT, thought that he had received a working product. After all, it had worked on his office computer. The software did indeed work, but when it was installed on the computers of fifty employees, the prototype began to have problems, and it was sometimes instable.

Project Environment

Today, there is a growing awareness and concern for the impact of infrastructure and facility construction on the physical environment. Fortunately, today's technological disciplines responsible for such work are becoming attuned to the idea of mitigating the adverse impacts of their projects. Certainly the project manager needs to be similarly concerned about the project's technology, and manage accordingly. This applies to both the implementation and shorter term practical construction impacts of the project as well as its conceptual development and consequent long term impacts. However, today's project manager also needs to be attuned to the cultural, organizational and social environments of the project. Understanding this environment includes identifying the project stakeholders and their ability to affect its successful outcome. This means working with people to achieve the best results, especially in the highly technical and complex environments such as those involving modern day construction projects. Therefore, it is essential that the project manager and his or her project team are comfortable with, and sympathetic towards, their cultural, organizational and social surroundings.

This leads to the possibility of influencing the project environment in a positive way, for the better reception of the change which the project is designed to introduce.

Example: Peoples' typical resistance to change will no doubt be evident amongst some of the stakeholders. Others may have vested interests or personal or group agendas which are only indirectly related to the project. If these can be identified in good time, they may be dealt with proactively and in such a way that the corresponding risks, which are otherwise likely to undermine the success of the project, can be significantly reduced. Failure to take such an approach will inevitably lead to a less than optimum project outcome.

7. Explain Dimensions of the Project Environment?

For convenience, and working outwards, the project environment may be thought of in terms of the project time environment, the internal project culture, the original corporate culture, and the external social surroundings. For those who have not had experience of a construction project “in the trenches” so to speak, it is sometimes difficult to capture the feeling of pressure, stress and ultimate satisfaction of a project well. Did u know?Gantt Charts have been around for over a hundred years. The discipline of project management has evolved and been refined for longer than you might suspect.

Explain The 7S of Project Management

A recent (2008) update on the McKinsey 7S model is a short podcast on the creation of McKinsey 7S model by Lowell Bryan, a director in McKinsey’s New York office, involved in creating and applying the 7S framework. He describes how it was introduced in the late 1970s to address the critical role of coordination, rather than structure, in organizational effectiveness.e reference the McKinsey 7S model in the E-consultancy Managing an E-commerce team report as a method of reviewing the internal capabilities of an organisation to manage digital channels.

❑ A project is a group of unique, interrelated activities that are planned and executed in a certain sequence to create a unique product or service.

❑ The successful project management is all about structure, control, sufficient attention to detail and continuously driving action.

❑ Plan the project – to understand how long it will take and how much it will cost.

❑ Project Management is quite often the province and responsibility of an individual project manager.

❑ A project manager is often a client representative and has to determine and implement the exact needs of the client based on knowledge of the firm he/she is representing.

❑ Project Management Institute (PMI) was founded in 1969.

❑ The payback period for a project is the initial fixed investment in the project divided by the estimated annual cash inflows from the project.

❑ The initiation phase is the beginning of the project.

❑ The project takes shape during the implementation phase.

Comparative Benefit Model: For this situation, assume that an organization has many projects to consider, perhaps several dozen. Senior management would like to select a subset of the projects that would most benefit the firm.

Definition Phase: In this phase, the requirements that are associated with a project result are specified as clearly as possible.

Implementation Phase: This phase involves the construction of the actual project result.

Initiation Phase: The initiation phase is the beginning of the project. In this phase, the idea for the project is explored and elaborated.

Operating Necessity: If a flood is threatening the plant, a project to build a protective dike does not require much formal evaluation.

Payback Period: The payback period for a project is the initial fixed investment in the project divided by the estimated annual cash inflows from the project.Social Issues: A project can only be successful when there is no conflict between the management and the local populace

Case Study Who is the Project Manager?

Assigning Project Management Responsibility for Success

A project manager’s prime task is managing a project to success. The products of the project need to be picked up by the line organisation, and if this involves change in the organisation or ways of working, the changes must be made to ‘stick’. By ensuring that the responsibilities for project management and business change are well assigned in a project there is an increased chance of success.

The Dilemma

In all projects assigning the correct project manager is crucial. The choice is often not simple. I have experienced this in the form of a dilemma: do we appoint someone who is an experienced project manager or someone who will champion the change? Very often the experienced project manager will come from a technical background, e.g. IT, and will not have authority to make changes in the organisation or processes. On the other hand the change champion will have credibility with the business unit, but often not have the project skills required. If you can always find all of this in one person, then good luck to you; you don't need the rest of this article!

When is This a Problem?

There can be a problem in a project that is not part of a programme. Let's look at the differences between programmes and projects. I'll use MSP™ (Managing Successful Programmes of the OGC) to illustrate. MSP clearly differentiates between projects - that deliver outputs - and programmes - that deliver outcomes. The main difference is that a project that is not part of a programme delivers the output to the line organisation; the line management is subsequently responsible for achieving the benefits (outcomes). A programme, on the other hand, is also responsible for the benefits realisation of the projects within the programme.

I have noticed, in our organisation at least, that projects are expected to deliver the change in the organisation, so the outcome is not achieved if the project only delivers the output.

How Does it go Wrong?

To ensure a good mix of business change and project management, for IT projects, we have in the past staffed projects with a project manager from the customer, a "business PM" or BPM, and an experienced project manager from IT, the "IT PM", reporting to them. This can work well, depending on the individuals and how well they cooperate and complement

Unit –II 2 Marks

1.Explain the Concept of Project Management

Project management is a formal discipline for managing projects. Project management has been developed over the past few decades as it has become apparent that without a structured approach, people are not very good at completing projects successfully.

2.PM-Uniqueness

Every project has some elements that are unique. No two construction or R&D projects are precisely alike. Though it is clear that construction projects are usually more routine than R&D projects, some degree of customisation is a characteristic of projects. In addition to the presence of risk, as noted earlier, this characteristic means that projects, by their nature, cannot be completely reduced to routine. The PM's importance is emphasized because, as a devotee of management by exception, the PM will find there are a great many exceptions to manage by.

3.Purpose of -PM

A project is usually a one time activity with a well-defined set of desired end results. It can be divided into subtasks that must be accomplished in order to achieve the project goals. The project is complex enough that the subtasks require careful coordination and control in terms of timing, precedence, cost, and performance. Often, the project itself must be coordinated with other projects being carried out by the same parent organization.

4.List out PM Conflict

More than most managers, the PM lives in a world characterized by conflict. Projects compete with functional departments for resources and personnel. More serious, with the growing proliferation of projects, is the project versus project conflict for resources within multi-project organizations. The members of the project team are in almost constant conflict for the project's resources and for leadership roles in solving project problems. If the characteristics listed above define a project, it is appropriate to ask if there are non-projects. There are. The use of a manufacturing line to produce a flow of standard

products is a non-project. The production of weekly employment reports, the preparation of school lunches, the delivery of mail, the flight of Delta, 1288 from Dallas to Dulles, checking your e-mail, all are non-projects.

Now we know that a project is a specific, finite task to be accomplished. Whether large or small scale or whether long or short run is not particularly relevant. What is relevant is that the whole project should be taken as a single unit. There are, however, some attributes that characterize projects.

5.PM- Delivery and Deliverables

There is a word that project managers and people involved regularly in projects use all the time; it is delivery. Delivery in the context of projects simply means getting the things done you set out to do. The role of a project manager is therefore to deliver the project. Delivery is a useful piece of jargon as it saves having to write 'completing the project to the expected time and cost with the desired outcome' again and again!

Deliverables are what is delivered by a project so taking the examples above, the deliverables from the respective projects are a new house, a new computer system or a new product. In a project the deliverables wanted are defined at the start of the project, and your success as a project manager is in delivering them in the planned time and to the expected cost.

6.Overlapping of Activities

Projects often interact with other projects being carried out simultaneously by their parent organization; but projects always interact with the parent organization's standard, ongoing operations. Although the functional departments of an organization (marketing, finance, manufacturing, and the like) interact with one another in regular, patterned ways, the patterns of interaction between projects and these departments tend to be changeable. Marketing may be involved at the beginning and end of a project, but not in the middle. Manufacturing may have major involvement throughout. Finance is often involved at the beginning and accounting at the end, as well as at periodic reporting times. The PM must keep all these interactions clear and maintain the appropriate interrelationships with all external groups.

7.Sharing of Resources in-PM

More than most managers, the PM lives in a world characterized by conflict. Projects compete with functional departments for resources and personnel. More serious, with the growing proliferation of projects, is the project versus project conflict for resources within multi-project organizations. The members of the project team are in almost constant conflict for the project's resources and for leadership roles in solving project problems.

There is much discussion about whether there is only one 'true' model of a project life cycle or many, and whether any of these are reasonably accurate descriptions of what happens in real

8. What is inventory control

Ans : Inventory control, also known as stock control, involves regulating and maximising your company's inventory. The goal of inventory control is to maximise profits with minimum inventory investment, without impacting customer satisfaction levels. Inventory control is also about knowing where all your stock is and ensuring everything is accounted for at any given time.

9.What is demand forecasting

Ans : Demand forecasting is the art and science of forecasting customer demand to drive holistic execution of such demand by corporate supply chain and business management. Demand forecasting involves techniques including both informal methods, such as educated guesses, and quantitative methods, such as the use of historical sales data and statistical techniques or current data from test markets.

10.What is warehousing

Ans : A warehouse is a commercial building for storage of goods. Warehouses are used by manufacturers, importers, exporters, wholesalers, transport businesses, customs, etc. They are usually large plain buildings in industrial areas of cities, towns and villages.

11.Define warehousing

Ans : Robert Hughes has defined it in following words, "Warehousing is a set of activities that are involved in receiving and storing of goods and preparing them for reshipment."

What are the kinds of warehousing

Ans :

1. Private Warehousing
2. Public Warehousing

12. What are functions of warehousing

Ans :

Receiving of Goods

Preparation of Record

1. Identification
2. Storing
3. Packing
4. Information About Receipt
5. Breaking of Bulk
6. To Search the Goods
7. Delivery of Goods

13.What is routing

Ans : Companies are turning to Geographic Information Systems (GIS) as a key component in their supply chain software. Mapping software provides an easy way for users to visualize data. In this paper the focus is on the transportation (Logistics) decision of the supply chain management, in specific the routing decision.

14.What is transportation management

Ans: A transportation management system (TMS) is a subset of supply chain management concerning transportation operations and may be part of an enterprise resource planning system. A TMS usually "sits" between an ERP or legacy order processing and warehouse/distribution module.

15.Provision for Contingencies

A provision for contingencies is made to provide for certain unforeseen expenses and price increases over and above the normal inflation rate which is already incorporated in the cost estimates.

To estimate the provision for contingencies the following procedure may be followed: (i) Divide the project cost items into two categories, viz., 'firm' cost items and 'non-firm' cost items (firm cost items are those which have already been acquired or for which definite arrangements have been made). (ii) Set the provision for contingencies at 5 to 10 percent of the estimated cost of non-firm cost items. Alternatively, make a provision of 10 percent for all items (including the margin money for working capital) if the implementation period is one year or less. For every additional one year, make an additional provision of 5 percent.

16. Margin Money for Working Capital

The principal support for working capital is provided by commercial banks and trade creditors. However, a certain part of the working capital requirement has to come from long-term sources of finance. Referred to as the 'margin money for working capital', this is an important element of the project cost.

The margin money for working capital is sometimes utilised for meeting over runs in capital cost. This leads to a working capital problem (and sometimes a crisis) when the project is commissioned. To mitigate this problem, financial institutions stipulate that a portion of the loan amount, equal to the margin money for working capital, be blocked initially so that it can be released when the project is completed.

17.What Initial Cash Losses

Most of the projects incur cash losses in the initial years. Yet, promoters typically do not disclose the initial cash losses because they want the project to appear attractive to the financial institutions and the investing public. Failure to make a provision for such cash losses in the project cost generally affects the liquidity position and impairs the operations. Hence prudence calls for making a provision, overt or covert, for the estimated initial cash losses.

18. Define Logistics.

Logistics is defined as “planning, implementing, and controlling the physical flows of materials and finished goods from point of origin to point of use to meet the customer’s need at the profit”.

19 Scope of Logistics

1. Value adding process
2. Reverse logistics Channels
3. Penetrating new markets, increasing market shares and profits.
4. Globalisation of Industries.

20. Example of Logistics firms in world

1. DHL- germany
2. UPS Supply chain solutions-
Giorgia 3. Fedex- America
4. SNCF- France
5. Kuene + Nage- Germany

21. Objectives of logistics

1. Reduction of Inventory
2. Economy of freight
3. Reliability and consistency in delivery performance
4. Minimum damage to products.

22. Functions of Logistics

1. Transportation
2. Inventory Management
3. warehousing
4. Order processing

Unit 2: The Project Life Cycle

Introduction

Essentially, a project is a task with a known end point. For example, building a new house is a project, the end point being when the house is built. Similarly, creating a new piece of computer software is a project, as is launching a new product for a business. Projects can be used to complete many different types of tasks.

Usually the term 'project' is applied to tasks with some degree of complexity. Projects fulfil some clear predefined objective, in a planned period of time, and to a planned cost. Once the project is complete something will have changed – for example, you have a new house, a new computer system or a new product.

The Project Management Institute defines a project as “a temporary endeavor undertaken to create a unique product or service”. There is a rich variety of projects to be found in our society. Although some may argue that the construction of the Tower of Babel or the Egyptian pyramids was some of the first projects, it is probable that cavemen formed a project to gather the raw material for mammoth stew. Modern project management, however, is usually said to have begun with the Manhattan Project. In its early days, project management was used mainly for very large, complex Research and Development (R&D) projects like the development of the Atlas Intercontinental Ballistic Missile and similar military weapon systems. Massive construction programs were also organized as projects the construction of dams, ships, refineries, and freeways, among others.

1. Explain the Concept of Project Management?

Project management is a formal discipline for managing projects. Project management has been developed over the past few decades as it has become apparent that without a structured approach, people are not very good at completing projects successfully. The aim of project management is to ensure that projects are completed and that the end point (the new house, computer system or new product) is achieved. More than this, project management is about reaching that end point predictably, which usually means to a given cost and within a planned amount of time.

The successful project management is all about structure, control, sufficient attention to detail and continuously driving action. The role of the project manager is to understand enough project management to apply its structure and ensure that project is successfully completed within the time and cost required.

The things you must do as a project manager are:

1. Ensure there is a clear understanding why a project is being done, and what it will produce.
2. Plan the project – to understand how long it will take and how much it will cost.
3. Manage the project – to ensure that as the project progresses, it achieves the objectives you have defined within the time and cost specified.
4. Complete the project properly – to make sure everything produced by the project is of the quality expected and works as required.

Project Management has emerged because the characteristics of our turn-of-the-century society demand the development of the new methods of management. Of the many forces involved, three are paramount:

1. The exponential expansion of the human knowledge;
2. The growing demand for a broad range of complex, sophisticated, customized goods and services;
3. The evolution of worldwide competitive markets for the production and consumption of goods and services.

All three forces combine to mandate the use of terms to solve problems that used to be solvable by individuals. These three forces combine to increase greatly the complexity of goods and services produced plus the complexity of the process used to produce them and all this in turn leads to the need for more sophisticated systems to control both outcomes and processes.

As the techniques of project management were developed, the use of project organization began to spread. Private construction firms found that project organization was helpful on smaller projects, such as the building of a warehouse or an apartment complex. Automotive companies used project organization

to develop new automobile models. Both General Electric and Pratt & Whitney used project organization to develop new jet aircraft engines for airlines, as well as the Air Force. Project management has even been used to develop new models of shoes and ships.

More recently, the use of project management by international organizations, and especially organizations producing services rather than products, has grown rapidly. Advertising

Notes campaigns, global mergers, and capital acquisitions are often handled as projects, and the methods have spread to the non-profit sector. Functions, weddings, fund drives, election campaigns, parties, recitals etc all make use of the principles of project management. Most striking has been the widespread adoption of project management techniques for the development of computer software.

Did u know? Each project phase is marked by completion of one or more deliverables. A deliverable is a tangible, verifiable work product. The conclusion of a project phase is generally marked by (a) completion and review of both key deliverables and project performance to date, to (b) determine if the project should continue into its next phase and (c) detect and correct errors cost effectively.

Self Assessment

Fill in the blanks:

1. The successful is all about structure, control, sufficient attention to detail and continuously driving action.
2. Project management is a formal discipline for projects.
3. Projects with functional departments for resources and personnel.
4. construction firms found that project organization was helpful on smaller projects, such as the building of a warehouse or an apartment complex.
5. The role of the is to understand enough project management to apply its structure and ensure that project is successfully completed within the time and cost required.

2. Explain Project Life Cycle?

Like organic entities, projects have life cycles. From a slow beginning they progress to a buildup of size, then peak, begin a decline, and finally must be terminated. Some projects end by being phased into the normal, ongoing operations of the parent organization.

Interdependencies

Projects often interact with other projects being carried out simultaneously by their parent organization; but projects always interact with the parent organization's standard, ongoing operations. Although the functional departments of an organization (marketing, finance, manufacturing, and the like) interact with one another in regular, patterned ways, the patterns of interaction between projects and these departments tend to be changeable. Marketing may be involved at the beginning and end of a project, but not in the middle. Manufacturing may have major involvement throughout. Finance is often involved at the beginning and accounting at the end, as well as at periodic reporting times. The PM must keep all these interactions clear and maintain the appropriate interrelationships with all external groups.

Uniqueness

Every project has some elements that are unique. No two construction or R&D projects are precisely alike. Though it is clear that construction projects are usually more routine than R&D projects, some degree of customisation is a characteristic of projects. In addition to the presence of risk, as noted earlier, this characteristic means that projects, by their nature, cannot be completely reduced to routine. The PM's importance is emphasized because, as a devotee of management by exception, the PM will find there are a great many exceptions to manage by.

Purpose

A project is usually a one time activity with a well-defined set of desired end results. It can be divided into subtasks that must be accomplished in order to achieve the project goals. The project is complex enough that the subtasks require careful coordination and control in terms of timing, precedence, cost, and performance. Often, the project itself must be coordinated with other projects being carried out by the same parent organization.

Caution Simultaneous projects often interact with other projects in terms of the functional departments. Thus, the project manager must keep all these interactions clear and maintain the appropriate interrelationships with all external groups.

Conflict

More than most managers, the PM lives in a world characterized by conflict. Projects compete with functional departments for resources and personnel. More serious, with the growing proliferation of projects, is the project versus project conflict for resources within multi-project organizations. The members of the project team are in almost constant conflict for the project's resources and for leadership roles in solving project problems. If the characteristics listed above define a project, it is appropriate to ask if there are non-projects. There are. The use of a manufacturing line to produce a flow of standard products is a non-project. The production of weekly employment reports, the preparation of school lunches, the delivery of mail, the flight of Delta, 1288 from Dallas to Dulles, checking your e-mail, all are non-projects.

Now we know that a project is a specific, finite task to be accomplished. Whether large or small scale or whether long or short run is not particularly relevant. What is relevant is that the whole project should be taken as a single unit. There are, however, some attributes that characterize projects.

Every project goes through various stages in its development. These stages vary depending on the type of project. For example, a project to build a new car has different stages compared to a project to develop an advertising campaign for a new type of washing detergent. However, at a generic level projects must go through common steps such as:

1. Specifying in detail what the project is for.
2. Planning the project and working out how it will be done.
3. Doing the project and creating the deliverables according to the plan.
4. Checking that the deliverables are as you originally wanted and meet the needs.
5. Closing the project down.

These five steps defined are a simple project lifecycle. The lifecycle is a skeleton framework which you can build your project around. From a slow beginning, they progress to a buildup of size, then peak, after that a decline, and finally they are terminated. Some projects end up by being phased out into the normal, ongoing operations of the parent organization.

Delivery and Deliverables

There is a word that project managers and people involved regularly in projects use all the time; it is delivery. Delivery in the context of projects simply means getting the things done you set out to do. The role of a project manager is therefore to deliver the project. Delivery is a useful piece of jargon as it saves having to write 'completing the project to the expected time and cost with the desired outcome' again and again!

Deliverables are what is delivered by a project so taking the examples above, the deliverables from the respective projects are a new house, a new computer system or a new product. In a project the deliverables wanted are defined at the start of the project, and your success as a project manager is in delivering them in the planned time and to the expected cost.

Did u know? The aim of project management is to ensure that projects are completed and that the end point (the new house, computer system or new product) is achieved.

Overlapping of Activities

Projects often interact with other projects being carried out simultaneously by their parent organization; but projects always interact with the parent organization's standard, ongoing operations. Although the functional departments of an organization (marketing, finance, manufacturing, and the like) interact with one another in regular, patterned ways, the patterns of interaction between projects and these departments tend to be changeable. Marketing may be involved at the beginning and end of a project, but not in the middle. Manufacturing may have major involvement throughout. Finance is often involved at the beginning and accounting at the end, as well as at periodic reporting times. The PM must keep all these interactions clear and maintain the appropriate interrelationships with all external groups.

Sharing of Resources

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There is much discussion about whether there is only one 'true' model of a project life cycle or many, and whether any of these are reasonably accurate descriptions of what happens in real

life. Some writers include the feasibility study as part of the project life cycle; others believe that the project proper only begins once the feasibility study is completed and the proposal accepted, or only when cost codes and a budget for the project are defined by the company accountants. We will use the point of conception, even though the actual circumstances can make that gestation period rather cloudy or uncertain. The practical starting point is often considered to be the birthday, since management normally give approval after they have been presented with the feasibility study and decided to go ahead with further work. If you find it helpful, you can think of the work needed to carry out a feasibility study as being a mini-project in its own right.

Even with the best of plans and most stringent of controls, real life is always more chaotic than the models we apply to it; the same is true of projects. Nevertheless, in the case of projects, models are useful to help us recognize different ways of moving from the project's beginning to its end, and the broad phases where the activities that take place change from one type to another. Each activity will be undertaken using a known procedure at a given level of formality, starting with a number of inputs from preceding activities that are the basis for further work. On completion of an activity there may be one or more outputs, which are known as deliverables (because they are needed for other activities). So, the order in which these activities are carried out is called a life cycle, which outlines the overall process for a given project. A phase is the term used to describe a set of interrelated activities that are needed to achieve a particular outcome or deliverable. When a life cycle includes a number of phases, it is usually because some form of evaluation or review is needed to decide when each phase is completed.

There is no single life cycle that applies to all projects, although certain types of project will be associated with a particular life cycle. We begin by describing a basic life cycle and then discuss some variations, which may provide an appropriate model for a given situation. We will use the characteristics of software to illustrate that a project's outcome is more than just a physical object.

In practice, the description of a life cycle may be very general or very detailed: some might only suggest what to do, while others might prescribe what must be done. Highly detailed descriptions might involve

numerous forms, models, checklists and so on which have been associated with the term project management methodology (see, for example, PMI, 2004).

3. Explain Project Classification and Extended Project Life Cycle?

Many writers use four phases when considering life cycles in relation to project management. Turner, for example, used the life cycle of a plant as an analogy to that of a project (1999).

Other writers, such as Weiss and Wysocki (1994), look at the core activities to come up with five phases such as define, plan, organise, execute and close. The change from one phase to the next is not necessarily abrupt. When there is significant overlap in time between activities in different phases (for example, when planning activities continue at the same time as the organisation is under way and execution may even have begun), we say that these activities exhibit concurrence. Since changes are an inevitable fact of project life, there will also be times when activities such as estimating or even recruiting or assigning work have to be done again in response to such changes. The overlapping of phases is also called fast tracking (PMI, 2004) as it allows the project to be completed in less time than following a strict sequence of phases.

The basic life cycle, which will fit many projects, is shown in Figure 2.1.

The extended life cycle, which is also known as a product life cycle, also shown in Figure 2.1 involves supporting and maintaining the deliverables in order to realise the project's intended benefits. The extended life cycle adds two more phases to the sequence (APM, 2006):

1. Operations: The period during which the completed deliverable is used and maintained in service for its intended purpose.
2. Termination: The disposal of the project deliverables at the end of their life.

Projects related to special events, such as an annual conference or a sporting event, make use of the extended life cycle.

When making a case for a new project, part of the work includes the choice of life cycle to use in order to achieve its goal and objectives. If an organisation has been using projects for some time, it is likely that it has developed a particular life cycle for the kinds of project that are approved. The simplest way to classify projects is by industry: for example, construction, mechanical engineering, software development, banking or health care.

At the same time, it is also possible to think of projects in terms of their outcomes, which might be some form of product or service. However, the outcome of many projects has been a combination of products and services. For example, the National Health Service in the UK has sponsored a project for a new service that allows general practitioners to make hospital appointments for their patients in real time (service). In order to achieve the project's objectives, a new software application (product) was developed. Hence, we might consider that one way to classify a project is according to the particular result or outcome that we want to achieve. In addition, it is also reasonable to include a consideration of the means by which the desired outcome is to be achieved. By combining a consideration of means and ends (answering the how? and the what? questions) for a project, there would be four classes of project according to how much is known about what you are trying to achieve and how you are going to achieve it.

In practice, the two extremes permit a simple qualitative assignment of a project into one of four classes. The use of a metaphor for each class of project helps stakeholders engage in it

Such a means of project classification is associated with the two main perspectives that are used to evaluate whether or not a project is successful.

Interdependencies: Projects often interact with other projects being carried out simultaneously by their parent organization but projects always interact with the parent organization's standard, ongoing operations. Operations: The period during which the completed deliverable is used and maintained in service for its intended purpose. Project: A project is usually a onetime activity with a well-defined set of desired end results. It can be divided into subtasks that must be accomplished in order to achieve the project goals. Termination: The disposal of the project deliverables at the end of their life.

4 What are all the Phases of Project Management?

Dividing a project into phases makes it possible to lead it in the best possible direction. Through this organisation into phases, the total work load of a project is divided into smaller Components, thus making it easier to monitor. The following paragraphs describe a phasing model that has been useful in practice. It includes six phases:

Initiation Phase

The initiation phase is the beginning of the project. In this phase, the idea for the project is explored and elaborated. The goal of this phase is to examine the feasibility of the project. In addition, decisions are made concerning who is to carry out the project, which party (or parties) will be involved and whether the project has an adequate base of support among those who are involved.

In this phase, the current or prospective project leader writes a proposal, which contains a description of the above-mentioned matters. Examples of this type of project proposal include business plans and grant applications. The prospective sponsors of the project evaluate the proposal and, upon approval, provide the necessary financing. The project officially begins at the time of approval.

Questions to be answered in the initiation phase include the following:

- (a) Why this project?
- (b) Is it feasible?

(c) Who are possible partners in this project?

(d) What should the results be?

(e) What are the boundaries of this project (what is outside the scope of the project)? In the initiation phase, the project partners enter a (temporary) relationship with each other. To prevent the development of false expectations concerning the results of the project, it makes sense to explicitly agree on the type of project that is being started:

- (a) a research and development project;
- (b) a project that will deliver a prototype or 'proof of concept'; and
- (c) a project that will deliver a working product.

The choice for a particular type of project largely determines its results.

Example: A research and development project delivers a report that examines the technological feasibility of an application. A project in which a prototype is developed delivers all of the functionalities of an application, but they need not be suitable for use in a particular context (e.g. by hundreds of users). A project that delivers a working product must also consider matters of maintenance, instructions and the operational management of the application.

Definition Phase

After the project plan (which was developed in the initiation phase) has been approved, the project enters the second phase: the definition phase. In this phase, the requirements that are associated with a project result are specified as clearly as possible. This involves identifying the expectations that all of the involved parties have with regard to the project result. How many files are to be archived? Should the metadata conform to the Data Documentation Initiative format, or will the Dublin Core (DC) format suffice? May files be deposited in their original format, or will only those that conform to the Preferred Standards be accepted? Must the depositor of a dataset ensure that it has been processed adequately in the archive, or is this the responsibility of the archivist? Which guarantees will be made on the results of the project? The list of questions goes on and on.

Notes

The list of requirements that is developed in the definition phase can be used to make design choices. In the design phase, one or more designs are developed, with which the project result can apparently be achieved. Depending on the subject of the project, the products of the design phase can include dioramas, sketches, flow charts, site trees, HTML screen designs, prototypes, photo impressions and UML schemas. The project supervisors use these designs to choose the definitive design that will be produced in the project. This is followed by the development phase. As in the definition phase, once the design has been chosen, it cannot be changed in a later stage of the project.

In a young, very informal company, the design department was run by an artist. The term design department was not accurate in this case; it was more a group of designers who were working together. In addition, everyone was much too busy, including the head of the department.

One project involved producing a number of designs, which were quite important to the success of the project. A young designer on the project team created the designs. Although the head of the design department had ultimate responsibility for the designs, he never attended the meetings of the project team when the designs were to be discussed. The project leader always invited him, and sent him e-mails containing his young colleagues sketches, but the e-mails remained unanswered. The project leader and the young designer erroneously assumed that the department head had approved the designs. The implementation phase began. When the project was nearly finished, the result was presented to the department head, who became furious and demanded that it be completely redone. The budget, however, was almost exhausted.

Development Phase

During the development phase, everything that will be needed to implement the project is arranged. Potential suppliers or subcontractors are brought in, a schedule is made, materials and tools are ordered, and instructions are given to the personnel and so forth. The development phase is complete when implementation is ready to start. All matters must be clear for the parties that will carry out the implementation.

In some projects, particularly smaller ones, a formal development phase is probably not necessary. The important point is that it must be clear what must be done in the implementation phase, by whom and when.

Implementation Phase

The project takes shape during the implementation phase. This phase involves the construction of the actual project result. Programmers are occupied with encoding, designers are involved in developing graphic material, contractors are building, and the actual reorganization takes place. It is during this phase that the project becomes visible to outsiders, to whom it may appear that the project has just begun. The implementation phase is the doing phase, and it is important to maintain the momentum.

In one project, it had escaped the project teams' attention that one of the most important team members was expecting to become a father at any moment and would thereafter be completely unavailable for about a month. When the time came, an external specialist was brought in to take over his work, in order to keep the team from grinding to a halt. Although the team was able to proceed, the external expertise put a considerable dent in the budget.

At the end of the implementation phase, the result is evaluated according to the list of requirements that was created in the definition phase. It is also evaluated according to the designs.

Example: Tests may be conducted to determine whether the web application does indeed support Explorer 5 and Firefox 1.0 and higher. It may be determined whether the trim on the building has been made according to the agreement, or whether the materials that were used were indeed those that had been specified in the definition phase. This phase is complete when all of the requirements have been met and when the result corresponds to the design.

Follow-up Phase

Although it is extremely important, the follow-up phase is often neglected. During this phase, everything is arranged that is necessary to bring the project to a successful completion. Examples of activities in the follow-up phase include writing handbooks, providing instruction and training for users, setting up a help desk, maintaining the result, evaluating the project itself, writing the project report, holding a party to celebrate the result that has been achieved, transferring to the directors and dismantling the project team.

The central question in the follow-up phase concerns when and where the project ends. Project leaders often joke among themselves that the first ninety per cent of a project proceeds quickly and that the final ten per cent can take years. The boundaries of the project should be considered in the beginning of a project, so that the project can be closed in the follow-up phase, once it has reached these boundaries. It is sometimes unclear for those concerned whether the project result is to be a prototype or a working product. This is particularly common in innovative projects in which the outcome is not certain. Customers may expect to receive a product, while the project team assumes that it is building a prototype. Such situations are particularly likely to manifest themselves in the follow-up phase. Consider the case of a software project to test a very new concept.

There was some anxiety concerning whether any results would be produced at all. The project eventually produced good results. The team delivered a piece of software that worked well, at least within the testing context. The customer, who did not know much about IT, thought that he had received a working product. After all, it had worked on his office computer. The software did indeed work, but when it was installed on the computers of fifty employees, the prototype began to have problems, and it was sometimes instable.

Project Environment

Today, there is a growing awareness and concern for the impact of infrastructure and facility construction on the physical environment. Fortunately, today's technological disciplines responsible for such work are becoming attuned to the idea of mitigating the adverse impacts of their projects. Certainly the project manager needs to be similarly concerned about the project's technology, and manage accordingly. This applies to both the implementation and shorter term practical construction impacts of the project as well as its conceptual development and consequent long term impacts. However, today's project manager also needs to be attuned to the cultural, organizational and social environments of the project. Understanding this environment includes identifying the project stakeholders and their ability to affect its successful outcome. This means working with people to achieve the best results, especially in the highly technical and complex environments such as those involving modern day construction projects. Therefore, it is essential that the project manager and his or her project team are comfortable with, and sympathetic towards, their cultural, organizational and social surroundings.

This leads to the possibility of influencing the project environment in a positive way, for the better reception of the change which the project is designed to introduce.

Example: Peoples' typical resistance to change will no doubt be evident amongst some of the stakeholders. Others may have vested interests or personal or group agendas which are only indirectly related to the project. If these can be identified in good time, they may be dealt with proactively and in such a way that the corresponding risks, which are otherwise likely to undermine the success of the project, can be significantly reduced. Failure to take such an approach will inevitably lead to a less than optimum project outcome.

5 Explain Dimensions of the Project Environment?

For convenience, and working outwards, the project environment may be thought of in terms of the project time environment, the internal project culture, the original corporate culture, and the external social surroundings. For those who have not had experience of a construction project “in the trenches” so to speak, it is sometimes difficult to capture the feeling of pressure, stress and ultimate satisfaction of a project well. Did u know?Gantt Charts have been around for over a hundred years. The discipline of project management has evolved and been refined for longer than you might suspect.

Explain The 7S of Project Management

A recent (2008) update on the McKinsey 7S model is a short podcast on the creation of McKinsey 7S model by Lowell Bryan, a director in McKinsey’s New York office, involved in creating and applying the 7S framework. He describes how it was introduced in the late 1970s to address the critical role of coordination, rather than structure, in organizational effectiveness.e reference the McKinsey 7S model in the E-consultancy Managing an E-commerce team report as a method of reviewing the internal capabilities of an organisation to manage digital channels.

☐ A project is a group of unique, interrelated activities that are planned and executed in a certain sequence to create a unique product or service.

☐ The successful project management is all about structure, control, sufficient attention to detail and continuously driving action.

☐ Plan the project – to understand how long it will take and how much it will cost.

☐ Project Management is quite often the province and responsibility of an individual project manager.

☐ A project manager is often a client representative and has to determine and implement the exact needs of the client based on knowledge of the firm he/she is representing.

☐ Project Management Institute (PMI) was founded in 1969.

☐ The payback period for a project is the initial fixed investment in the project divided by the estimated annual cash inflows from the project.

☐ The initiation phase is the beginning of the project.

☐ The project takes shape during the implementation phase.

Comparative Benefit Model: For this situation, assume that an organization has many projects to consider, perhaps several dozen. Senior management would like to select a subset of the projects that would most benefit the firm.

Definition Phase: In this phase, the requirements that are associated with a project result are specified as clearly as possible.

Implementation Phase: This phase involves the construction of the actual project result.

Initiation Phase: The initiation phase is the beginning of the project. In this phase, the idea for the project is explored and elaborated.

Operating Necessity: If a flood is threatening the plant, a project to build a protective dike does not require much formal evaluation.

Payback Period: The payback period for a project is the initial fixed investment in the project divided by the estimated annual cash inflows from the project.Social Issues: A project can only be successful when there is no conflict between the management and the local populace

6. Case Study HCL: When to do re-estimation?

software company receives a web based development project from renowned client to develop vehicle tracking system for their organization.

The software company is well set to start the project and preparing the ground work. They have done the sizing exercise based on the requirements shared by the client using Function Point methodology and arrived the size of 200 FP. It is JAVA based technology and by using their organization productivity of 0.8 FP/day (of high skilled resource), the efforts required to complete the development of the project is 250 Person days.

Project manager started the project unfortunately he didn't get skilled resources. When the PM generates EV metrics for 1st week of the project, realized that the project is not going on track and there is 5% variance due to requirements delay from client.

At the end of the 2 weeks PM found that variance is increased to 40%. The reasons added here are resources are not skilled enough to understand the requirements and prepare design documents.

No of days estimated to complete the project = 250 Person Days

No of Months to complete the project allocating 4 resources = $250 / (20 * 4) = 3.125$ PMs After 2 weeks, when the

project manager generates the following metrics:

The project is over budget and behind the schedule (please refer to appendix - A for details on metrics) PM able to calculate above metrics as he baselined the estimates and plan, compared actuals against baselined efforts.

The remaining size of the application to be developed = 184 FP

To complete 184 FP in 210 person days require = $184 / 210 = 1.14$ against the 0.8 productivity assumed for initial estimation.

Once the re-estimation done and baseline the Estimation, re-planning should follow and plan need to be baselined.

Re-estimation at end of the project Phase

An MNC awarded to develop employee leave details Portal

Initially project is sized to 100 FP. It is JAVA based technology and by using their organization productivity of 0.8 FP/day, the efforts required to complete the development of the project is 125 Person days.

At the end of the Requirements phase the size of the project is increased by 50 FP due to scope creep.

7.Explain Functions of Logistics:

The logistics function concentrates on performing activities like Acquisition, storage, circulation, maintenance and retrieval of materials and equipment.



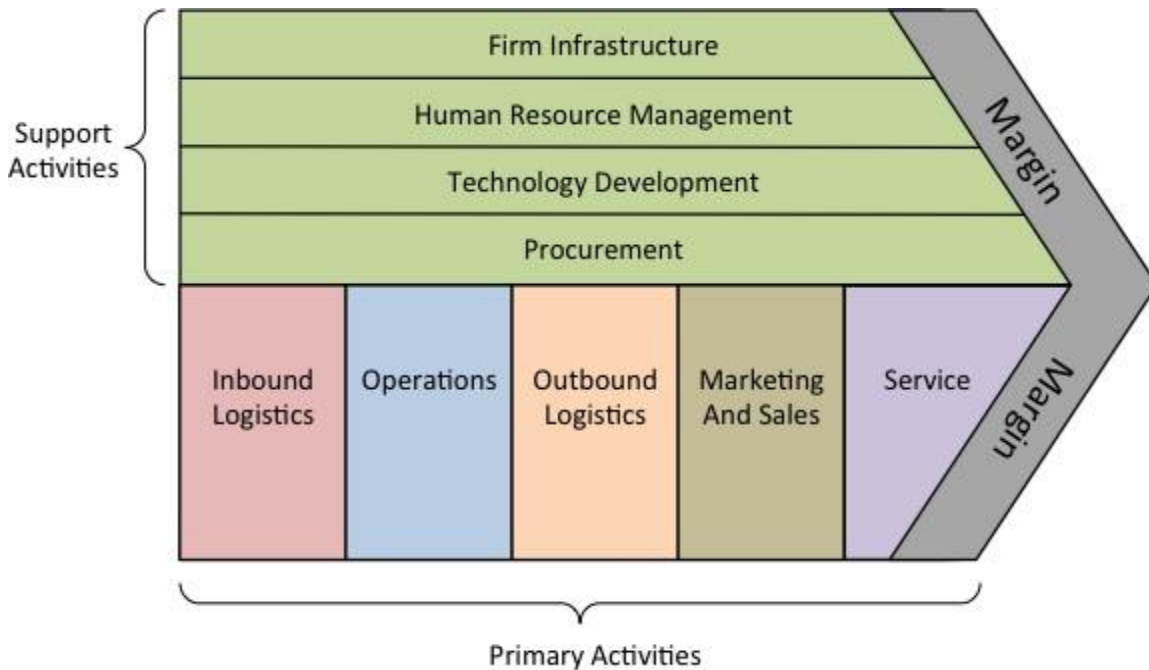
(Secondary source)

- 1. Order Processing:** Processing the orders received from the customers is an activity which is very important and also consumes a lot of time and paperwork. It involves steps like checking the order for deviations in the agreed or negotiated terms, price, payment and delivery terms, checking if the materials are available in stock, producing and scheduling the material for shortages, and also giving acknowledgements to the owner, by indicating any deviations.
- 2. Inventory Planning:** Planning the inventory can help an organization in maintaining an optimal level of inventory which will also help in satisfying the customer. Activities like inventory forecasting, engineering the order quantity, optimizing the level of service, proper deployment of inventory etc. are involved in this process.
- 3. Warehousing:** This serves as the place where the finished goods are stored before they are sold to the customers finally. This is a major cost centre and improper warehouse management will create a host of problems.
- 4. Packaging:** A critical element in the physical distribution of the product, which also influences the efficiency of the logistics system.
- 5. Transportation:** Helps in physical movement of goods to the customer's place. This is done through various modes such as rail, road, air, sea respectively.

Value Chain:

According to Porter "A value chain is a set of activities that an organization carries out to create value for its customers".

Porter's Value Chain focuses on systems, and how inputs are changed into the outputs purchased by consumers. Using this viewpoint, Porter described a chain of activities common to all businesses, and he divided them into primary and support activities, as shown below.



(Secondary source)

1.4.1 Primary Activities:

Primary activities relate directly to the physical creation, sale, maintenance and support of a product or service. They consist of the following:

- **Inbound logistics** – These are all the processes related to receiving, storing, and distributing inputs internally. Your supplier relationships are a key factor in creating value here.
- **Operations** – These are the transformation activities that change inputs into outputs that are sold to customers. Here, your operational systems create value.
 - **Outbound logistics** – These activities deliver your product or service to your customer. These are things like collection, storage, and distribution systems, and they may be internal or external to your organization.
 - **Marketing and sales** – These are the processes you use to persuade clients to purchase from you instead of your competitors. The benefits you offer, and how well you communicate them, are sources of value here.
 - **Service** – These are the activities related to maintaining the value of your product or service to your customers, once it's been purchased.

1.4.2 Supporting Activities:

These activities support the primary functions above. In our diagram, the dotted lines show that each support, or secondary, activity can play a role in each primary activity. For example, procurement supports operations with certain activities, but it also supports marketing and sales with other activities.

- **Procurement (purchasing)** – This is what the organization does to get the resources it needs to operate. This includes finding vendors and negotiating best prices.

- **Human resource management** – This is how well a company recruits, hires, trains, motivates, rewards, and retains its workers. People are a significant source of value, so businesses can create a clear advantage with good HR practices.
- **Technological development** – These activities relate to managing and processing information, as well as protecting a company's knowledge base. Minimizing information technology costs, staying current with technological advances, and maintaining technical excellence are sources of value creation.
- **Infrastructure** – These are a company's support systems, and the functions that allow it to maintain daily operations. Accounting, legal, administrative, and general management are examples of necessary infrastructure that businesses can use to their advantage.

Value-added logistics indicates “providing professional services and processes that extend beyond standard receiving, storing and shipping of the client's products”.

Logistics involves a broad spectrum of activities that mainly covers planning, implementation and control of flows of goods, services and information from the point of origin to the point of consumption.

Conventionally, it features most significantly in transportation and cargo forwarding activities. Yet the landscape of the industry has gradually evolved towards greater emphasis on high value added logistics (VAL), essentially an integrative profile that incorporates processes designed to efficiently support and facilitate different elements in the supply chain.

The emergence of VAL is closely related to the growing importance of supply chain management under globalisation. Global market expansion and liberalisation have extended the supply chain to cover more and more regions, as manifested by increased international procurement and marketing activities as well as offshore trade. These developments require more effective supply chain management that has to be built upon an integrative set of specialised logistics services. Some of the value added services in logistics include:

- Product labelling and packaging
- Shipment consolidation
- Customs clearance
- Customized insurance
- Transport Management
- Cargo tracking and tracing facility
- Door step delivery

Eg: SAL logistics Pvt Ltd,

1. **Palletization service**
2. **Goods warehousing**
3. **Consultation on Import and exports**
4. **Port handling**

***Performance areas of Value added services**

1. **Customer –focused services:** Customer focused service involve use of third party specialist to distribute products to customers. An Instance of customer focused value added services is fulfilment. Fulfilment involves processing customer orders for manufacturers, delivering directly to stores, maintaining retail store for shelf stocking.
2. **Promotion focused services:** Value added services focus on promotion focused services, support point of sale, advertising and other promotional materials. Normally gifts and premium merchandise as part of promotional effort are handled and shipped by service specialist.
3. **Manufacturing focused services:** The manufacturing focused value added services are in the form of unique product assortment and delivery to support manufacturing. Every customer has physical

facilities and manufacturing assembly that are unique. So, it becomes essential to customise the delivery and presentation of in-bound materials and components. Specialist are hired to perform the value added service in the logistics channel. For example, surgical kits are assembled to satisfy the special requirements of the physicians.

4. **Time Focused services:** Time focused services aims at eliminating unnecessary work and maximising the speed of service. First seek to perform logistics activities faster to reduce the level of financial assets required to support performance. The aim is to compress and control time from order receipt to order delivery in an effort to accelerate inventory turns. The popular form of time based value added service is the JIT feeder warehouse. Suppliers make daily deliveries to a JIT facility established near the plant

Unit –III 2 Marks

1. What is business strategy?

“Strategy is the determination of the basic long goals and objectives of an enterprise and the adoption of the course of action and the allocation of the resources necessary for carrying out these goals”. It’s a comprehensive master plan stating how the corporation will achieve its mission and objectives of maximizes the competitive advantage and minimizes the competitive disadvantage.

2. What is strategic management?

Strategic management is that set of managerial decisions and actions that determine the long-run performance of a corporation of includes environmental Scanning, strategy formulation strategy implementation and evaluation and control. The study of strategic management therefore emphasizes the monitoring and evaluating of external opportunities and threats in the light of corporation’s

strengths and weaknesses.

3. What is corporate strategy?

Corporate strategy describes a company’s overall direction in terms of its

general altitude towards growth and the management of its various businesses and product lines.

Corporate strategy is composed of directional strategy, portfolio analysis and parenting strategy, corporate strategies typically fit within the three main categories of stability, growth and retrenchment.

4. Define Ethics?

Ethics specify what is good, true, fair, just, right and proper in business. Businesses his relate to the behavior of a business man in a business situation. They are concerned primarily with the impacts of decisions on people with in and without the organization. Business ethical behavior is conduct that is fair and just over and above the various rules and regulations.

5. What do you mean by strategic myopia?

While identifying the external strategic factors, the managers sometimes miss or ignore crucial new developments. Personal values and functional experiences of a corporation’s manager as well as the success of current strategies bias both their perception of what they important to monitor in the external environment and the interpretations of what they perceive. This willingness to reject unfamiliar as well as negative information is called strategic myopia.

6. What is core- competency?

Core-competencies are the things that a corporation can do exceedingly well. It is the combination of an organization's resources and capabilities if the core competency of an organization is superior to that of its competitors it is called distinctive competency.

7. What is Distinctive competency?

Distinctive competencies are firm's specific strengths that allow a company to differentiate its products and achieve substantially lower costs than its rivals and thus gain competitive advantage competencies arise from two complementary sources resources and capabilities.

8. Define joint venture?

Joint ventures are partnerships in which two or more firms carryout a

specific project or corporate in a selected area of business. Joint ventures can be temporary or long term. Ownership of the firm remains unchanged. Every joint venture has a scheduled life-cycle, which will end sooner or later every joint venture has to be dissolved when it has outlived its life-cycle. Changes in the environment forces joint ventures to be redesigned regularly.

9. What is conglomerate diversification?

When firms create new businesses that are unrelated to its original business, it is called conglomerates diversification. The benefits of conglomerate diversification are reductions of risks, economics of large scale operations, financial stability, increase in profits and attain managerial competence.

10. What are barriers to Entry?

An entry barrier is an obstruction that make it difficult for a company to enter an industry Established companies already operating in an industry often attempt to discourage the potential competitors by creation. High Entry barriers, such as rand Loyalty, absolute cost advantages, economics of scale customer switching cost, product differentiation etc.

11.Distinguish between hostile takeover and friendly takeover?

Takeover can be defined the ownership or control over the other firm. Of one firm acquires the ownership against the wishes of hi others management it is called hostile takeover. Of the acquisition is through the mutual consent of both the parties it is called friendly takeover.

12. What is Horizontal Expansion?

It's a growth strategy. Of a firm fries to expand its business by creating other firms in their same line of business it is called horizontal expansion. The aim of horizontal expansion is to increase market shane. To reduce cost of production through large scale economic, to take advantage of synergy and to promote products and services more efficiently to a larger audience.

13. Define strategic Group?

Strategic group is a set of business units or firms that pursue similar strategies with similar resources. Categorizing the firms in an industry into a set of strategic groups is very useful for the better understanding of the competitive environment. Because a corporation's structure and culture reflect the kinds of strategies it follow. Companies or Business units belonging to a particular

strategic group within the same industry tend to be strong rivals and tend to be more similar to each other than to competitors in other strategic groups within the same industry.

14. Define corporate governance

Corporate governance refers to the relationship between the board of Directors, top management and the investors or shareholders in determining the direction and performance of the corporation.

15. What is Backward integration?

When a company or firm acquires or creates another firm which provides raw material, component parts or other input for the original firm, it is called backward integration.

16. Define strategic outsourcing

Strategic outsourcing refers to the separation of some of the company's value creation activities within the business and allowing them to be performed by a specialist in that activity. Strategic outsourcing will lower the cost structure of the company and increase its profitability. Moreover, strategic outsourcing of non-core activities helps the company to focus management attention on those activities that are most important for its long-term competitive position.

17. Distinguish between programs and procedures.

A program is a statement of the activities or steps needed to accomplish a single-use plan or makes the strategy action-oriented. It may involve restructuring the corporation, changing the company's internal structure, or beginning a new research effort. Procedures are a system of sequential steps or techniques that describe in detail how a particular job or task is to be done. They typically detail the various activities that must be carried out for completion of the corporation's programs.

18. What is Entrepreneurial mode?

It is a type of strategic decision making. In this mode, the strategy is developed by one powerful individual. The focus is on opportunities and problems are secondary; strategy is guided by the founder's own vision or direction and is exemplified by large, bold decisions. The dominant goal is growth of the corporation.

19. What is Adaptive mode?

This is a decision-making mode sometimes referred to as "muddling through". It is characterized by reactive solutions to existing problems rather than a proactive search for new opportunities. Strategy is fragmented and is developed to move the corporation forward in incremental steps.

20. What is planning mode?

This mode of strategic decision making involves the systematic gathering of appropriate information for situational analysis, the generation of feasible alternative strategies, and the rational selection of the most appropriate strategy. This mode includes both the pro-active search for new opportunities and the reactive solution of existing problems.

Unit 3: Strategic Management and Project Selection

1. Introduction about Strategic Management and Project Selection

A project is an allocation of capital and human resources to achieve time-specific objectives. Project management is the procedure and techniques used to achieve project objectives, which includes identifying, prioritising and scheduling tasks to systematically effect rapid change. Many companies are “managing organisations by projects,” using projects as a way to achieve business goals and strategic plans.

Selection Process of Project

An organisation might have dozens of prospective projects varying for limited resources.

Business Goals

This requires a selection process that maximises the efficiency of scarce business resources. When selecting between prospective projects, assess how each project ties to the organisation’s goals and objectives. Base selections on the value each project lends to the organisation’s strategic plans. Review the organisation’s vision statements, mission statements and business goals against each project’s objectives.

Selection Criteria

The process of evaluating individual projects or groups of projects for the purpose of choosing which to implement might include a number of factors. When selecting among competing project alternatives, additional project factors that might be reviewed and compared include costs, benefits and risks. While the exact parameters of these factors might not be known with certainty, estimates can be compared to evaluate differences.

Objectives Matrix

Top management might develop a matrix of objectives for projects that are expressly based on the organisation’s business goals and strategies. Examples of objectives include improving the corporate brand with customers, expansion into a new market and growth of market share for a particular product or service, to name a few.

Achievable

A project should be assessed for realism, capability and cost. Thirty percent of all projects end midstream and half of completed projects end an average of 200 percent over schedule and over budget, according to a 2001 study by the Centre for Innovative Management. Unfinished projects are a significant waste of resources. A project that costs more than double its projected budget raises cost-benefit analysis questions.

Notes

2. List out Project Selection and Criteria?

One of the biggest decisions that any organisation would have to make is related to the projects they would undertake. Once a proposal has been received, there are numerous factors that need to be considered before an organisation decides to take it up.

The most viable option needs to be chosen, keeping in mind the goals and requirements of the organisation. How is it then that you decide whether a project is viable? How do you decide if the project at hand is worth approving? This is where project selection methods come in use.

Notes Choosing a project using the right method is therefore of utmost importance. This is what will ultimately define the way the project is to be carried out.

But the question then arises as to how you would go about finding the right methodology for your particular organisation. At this instance, you would need careful guidance in the project selection criteria, as a small mistake could be detrimental to your project as a whole, and in the long run, the organisation as well.

Selection Methods

There are various project selection methods practiced by the modern business organisations. These methods have different features and characteristics. Therefore, each selection method is best for different organisations.

Although there are many differences between these project selection methods, usually the underlying concepts and principles are the same.

Following is an illustration of two of such methods (Benefit Measurement and Constrained Optimisation methods).

As the value of one project would need to be compared against the other projects, you could use the benefit measurement methods. This could include various techniques, of which the following are the most common:

1. You and your team could come up with certain criteria that you want your ideal project objectives to meet. You could then give each project scores based on how they rate in each of these criteria, and then choose the project with the highest score.
2. When it comes to the Discounted Cash flow method, the future value of a project is ascertained by considering the present value and the interest earned on the money. The higher the present value of the project, the better it would be for your organisation.
3. The rate of return received from the money is what is known as the IRR. Here again, you need to be looking for a high rate of return from the project.

The mathematical approach is commonly used for larger projects. The constrained optimisation methods require several calculations in order to decide on whether or not a project should be rejected.

Cost-benefit analysis is used by several organisations to assist them to make their selections. Going by this method, you would have to consider all the positive aspects of the project, which is the benefits, and then deduct the negative aspects (or the costs) from the benefits. Based on the results you receive for different projects, you could choose which option would be the most viable and financially rewarding.

These benefits and costs need to be carefully considered and quantified in order to arrive at a proper conclusion. Questions that you may want to consider asking are in the selection process are:

1. Would this decision help me to increase organisational value in the long run?
2. How long will the equipment last for?
3. Would I be able to cut down on costs as I go along?

In addition to these methods, you could also consider Choosing based on opportunity cost - When choosing any project, you would need to keep in mind the profits that you would make if you do decide to go ahead with the project.

Profit optimisation is therefore the ultimate goal. You need to consider the difference between the profits of the project you are primarily interested in, and the next best alternative.

Implementation of the Chosen Method

The methods mentioned above can be carried out in various combinations. It is best that you try out different methods, as in this way you would be able to make the best decision for your organisation considering a wide range of factors rather than concentrating on just a few. Careful consideration would therefore need to be given to each project.

3. What is Nature of Project Selection Models?

The Nature of models is as follows:

1. Models turn inputs into outputs
2. Managers decide on the values for the inputs and evaluate the outputs
3. The inputs never fully describe the situation
4. The outputs never fully describe the expected results
5. Models are tools
6. Managers are the decision makers

There are two basic types of project selection models, numeric and non-numeric. Both are widely used. Many organisations use both at the same time, or they use models that are combinations of the two. Non-numeric models, as the name implies, do not use numbers as inputs. Numeric models do, but the criteria being measured may be either objective or subjective. It is important to remember that the qualities of a project may be represented by numbers, and that subjective measures are not necessarily less useful or reliable than objective measures.

Before examining specific kinds of models within the two basic types, let us consider just what we wish the model to do for us, never forgetting two critically important, but often overlooked facts.

☐ Models do not make decisions—people do. The manager, not the model, bears responsibility for the decision. The manager may “delegate” the task of making the decision to a model, but the responsibility cannot be abdicated.

☐ All models, however sophisticated, are only partial representations of the reality they are meant to reflect. Reality is far too complex for us to capture more than a small fraction of it in any model. Therefore, no model can yield an optimal decision except within its own, possibly inadequate, framework. We seek a model to assist us in making project selection decisions. This model should possess the characteristics discussed previously and, above all, it should evaluate potential projects by the degree to which they will meet the firm’s objectives. To construct a selection/evaluation model, therefore, it is necessary to develop a list of the firm’s objectives.

A list of objectives should be generated by the organisation’s top management. It is a direct expression of organisational philosophy and policy. The list should go beyond the typical clichés about “survival” and “maximising profits,” which are certainly real goals but are just as certainly not the only goals of the firm. Other objectives might include maintenance of share of specific markets, development of an improved image with specific clients or competitors, expansion into a new line of business, decrease in sensitivity to business cycles, maintenance of employment for specific categories of workers, and maintenance of system loading at or above some percent of capacity, just to mention a few.

A model of some sort is implied by any conscious decision. The choice between two or more alternative courses of action requires reference to some objective(s), and the choice is thus, made in accord with some, possibly subjective, “model.” Since the development of computers and the establishment of operations research as a subject in the mid-1950s, the use of formal, numeric models to assist in decision making has expanded. Many of these models use financial metrics such as profits and/or cash flow to measure the “correctness” of a managerial decision. Project selection decisions are no exception, being based primarily on the degree to which the financial goals of the organisation are met. As we will see later, this stress on financial goals, largely to the exclusion of other criteria, raises some serious problems for the firm, irrespective of whether the firm is for profit or not-for-profit.

When the list of objectives has been developed, an additional refinement is recommended. The elements in the list should be weighted. Each item is added to the list because it represents a contribution to the success of the organisation, but each item does not make an equal contribution. The weights reflect different degrees of contribution each element makes in accomplishing a set of goals.

Once the list of goals has been developed, one more task remains. The probable contribution of each project to each of the goals should be estimated. A project is selected or rejected because it is predicted to have certain outcomes if implemented.

These outcomes are expected to contribute to goal achievement. If the estimated level of goal achievement is sufficiently large, the project is selected. If not, it is rejected. The relationship between the projects expected results and the organisation's goals must be understood. In general, the kinds of information required to evaluate a project can be listed under production, marketing, financial, personnel, administrative, and other such categories.

Some factors in this list have a one-time impact and some recur. Some are difficult to estimate and may be subject to considerable error. For these, it is helpful to identify a range of uncertainty. In addition, the factors may occur at different times. And some factors may have thresholds, critical values above or below which we might wish to reject the project. We will deal in more detail with these issues later in this Unit.

Clearly, no single project decision needs to include all these factors. Moreover, not only is the list incomplete, it also contains redundant items. Perhaps more important, the factors are not at the same level of generality: profitability and impact on organisational image both affect the overall organisation, but impact on working conditions is more oriented to the production system. Nor are all elements of equal importance.

Change in production cost is usually considered more important than impact on current suppliers. Shortly, we will consider the problem of generating an acceptable list of factors and measuring their relative importance. At that time we will discuss the creation of a Decision Support System (DSS) for project evaluation and selection.

Although the process of evaluating a potential project is time-consuming and difficult, its importance cannot be overstated. A major consulting firm has argued (Booz, Allen, and Hamilton, 1966) that the primary cause for the failure of Research and Development (R & D) projects is insufficient care in evaluating the proposal before the expenditure of funds. What is true for such projects also appears to be true for other kinds of projects, and it is clear that product development projects are more successful if they incorporate user needs and satisfaction in the design process (Matzler and Hinterhuber, 1998).

Careful analysis of a potential project is a sine qua non for profitability in the construction business. There are many horror stories (Meredith, 1981) about firms that undertook projects for the installation of a computer information system without sufficient analysis of the time, cost, and disruption involved.

Later, we will consider the problem of conducting an evaluation under conditions of uncertainty about the outcomes associated with a project. Before dealing with this problem, however, it helps to examine several different evaluation/selection models and consider their strengths and weaknesses. Recall that the problem of choosing the project selection model itself will also be discussed later.

Did u know? Expert judgement is one of the technique used, in project management to accomplish various tasks, including project selection.

4.Explain **Types of Project Selection Models**

Of the two basic types of selection models (numeric and non-numeric), non-numeric models are older and simpler and have only a few subtypes to consider. We examine them first.

Non-Numeric Models

These include the following:

1. **The Sacred Cow:** In this case the project is suggested by a senior and powerful official in the organisation. Often the project is initiated with a simple comment such as, "If you have a chance, why don't you look into . . .," and there follows an undeveloped idea for a new product, for the development of

a new market, for the design and adoption of a global database and information system, or for some other project requiring an investment of the firm's resources. The immediate result of this bland statement is the creation of a "project" to investigate whatever the boss has suggested. The project is "sacred" in the sense that it will be maintained until successfully concluded, or until the boss, personally, recognises the idea as a failure and terminates it.

2. The Operating Necessity: If a flood is threatening the plant, a project to build a protective dike does not require much formal evaluation, which is an example of this scenario. XYZ Steel Corporation has used this criterion (and the following criterion also) in evaluating potential projects. If the project is required in order to keep the system operating, the primary question becomes: Is the system worth saving at the estimated cost of the project? If the answer is yes, project costs will be examined to make sure they are kept as low as is consistent with project success, but the project will be funded.

3. The Competitive Necessity: Using this criterion, XYZ Steel undertook a major plant rebuilding project in the late 1960s in its steel bar manufacturing facilities near Chicago. It had become apparent to XYZ's management that the company's bar mill needed modernisation if the firm was to maintain its competitive position in the Chicago market area. Although the planning process for the project was quite sophisticated, the decision to undertake the project was based on a desire to maintain the company's competitive position in that market. In a similar manner, many business schools are restructuring their undergraduate and Masters in Business Administration (MBA) programs to stay competitive with the more forward looking schools. In large part, this action is driven by declining numbers of tuition paying students and the need to develop stronger programs to attract them.

Investment in an operating necessity project takes precedence over a competitive necessity project, but both types of projects may bypass the more careful numeric analysis used for projects deemed to be less urgent or less important to the survival of the firm.

4. The Product Line Extension: In this case, a project to develop and distribute new products would be judged on the degree to which it fits the firm's existing product line, fills a gap, strengthens a weak link, or extends the line in a new, desirable direction. Sometimes careful calculations of profitability are not required. Decision makers can act on their beliefs about what will be the likely impact on the total system performance if the new product is added to the line.

5. Comparative Benefit Model: For this situation, assume that an organisation has many projects to consider, perhaps several dozen. Senior management would like to select a subset of the projects that would most benefit the firm, but the projects do not seem to be easily comparable. For example, some projects concern potential new products, some concern changes in production methods, others concern computerisation of certain records, and still others cover a variety of subjects not easily categorised (e.g., a proposal to create a daycare center for employees with small children).

The organisation has no formal method of selecting projects, but members of the selection committee think that some projects will benefit the firm more than others, even if they have no precise way to define or measure "benefit."

The concept of comparative benefits, if not a formal model, is widely adopted for selection decisions on all sorts of projects. Most United Way organisations use the concept to make decisions about which of several social programs to fund. Senior management of the funding organisation then examines all projects with positive recommendations and attempts to construct a portfolio that best fits the organisation's aims and its budget.

Numeric Models

As noted earlier, a large majority of all firms using project evaluation and selection models use profitability as the sole measure of acceptability. We will consider these models first, and then discuss models that surpass the profit test for acceptance. These include the following:

1. Payback Period: The payback period for a project is the initial fixed investment in the project divided by the estimated annual net cash inflows from the project. The ratio of these quantities is the number of years required for the project to repay its initial fixed investment. For example, assume a project costs \$100,000 to implement and has annual net cash inflows of \$25,000. Then
Payback period = \$ 100,000 / \$ 25,000 = 4 years

This method assumes that the cash inflows will persist at least long enough to pay back the investment, and it ignores any cash inflows beyond the payback period. The method also serves as an (inadequate) proxy for risk. The faster the investment is recovered, the less the risk to which the firm is exposed.

2. Average Rate of Return: Often mistaken as the reciprocal of the payback period, the average rate of return is the ratio of the average annual profit (either before or after taxes) to the initial or average investment in the project. Because average annual profits are usually not equivalent to net cash inflows, the average rate of return does not usually equal the reciprocal of the payback period. Assume, in the example just given, that the average annual profits are \$15,000.

Neither of these evaluation method is recommended for project selection, though payback period is widely used and does have a legitimate value for cash budgeting decisions. The major advantage of these models is their simplicity, but neither takes into account the time-value of money. Unless interest rates are extremely low and the rate of inflation is nil, the failure to reduce future cash flows or profits to their present value will result in serious evaluation errors.

3. Discounted Cash Flow: Also referred to as the Net Present Value (NPV) method, the discounted cash flow method determines the net present value of all cash flows by discounting them by the required rate of return (also known as the hurdle rate, cutoff rate, and similar terms) as follows:

To include the impact of inflation (or deflation) where pt is the predicted rate of inflation during period t , we have Early in the life of a project, net cash flow is likely to be negative, the major outflow being the initial investment in the project, A_0 . If the project is successful,

however, cash flows will become positive. The project is acceptable if the sum of the net present values of all estimated cash flows over the life of the project is positive. A simple example will suffice.

Using our \$100,000 investment with a net cash inflow of \$25,000 per year for a period of eight years, a required rate of return of 15 percent, and an inflation rate of 3 percent per year, we have.

Because the present value of the inflows is greater than the present value of the outflow— that is, the net present value is positive—the project is deemed acceptable.

Example: PsychoCeramic Sciences, Inc. (PSI), a large producer of cracked pots and other cracked items, is considering the installation of a new marketing software package that will, it is hoped, allow more accurate sales information concerning the inventory, sales, and deliveries of its pots as well as its vases designed to hold artificial flowers.

The Information Systems (IS) department has submitted a project proposal that estimates the investment requirements as follows: an initial investment of \$125,000 to be paid up- front to the Pottery Software Corporation, an additional investment of \$100,000 to modify and install the software; and another \$90,000 to integrate the new software into the overall information system. Delivery and installation is estimated to take one year; integrating the entire system should require an additional year.

Thereafter, the IS department predicts that scheduled software updates will require further expenditures of about \$15,000 every second year, beginning in the fourth year. They will not, however, update the software in the last year of its expected useful life.

The project schedule calls for benefits to begin in the third year, and to be upto a particular speed by the end of that year. Projected additional profits resulting from better and more timely sales information are estimated to be \$50,000 in the first year of operation and are expected to peak at \$120,000 in the second year of operation.

Project life is expected to be 10 years from project inception, at which time the proposed system will be obsolete for this division and will have to be replaced. It is estimated, however, that the software can be sold to a smaller division of PsychoCeramic Sciences, Inc. (PSI) and will thus, have a salvage value of \$35,000. The Company has a 12 percent hurdle rate for capital investments and expects the rate of inflation to be about 3 percent over the life of the project. Assuming that the initial expenditure occurs at the beginning of the year and that all other receipts and expenditures occur as lump sums at the end of the year, we can prepare the Net Present Value analysis for the project.

The Net Present Value of the project is positive and, thus, the project can be accepted. (The project would have been rejected if the hurdle rate were 14 percent.) Just for the intellectual exercise, note that the total inflow for the project is \$759,000, or \$75,900 per year on average for the 10 year project. The required investment is \$315,000 (ignoring the biennial overhaul charges). Assuming 10 year, straight line depreciation, or \$31,500 per year, the payback period would be: A project with this payback period would probably be considered quite desirable.

4. Internal Rate of Return (IRR): If we have a set of expected cash inflows and cash outflows, the internal rate of return is the discount rate that equates the present values of the two sets of flows. If A_t is an expected cash outflow in the period t and R_t is the expected inflow for the period t , the internal rate of return is the value of k that satisfies the following equation (note that the A_0 will be positive in this formulation of the problem). The value of k is found by trial and error.

5. Profitability Index: Also known as the benefit–cost ratio, the profitability index is the net present value of all future expected cash flows divided by the initial cash investment. (Some firms do not discount the cash flows in making this calculation.) If this ratio is greater than 1.0, the project may be accepted.

6. Other Profitability Models: There are a great many variations of the models just described. These variations fall into three general categories. These are:

(a) Those that subdivide net cash flow into the elements that comprises the net flow.

(b) Those that include specific terms to introduce risk (or uncertainty, which is treated as risk) into the evaluation.

(c) Those that extend the analysis to consider effects that the project might have on other projects or activities in the organization.

1. Certainty means that although future flows must be forecast or estimated, the estimated amounts will be received at the times they are expected to occur.

2. Certainty makes the decision simple to model, and the outcome easy to accept.

3. Under the assumption of certainty, future cash flows are to be discounted at a rate which represents the time value of money.

Example: Project Alpha requires an initial outlay of \$900, will have cash inflows of \$300 in year 1, \$400 in year 2 and \$600 in year 3. The discount rate is 8% per annum. The calculation is:

$$\begin{aligned} \text{NPV} &= -\$900 + \frac{\$300}{(1.08)^1} + \frac{\$400}{(1.08)^2} + \frac{\$600}{(1.08)^3} \\ &= \$197.01 \end{aligned}$$

This positive result means that, by undertaking the project, the firm's wealth will increase by \$197.01. Based on the NPV decision rule, the project should be undertaken.

We have made several assumptions in formulating and using this NPV model and decision:

1. the amounts of the initial cash outflow and all future cash flows are known with certainty

2. the discount rate is constant and known with certainty

3. the initial capital outlay occurs at the beginning of year 1 and all operating cash flows occur at year end

4. cash outflows from the firm are treated as negative; cash inflows are treated as positive

5. there are no constraints on the supply of capital, or on other resources

6. the firm will accept all positive NPV projects.

Competitive Necessity: Using this criterion, XYZ Steel undertook a major plant rebuilding project in the late 1960s in its steel bar manufacturing facilities near Chicago.

Cost Benefit Analysis: Cost-benefit analysis is used by several organisations to assist them to make their selections.

Discounted Cash Flow: It determines the net present value of all cash flows by discounting them by the required rate of return.

Discounted Cash Flow Method: The future value of a project is ascertained by considering the present value and the interest earned on the money.

IRR: The rate of return received from the money.

Operating Necessity: If a flood is threatening the plant, a project to build a protective dike does not require much formal evaluation, which is an example of this scenario

Product Line Extension: In this case, a project to develop and distribute new products would be judged on the degree to which it fits the firm's existing product line, fills a gap, strengthens a weak link, or extends the line in a new, desirable direction.

Profitability Index: It is the net present value of all future expected cash flows divided by the initial cash investment.

5. Case Study Green Projects

We discussed the effect that the current economy is having on projects and project management in an article entitled "Project Management in Tight Times." In that article we made the case that although some projects are being put on hold, others are going forward with increased scrutiny.

Projects that are environmentally "friendly" by virtue of their ability to reduce pollution, reduce fossil fuel consumption, or some other positive effect on the environment are definitely among those projects that are going forward. So project managers should increase their focus and awareness on these areas. These projects have spawned a new vocabulary. Terms such as "Green Project" and "Green Collar Jobs" are examples. Project managers should be aware of this shift in focus and add some of the new terms to their resumes to attract interest. Project management on these projects may demand a slightly different skill set than on other types of projects though.

Tyler Hamilton, reporting in the Friday, June 19, 2009 edition of the Toronto Star says that developers of large scale solar farms in Ontario, Canada, are preparing to battle the provincial government over its restrictions on where solar farms can be placed. Solar farms are vast areas of solar panels which supply electricity to a power grid. Solar power companies either lease or buy existing farms to install the panels. The ideal place for these farms is as close to the power grid as possible. That placement will reduce the length of transmission lines and reduce the cost of the project. The problem with that strategy is that government agriculture policy states that farms with class 1, 2, or 3 soils (soils are rated on a scale with 1 being the highest fertility) are not suitable for purposes other than agriculture. Averting any farmland that falls into class 1, 2, and 3 would potentially add considerable cost to any solar farm project.

Solar farm projects are attractive because they fall into the "green" class of project because they reduce dependency on electricity generated by plants that use fossil fuels. Solar farm projects are obviously also attractive to the solar power companies that initiate them because of their ability to generate profit. The increase in infrastructure costs that the additional transmission lines would have could potentially reduce the profit to the point that they would incur a loss with a project because their electricity prices must be competitive with existing sources.

According to Tyler Hamilton's article in the Star, Ontario's Energy and Infrastructure Minister George Smitherman said that rules expected to result from Green Energy and Green Economy Act would put restrictions on where solar farms could be placed. He said that farms with class 1, 2, or 3 soil would not qualify for development (including solar farms) in Ontario. Smitherman believes that there is enough farm land available that doesn't fall into class 1, 2, or 3 and that solar farms should not compete for the more fertile farm land. Some advocacy groups backed by the Ontario Federation of Agriculture for Environment Law and Policy are solidly behind this government policy.

The Canadian Solar Industries Association is fighting the policy with its own public relations campaign on several fronts. They say that they would only be consuming class 1, 2, or 3 farmland at the rate of 0.11% over 20 years. The Association also claims that without the ability to lease or buy this farmland they would be unable to initiate the large projects which would bring manufacturers of solar panels and other related industries to the

Notes province. These industries would bring what are termed "green collar" jobs to the province, an especially appealing prospect in a province bleeding manufacturing jobs.

The Association claims that using the farms for solar use will not harm the fertile farmland. The farms will guard against soil erosion because of the cover the panels provide. Allowing the land to lay fallow while being used for solar farms would also provide an opportunity for nutrients to build up in the soil making it even more fertile if it were to be returned to agricultural usage.

The reporter spoke with a farmer, Ray Roth of New Hamburg, Ontario, Canada who is a farmer trying to develop solar farms. Mr. Roth pointed out that it would be contradictory for the province to implement restrictions on the solar farms because it already provides indirect subsidies to farmers who grow corn and other crops used for ethanol production. The corn and other crops must be trucked to a plant which consumes fossil fuels, so replacing a corn farm with a solar farm would reduce fossil fuel consumption because the power would go directly on the grid.

Projects are always influenced by stakeholders who are not customers, clients, sponsors, or members of the project team. They may not all be as influential as the government is in this case, but must have their considerations taken into account in any case. The higher the public profile of a project, the greater the number of public interest groups that will take an interest in the outcome. The ideal time to identify these stakeholders is at the outset of the project. Demonstrating the value of a “green project” to these stakeholders becomes much easier when the groups are consulted with during initiation. The project manager must take ownership of this effort, identify the interest groups, and engage them early on in the project. Look for ways to demonstrate the benefit of the project to the public, paying special attention to the interests representing by the group in question. Associations or organisations may be available to manage these issues. Where these don’t exist, the sponsor or project manager may need to engage the services of a public relations firm to state the benefits of their project.

The benefits of the solar farms for the provinces economy (“green collar” jobs) has been demonstrated by the Canadian Solar Industries Association. They have also demonstrated the benefit to the environment, a reduction in fossil fuel consumption to produce electricity. The problem they face is the backlash from farming groups who aren’t directly affected by the demand for farmland for solar farms. These groups don’t directly benefit from either of the two benefits stated above, and above all won’t benefit financially from the sale or leasing of their farms for the purpose of building solar farms. But they do vote, a fact that George Smitherman won’t miss. The Association faces a challenge from the government before it can hope to get the farmland it wants and it will have to influence the government to change their position on solar farms. Perhaps the best way of doing this would be to provide a benefit to the farm groups backing the government’s position.

Question:

1. Analyse the case and discuss the case facts.

What is optimum Resource Allocation?

Resource allocation is the distribution of resources – usually financial - among competing groups of people or programs. When we talk about allocation of funds for healthcare, we need to consider three distinct levels of decision-making:

Level 1: Allocating resources to healthcare versus other social needs.

Level 2: Allocating resources within the healthcare sector.

Level 3: Allocating resources among individual patients.

Market Analysis and Demand Analysis?

Forecast vs. Prediction: Forecast is an estimate of future events and trends and is arrived at by systematically combining past data and projecting it forward in a predetermined manner. Prediction is an estimate of future events and trends in a subjective manner without taking into account the past data. The subjective considerations may not emerge from any predetermined analysis or approach.

Time Horizon of Demand Forecasting: Market and demand analysis of various types are undertaken to meet specific requirements of planning and decision making.

Example: Short-term decisions in production planning, distribution etc. and selling individual products would require short-term forecast, up to one year time horizon, which must be fairly accurate for specific product items. For long-term planning, time horizon being four to five years, information required from demand analysis would be for broad product groups for facilitating choice of technology, machine tools and other hardwares and their location.

Longer-term forecasting is also undertaken to determine trends in technology development so as to choose the technology for backing up and funding its research and development.

Appropriateness of Technology?

Appropriate technology refers to those methods of production which are suitable to local economic, social, and cultural conditions. In recent years, the debate about appropriate technology has been sparked off mainly by Schumacher and others. The advocates of appropriate technology urge that the technology should be evaluated in terms of the following questions:

1. Whether the technology utilises local raw materials?
2. Whether the technology utilises local man power?
3. Whether the goods and services produced cater to the basic needs?
4. Whether the technology protects ecological balance?
5. Whether the technology is harmonious with social and cultural conditions?

What is Material Inputs and Utilities?

An important aspect of technical analysis is concerned with defining the materials and utilities required, specifying their properties in some detail, and setting up their supply programme. There is an intimate relationship between the study of materials and utilities and other aspects of project formulation, particularly those concerned with location, technology, and equipments.

Material inputs and utilities may be classified into four broad categories: (i) raw materials,

(ii) processed industrial materials and components, (iii) auxiliary materials and factory supplies, and (iv) utilities.

Explain Processed Industrial Materials and Components?

Processed industrial materials and components (base metals, semi processed materials, manufactured parts, components, and sub-assemblies) represent important inputs for a number of industries. In studying them the following questions need to be answered: In the case of industrial materials, what are their properties? What is the total requirement of the project? What quantity would be available from

domestic sources? What quantity can be procured from foreign sources? How dependable are the supplies? What has been the past trend in prices? What is the likely future behaviour of prices?

1. Define Demand.

Demand indicates the quantities of products (goods service) which the firm is willing and financially able to purchase at various prices, holding other factors constant.

2. Define Determinants of Demand:

An individual's demand for a commodity depends on his desire and capability to purchase it. Apart from the desire to purchase, there are many other factors which influence the purchase of a product (demand). These are known as demand determinants.

3. What is meant by Tastes and preferences of Consumers:

The change of tastes and preferences of consumers in favor of a commodity will result in a greater demand for the commodity. The opposite also holds good i.e. if the tastes and preferences of consumer change against the commodity, the demand will suffer.

4. What are the two kinds of Consumers expectations?

Consumers have two kind of expectations one pertains to their future income and the second is related to the future prices of the goods and its related goods.

5. Define Advertising

Advertisements provide information about the presence of quality products in the market and induces customer's to buy more. It also promotes the latest preferences of the general public to masses.

6. Define the Law of Demand:

The relation of price to quantity demanded / sales is known as the law of demand. Law of demand states that the higher the price is the lower the demand is and vice versa, holding other factors as constant.

7. Define the price quantity relation.

This price quantity relation can be expressed as demand being a function of price

$$D=f(p).$$

8. What Highlights of the law of demand:

1. The relationship between price and quantity demanded is inverse.
2. Price is the independent variable and demand the dependent variable.
3. Law of demand assumes that except for price and demand, other factors remain constant.

9. What is Demand Shift: (Change in demand)

Factors shift the demand for a particular product either on the right side of the demand curve or to the left side of the demand curve based on the changes in price. These factors, other than the price of a good that influence demand are known as demand shifters. The shift in the demand either to the left or right is called the demand shift.

10. What are the Exceptions to law of demand:

1. In share markets one would have noticed that the rise in price of the shares increases, the sales of the shares while decrease in the price of the shares results in decrease of sale of the shares.
2. Some goods which act as status symbol and have a snob appeal fall under this category. Here when the price of the product rises then the appeal of the product also rises and thus the demand. Some example are diamonds and antiques.
3. Finally, ignorance on the part of the consumer may cause the consumer to buy at a higher price, especially when the rise in price is taken to mean an improvement in quality and a reduction in price as deterioration in quality.

11. Define Individual demand :

The quantity of a product demanded by an individual purchaser at a given price is known as individual demand.

12. Define Market demand :

The total quantity demanded by all the purchasers together is known as the market demand.

13. What are the types of Demand function

1. Consumption function
2. Product consumption function
3. Differences in regional incomes
4. Income expectation and demand

14. What are the Characteristics of demand function ?

1. The long run relationship between consumption and income is somewhat stable, and expenditure on consumption is usually about 85 to 90% of the income.
2. The consumption function is highly unstable in short runs and the relationship between income and consumption cannot be predicted by any mathematical formula.
3. During the periods of economic prosperity, there is an absolute increase in the expenditure on consumption, but decrease as a percentage of income during periods of depression, the consumption declines absolutely but the expenditure on the consumption increases as a percentage of income.
4. In the periods of economic recovery, the rate of increase in consumption is higher than the rate of the decline in consumption in times of recession.

15. Define Product consumption function:

This function can be defined as the relationship between the total income of the consumer and sales of particular products. It means that when there is a change in income there is a change in the demand for particular products.

16. Define Income expectations and Demand:

Expectations are related to people's estimates of the level and durability of the future economic conditions. The demand for many consumer durables (household appliances like TV, Washing machine, etc) is often sensitive to general expectations regarding income level.

17. What are the features of advertising demand relationship ?

1. Even when there is no advertising effort done, there will be a certain amount of sales possible for a particular product by virtue of its presence in the market.
2. There is a direct relationship between advertising and sales. Thus when there is an increased spending on advertisements. It will bring in more sales.
3. Increase in advertisements will lead to more than proportionate increase in sales only to a point. After that any increase in advertisement will have only less than proportionate effect on sales.

18. Define Elasticity of Demand:

Elasticity of demand is defined as 'the percentage change in quantity demanded caused by one percent change in the demand determinant under consideration, while other determinants are held constant'.

19. Define demand determinant

It is the degree of change in demand to the degree of change in any of the demand determinants.

20. What are the Various Elasticities ?

1. Price elasticity of demand
2. Income elasticity of demand
3. Cross elasticity of demand
4. Promotional elasticity
5. Exportations elasticity of demand

21. Define Price Elasticity of Demand

Price elasticity of demand can be defined as "the degree of responsiveness of quantity demanded to a change in price".

22. What are the Types of price elasticity:

1. Perfectly elastic demand
2. Absolutely inelastic demand or perfectly inelastic demand
3. Unit elasticity of demand
4. Relatively elastic demand
5. Relatively inelastic demand

23. Define Absolutely inelastic demand or perfectly inelastic demand ($e_p=$):

Absolutely inelastic demand is where a change in price howsoever large, causes no change in the quantity demanded of a product. Here, the shape of the demand curve is vertical.

24. Define Relatively elastic demand ($e_p > 1$):

It is where a reduction in price leads to more than proportionate change in demand. Here the shape of the demand curve is flat.

25. The elasticity of demand depends on the following factors namely

1. Nature of the product
2. Extent of usage
3. Availability of substitutes
4. Income level of people
5. Proportion of the income spent of the product
6. Urgency of demand and
7. Durability of a product.

Unit 4: Project Analysis and Selection

Introduction

A project should earn sufficient return on the investment. The very idea of promoting a project by an entrepreneur is to earn attractive returns on investment on the project. Projects sponsored/ undertaken by Government may take into account social cost benefits of the proposed project and in such cases, financial return alone needs not be the criterion. But for such Government projects, all other projects have the prime motive of getting maximum return on investment. If there are many alternative projects, all of which, prima facie, appear to be more or less equal in profit earning capacity, the investor should make a comparative study of the return on the different alternative proposals before choosing one.

1. What is Project Initiation and Resource Allocation?

The purpose of Project Initiation is to begin to define the overall parameters of a project and establish the appropriate project management and quality environment required to complete the project. Development of the Project Charter is a pivotal starting point for the project, establishing the project definition that will serve as the foundation for all future efforts. The completion of this process is marked by the Project Kick-off Meeting, in which the Project Manager presents the Project Charter. Successful projects begin with a detailed project definition that is understood and accepted by Stakeholders. Putting everything down in writing helps ensure a commitment among Project Team members and between the team and the Stakeholders. As part of Project Initiation, an initial Project Plan is developed, which comprises the Project Charter, Cost/Scope/Schedule/ Quality (CSSQ) documents, and preliminary risk identification list. These documents, once approved, ensure a consistent understanding of the project, help to set expectations, and identify resources necessary to move the project to the next level of detailed planning. Potential problems are identified so that they can be addressed early in the project.

Also during Project Initiation, a high-level Project Schedule is developed as the roadmap to more detailed Project Planning and Project Execution and Control. This high-level schedule will be refined over time, and will serve as the primary source of information regarding project status and progress. An accurate, realistic, and complete schedule, rigorously maintained, is essential to the success of a project.

What is optimum Resource Allocation

Resource allocation is the distribution of resources – usually financial - among competing groups of people or programs. When we talk about allocation of funds for healthcare, we need to consider three distinct levels of decision-making:

Level 1: Allocating resources to healthcare versus other social needs.

Level 2: Allocating resources within the healthcare sector.

Level 3: Allocating resources among individual patients.

Notes

Example: A community receives a gift of \$100,000 from a wealthy donor to spend on healthcare, education and housing. The funds can be distributed among the three areas or dedicated to a single area, such as healthcare.

Level 1: At this level, community members consider how to distribute the funds among one, two or three of the competing programs.

Example: For example, should the funding be split in three equal portions or should one program, possibly under-funded in the past, get all or most of the money?

Level 2: Assuming that healthcare gets a portion of the \$100,000, the next decision community members face is how best to direct the spending among competing healthcare interests. Should most or all of the funds go to hospital care and medical equipment? What about the public education program that promotes healthy lifestyles and behaviors (like exercise or immunizations) that prevent disease? Or, community members could decide to spend the money to purchase health insurance for those who can't afford it.

Level 3: The next level of decision making involves distributing the financial resources among individuals. Most communities have policies and guidelines to insure fairness in these situations. Decisions at this level include: Who gets the next available heart for transplant? And, who sees the doctor first when there are many people waiting in an emergency room?

Did u know? The wants and needs of a project or business are unlimited but the resources to satisfy these wants are limited. Thus, resource allocation is a mandatory activity.

2. Why is Resource Allocation Needed?

Because of increasing demand for healthcare services and rising costs to provide those services, Americans must choose how to allocate healthcare dollars.

Rising Cost of Healthcare

Resources spent on healthcare have increased over the last century. Americans are spending far more resources on healthcare than do citizens of any other industrialized nation. Why?

1. Continued medical advances have lead to more accurate diagnoses and better treatments, but also have increased the cost of healthcare.
2. The aging population is growing. Nearly 36 million Americans (more than the entire population of Canada) are age 65 or older and account for a majority of healthcare expenditures.
3. More people are living with chronic disease and disabilities, including AIDS.

Healthcare Rationing

Rationing refers to the conscious decision to exclude certain people from a service or treatment that they need. Rationing takes many forms. Rationing occurs when a state determines who is eligible for Medical Assistance insurance. It also occurs when deciding which patient on the waiting list gets an organ transplant. Rationing is also utilized when prices are set for health insurance and health services that some people cannot afford.

Oregon Health Plan

Oregon has implemented an innovative health plan that rations health care by developing a prioritized list of treatments. A cut off line is then set to determine which services would be covered and which would not. The plan serves to increase access to health care for more Oregon residents but cuts down on the range of services covered.

This plan allows Oregon to provide health care access to a greater percentage of its residents, but it raises a number of ethical considerations. If ranking health care services is based on improving quality of life rather than medical or biological outcomes, how do we evaluate quality of life? Is it ethical to refuse to medical care based on cost-effective rankings? Does the method of ranking by quality of life discriminate against people with disabilities?

Caution Successful projects begin with a detailed project definition that is understood and accepted by Stakeholders.

3. What is Market Analysis and Demand Analysis?

Forecast vs. Prediction: Forecast is an estimate of future events and trends and is arrived at by systematically combining past data and projecting it forward in a predetermined manner. Prediction is an estimate of future events and trends in a subjective manner without taking into account the past data. The subjective considerations may not emerge from any predetermined analysis or approach.

Time Horizon of Demand Forecasting: Market and demand analysis of various types are undertaken to meet specific requirements of planning and decision making.

Example: Short-term decisions in production planning, distribution etc. and selling individual products would require short-term forecast, up to one year time horizon, which must be fairly accurate for specific product items. For long-term planning, time horizon being four to five years, information required from demand analysis would be for broad product groups for facilitating choice of technology, machine tools and other hardwares and their location.

Longer-term forecasting is also undertaken to determine trends in technology development so as to choose the technology for backing up and funding its research and development.

Need for Demand Forecasting

All business planning starts with forecasting Capital investment, like procurement of raw materials and production planning, has to relate to demand forecasting. High volume high technology mass production systems have further highlighted the importance of accurate demand forecasts. Even in a batch type production, any major mismatch between forecast and manufacture will lead to higher capital tied up in finished products which are slow in selling.

Uncertainties in Demand Forecasting

Demand forecasting is the estimate of future demand. As the future is always uncertain, forecasting cannot be completely fool proof and correct. However, the very process of forecasting demand in future involves evaluating various forces and factors which influence demand. This exercise is very rewarding in itself as it enables the personnel to know about various market forces, currents, cross-currents and under-currents relevant to the demand behavior.

Levels of Demand Forecasting?

Demand forecasting can be at the level of a firm or an industry or at the national or national or international level:

1. Firm Level: If the exercise aims at forecasting demand of firms products locally at state, region or national level, it is a micro-level of demand forecasting. Sometimes, forecasts are required for company products in specific industry or market segment.
2. Industry Level: Such a demand forecasting exercise focuses on an industry as a whole for the region and/or national level. These forecasts may be undertaken by a group of companies or by industry/trade associations.
3. National Level: Demand forecasts at national level include parameters like national income, expenditure, index of industrial and/or agricultural production etc. Estimating aggregate demand of products at national level facilitates governmental decisions for imports, exports, pricing policy, etc.
4. International Level: Companies operating in multinational markets would require similar forecasting of demands for its products, trends in consumption, etc. at international level. Managerial Economists play a leading role in masterminding these forecasts at firm, industry, national and international levels. Time horizon of these demand forecasts usually varies from 1 to 5 years and in rare instances up to 10 years.

Did u know? Demand forecasting is the activity of estimating the quantity of a product or service that consumers will purchase. Demand forecasting may be used in making pricing decisions.

Self Assessment

1. is also utilized when prices are set for health insurance and health services that some people cannot afford.
2. is also undertaken to determine trends in technology development so as to choose the technology for backing up and funding its research and development.
3. Rationing occurs when a state determines who is eligible for Assistance insurance.
4. and demand analysis of various types are undertaken to meet specific requirements of planning and decision making.
5. exercise should not be expensive in terms of efforts and costs.

4. Criteria for a Good Forecasting Method?

A good forecasting method should have the following attributes:

1. Accuracy in forecast: Accuracy in forecast is measured in terms of past forecasts against current sales and by the percentage of deviation from actual demand. It is important to not only check the accuracy of past forecasts but also the validity of assumptions in practice. Forecasts being future-oriented, cannot be always accurate although accuracy is the most important criterion.
2. Plausibility of forecasts: Forecasts of demand must be reasonable, consistent and plausible. Assumptions made should stand scrutiny and techniques adopted must be commensurate. Explanatory note on these aspects must be available in the write-up on methods and methodology employed in forecasting.
3. Economy of forecasts: Forecasting exercise should not be expensive in terms of efforts and costs. Additional costs of ways and means for improving the accuracy of forecasts should not exceed the extra gain expected.
4. Quick Results: Method of forecasting chosen should be capable of yielding quick and useful results, If method selected takes too long a time to yield accurate forecast, it may not be conducive for taking quick and effective decisions. Always remember not to make best enemy of 'good'.
5. Availability and Timeliness: Methodology of forecasting should be such that it can easily be updated when changes occur in the demand relationships.
6. Durability: Demand forecasts should not be changed frequently. Durability of forecast is subject to the followings:
 - (a) Simple and reasonable relationship between price and demand, advertisement and sales, level of income and volume of sales etc.
 - (b) Stability of relationship between the above variables.
7. Flexibility: Flexibility of forecast is an added advantage. It is desirable to be able to adjust 'coefficient' of variables from time to time to cope with the changing conditions.

5. Methods of Forecasting Demand?

To facilitate proper and reliable appraisal of investment proposal, we require a reasonably accurate forecast of demand. Starting with qualitative methods like survey of collective opinions, buyers' intention, Delphi approach and its variant, a number of quantitative methods are used for compiling and computing demand forecasts as detailed below:

1. Collective Opinion Survey: Sales personnel are closest to the customers and have an intimate feel of the market. Thus they are most suited to assess consumers' reaction to company's products. Herein each salesperson makes an estimate of the expected sales in their respective area, territory, state and/or region, These estimates are collated, reviewed and revised to take into account changes in design/features of products, changes in selling prices, projected advertising and sales promotion campaigns and anticipated changes in competitors: marketing policies covering product, people, price, promotion and place. Opinions of all managers involved at various levels of sales organisation are also

included in the survey. Thus “collective opinion survey forms the basis of market analysis and demand forecasting.

Although this method is simple, direct, first hand and most acceptable, it suffers from following weaknesses:

- (a) Estimates are based on personal judgment which may not be free from bias.
- (b) Adding together demand estimates of individual salespersons to obtain total demand of the country maybe risky as each person has knowledge about a small portion of market only
- (c) Salesperson may not prepare the demand estimates with the requisite seriousness and care

(d) Owing to limited experience, usually in their employment, salesperson may not have the requisite knowledge and experience

This method may be useful for long-term forecasts. It is also used for new products or new variants of existing products.

2. Survey of Customers Intention: Another method of demand forecasting is to carry out a survey of what consumers prefer and intend to buy. If the product is sold to a few large industrial buyers, survey would involve interviewing them. If it is a consumer durable product, a sample survey is carried out for questioning a few representative consumers about what they are planning or intending to buy. It is neither realistic nor desirable to query all consumers either through direct contact or through printed questionnaire by mail.

These surveys serve useful purpose in establishing relationships between:

- (a) demand and price
- (b) demand and income of consumers
- (c) demand and expenditure on advertisement etc.

This method is preferred when bulk of the sales is to institutions and industrial buyers and only a few of them have to be contacted.

Disadvantages are that customers may not know total requirements; in some cases they are not certain about quantity to be purchased. Besides during shortages there is a tendency to inflate their requirements. Survey method is not useful for households - interviewing them is not only difficult out but also expensive. They are not able to give precise idea about their intentions particularly when alternative products are available in the market.

3. Delphi Method of Demand Forecasting: Delphi method is a group process and aims at achieving a consensus of the members. Herein experts in the field of marketing research and demand forecasting are engaged in analyzing economic conditions carrying out sample surveys of market conducting opinion polls. Based on the above, demand forecast is worked out in following steps:

- (a) Coordinator sends out a set of questions in writing to all the experts co-opted on the panel who are requested to write back a brief prediction.
- (b) Written predictions of experts are collated, edited and summarized together by the Coordinator.
- (c) Based on the summary, Coordinator designs a new set of questions and gives them to the same experts who answer back again in writing.
- (d) Coordinator repeats the process of collating, editing and summarizing the responses.
- (e) Steps 3 and 4 are repeated by the Coordinator to experts with diverse backgrounds until consensus is reached.

If there is divergence of opinions and hence conclusions, Coordinator has to sort it out through mutual discussions. Coordinator has to have the necessary experience and background as he plays a key role in designing structured questionnaires and synthesizing the data.

Direct interaction among experts is avoided nor their identify is disclosed. Procedure also avoids inter-personnel conflicts nor strong-willed experts are able to dominate the group. This method is also used for technology forecasting.

6. The choice of technology is influenced by a variety of considerations – explain in detail?

1. **Plant Capacity:** Often, there is a close relationship between plant capacity and production technology. To meet a given capacity requirement perhaps only a certain production technology may be viable.
2. **Principal Inputs:** The choice of technology depends on the principal inputs available for the project. In some cases, the raw materials available influence the technology chosen.
Example: The quality of milestones determines whether the wet or dry process should be used for a cement plant.
3. **Investment Outlay and Production Cost:** The effect of alternative technologies on investment outlay and production cost over a period of time should be carefully assessed.
4. **Use by Other Units:** The technology adopted must be proven by successful use by other units, preferably in India.
5. **Product Mix:** The technology chosen must be judged in terms of the total product mix generated by it, including saleable by products.
6. **Latest Developments:** The technology adopted must be based on the latest developments in order to ensure that the likelihood of technological obsolescence in the near future, at least, is minimised.
7. **Ease of Absorption:** The ease with which a particular technology can be absorbed can influence the choice of technology. Sometimes a high-level technology may be beyond the absorptive capacity of a developing country which may lack trained personnel to handle that technology.

Appropriateness of Technology

Appropriate technology refers to those methods of production which are suitable to local economic, social, and cultural conditions. In recent years, the debate about appropriate technology has been sparked off mainly by Schumacher and others. The advocates of appropriate technology urge that the technology should be evaluated in terms of the following questions:

1. Whether the technology utilises local raw materials?
2. Whether the technology utilises local man power?
3. Whether the goods and services produced cater to the basic needs?
4. Whether the technology protects ecological balance?
5. Whether the technology is harmonious with social and cultural conditions?

Technical Arrangements

Satisfactory arrangements must be made to obtain the technical know how needed for the proposed manufacturing process. When collaboration is sought, inter alia, the following aspects of the agreement must be worked out in detail:

1. The nature of support to be provided by the collaborators during the designing of the project, selection and procurement of equipment, installation and erection of the plant, operation and maintenance of the plant, and training of the project personnel.
2. Process and performance guarantees in terms of plant capacity, product quality, and consumption of raw materials and utilities.
3. The price of technology in terms of one time licensing fee and periodic royalty fee.
4. The continuing benefit of research and development work being done by the collaborator.
5. The period of the collaboration agreement.
6. The assistance to be provided and the restrictions to be imposed by the collaborator with respect to exports.
7. The level of equity participation and the manner of sharing management control, especially if the technical collaboration is backed by financial collaboration.
8. Assignment of the agreement by either side in case of change of ownership.
9. Termination of the agreement or other remedies when either party fails to meet its obligation.
10. Approach to be adopted in force majeure situations.

Material Inputs and Utilities

An important aspect of technical analysis is concerned with defining the materials and utilities required, specifying their properties in some detail, and setting up their supply programme. There is an intimate relationship between the study of materials and utilities and other aspects of project formulation, particularly those concerned with location, technology, and equipments.

Material inputs and utilities may be classified into four broad categories: (i) raw materials, (ii) processed industrial materials and components, (iii) auxiliary materials and factory supplies, and (iv) utilities.

Raw Materials

Raw materials (processed and/or semi processed) may be classified into four types:

(i) agricultural products, (ii) mineral products, (iii) livestock and forest products, and (iv) marine products. These are explained below:

1. **Agricultural Products:** In studying agricultural products, the quality must first be examined. Then, an assessment of the quantities available, currently and potentially, is required. The questions that may be raised in this context are: What is the present marketable surplus? What is the present area under cultivation? What is the likely increase in yield per acre?
2. **Mineral Products:** In assessing mineral raw materials, information is required on the quantum of exploitable deposits and the properties of the raw materials. The study should provide details of the location, size, and depth of the deposits and the viability of open cast or underground mining. In addition, information should be generated on the composition of the ore, level of impurities, need for beneficiation, and physical, chemical and other properties.
3. **Livestock and Forest Products:** Secondary sources of data on livestock and forest products often do not provide a dependable basis for estimation. Hence, in general, a specific survey may be required to obtain more reliable data on the quantum of livestock produce and forest products.
4. **Marine Products:** Assessing the potential availability of marine products and the cost of collection is somewhat difficult. Preliminary marine operations, essential for this purpose, have to be provided for in the feasibility study.

Processed Industrial Materials and Components

Processed industrial materials and components (base metals, semi processed materials, manufactured parts, components, and sub-assemblies) represent important inputs for a number of industries. In studying them the following questions need to be answered: In the case of industrial materials, what are their properties? What is the total requirement of the project? What quantity would be available from domestic sources? What quantity can be procured from foreign sources? How dependable are the supplies? What has been the past trend in prices? What is the likely future behaviour of prices?

Auxiliary Materials and Factory Supplies

In addition to the basic raw materials and processed industrial materials and components, a manufacturing project requires various auxiliary materials and factory supplies like chemicals, additives, packaging materials, paint, varnishes, oils, grease, cleaning materials, etc. The requirements of such auxiliary materials and supplies should be taken into account in the feasibility study.

Utilities

A broad assessment of utilities (power, water, steam, fuel, etc.) may be made at the time of the input study though a detailed assessment can be made only after formulating the project with respect to location, technology, and plant capacity. Since the successful operation of a project critically depends on the adequate availability of utilities, the following questions should be raised while conducting the inputs study. What quantities are required? What are the sources of supply? What would be the potential availability? What are the likely shortages/bottlenecks? What measures may be taken to augment supplies?

Did u know? Experts of marine products have been erratic and on a declining trend which can be owed to the adverse market conditions in the EV and US markets.

7 Explain the Basis of Government Regulatory Framework in project management?

Government of India recognizes that there are significant shortcomings in the availability of critical infrastructure in the country at central as well as state and local level and that this is hindering rapid economic development. In addition, the development of infrastructure requires very large investment that may not be possible out of the budgetary resources of government of India alone. In order to remove these shortcomings and to bring in private sector resource as well as techno-managerial efficiencies, the government is committed to promoting Public Private Partnerships (PPPs) in infrastructure development. It is also recognized that infrastructure projects have a long gestation period and may not all be fully financially viable on their own. On the other hand, financial viability can often be fully financially viable on mechanism that provides government support to reduce project costs. The government of India therefore proposes to set up a special facility to provide such support to PPP projects. This support is generically termed as 'viability gap funding' throughout this document. This facility will be housed in the department of economic affairs (DEA). Suitable budgetary provisions will be made on a year basis.

Explain Project Proposal and Project Portfolio Process?

A technical proposal, often called a "Statement of Work," is a persuasive document. Its objectives are to:

1. Identify what work is to be done
2. Explain why this work needs to be done
3. Persuade the reader that the proposers (you) are qualified for the work, have a plausible management plan and technical approach, and have the resources needed to complete the task within the stated time and cost constraints.

8. What makes a Good Proposal?

One attribute is appearance. A strong proposal has an attractive, professional, inviting appearance. In addition, the information should be easy to access.

A second attribute is substance. A strong proposal has a well-organized plan of attack. A strong proposal also has technical details because technical depth is needed to sell your project.

Remember: A proposal is a persuasive document.

4.9.2 Required Format

One aspect of layout is the incorporation of illustrations. In your proposal, each illustration should have a name and be formally introduced in the text. Illustrations consist of figures and tables. Figures include photographs, drawings, diagrams, and graphs. Each figure should have a stand-alone caption, and the key points and features should be labelled. Tables are arrangement of words and numbers into rows and columns. Use tables to summarize lists that the audience will try to find later (the budget, for instance). Department of Information Technology supports R&D projects in industries (public and private Sector), academic institutes, research labs in the identified thrust area related to Information Technology (Hardware/Software), Information and Broadcasting, Industrial Electronics, Consumer Electronics, Microelectronics and Photonics, Capital Good Development, Strategic Electronics, Communications, Rural Application, Health and Biotechnology, Components including microwaves and millimeter waves and Materials.

According to Max Wideman, author of A Management Framework for Project, Program, and Portfolio Integration, the project portfolio life span consists of the following steps:

1. Identification of needs and opportunities
2. Selection of best combinations of projects (the portfolios)
3. Planning and execution of the projects (project management)
4. Product launch (acceptance and use of deliverables)
5. Realization of benefits

Many organizations focus only on Step 3, which involves the planning and execution of projects. However, from a project portfolio management point of view, the focus should be placed on the entire process and not on a single step.

Let's talk about each step and then discuss how the entire process fits together to deliver the best value for an organization.

First, ideas, opportunities, and needs are evaluated based on a predetermined screening process. This screening process starts with the creation of your organization's mission, vision, strategy, goals, and objectives. Once the baseline is established, the ideas, opportunities, and needs are measured against the baseline. Do these new ideas align with corporate strategy? Will solving a defined need improve the value proposition for your business?

Second, once an idea is validated, it continues through the screening process in order to create the best combination of projects for the company. Which of the many good ideas should the organization pursue? Which of all the opportunities will provide the most value for the organization? In this stage, the ideas, opportunities, and needs identified in Step 1 are put through an additional filter to select the best projects for the portfolio. This concept phase weeds out the good projects in order to select the best projects.

Third, now that a portfolio of projects has been selected and evaluated, it is time to start planning and executing on the projects. At this point, project managers will identify the individual tasks of the project, create a Gantt chart, allocate resources, and oversee the completion of the project. This project management phase is normally where most of the focus is placed due to the time and money involved in making sure that the project is delivered as specified.

Fourth, once the projects have been completed, it is time to launch the product or service. Whether the product is a new piece of software or a new building, the Sponsors of the individual projects need to accept and then use the deliverables of the projects. Did the projects satisfy the predetermined objectives or were they over budget and late? This is the time to reflect upon the projects themselves. Did the organization receive the benefits that it intended to receive?

Fifth, realize the benefits of the projects. Assuming that the projects were successful, now is the time to sit back and reap the benefits of the hard work. The company should be seeing a positive ROI from the portfolio and hopefully hand out bonuses to all of the executives, project managers, and project teams that worked together to produce a great product.

Of course all of this sounds a lot easier than it actually is. Managing the entire process and keeping everybody in the loop can be as challenging as executing on any one of the above tasks. How do you keep the birds eye view while being in the trenches at the same time? How does the Team Member know the objectives of the Planning Committee? What if something goes wrong? Is there a process in place to fix the problem? At what point does a "good" project become a loss? And finally, is there a tool that can be used by the Planning Committee, the Project Managers, and the Team Members that can facilitate this process?

The answer to these questions can be complicated and deserve their own articles, but suffice it to say that it can be done and organizations that learn how to do it will be more effective, innovative, and competitive.

Healthcare Rationing: Rationing refers to the conscious decision to exclude certain people from a service or treatment that they need. Rationing takes many forms.

Mineral Products: In assessing mineral raw materials, information is required on the quantum of exploitable deposits and the properties of the raw materials.

Oregon Health Plan: Oregon has implemented an innovative health plan that rations health care by developing a prioritized list of treatments.

Project Initiation: The purpose of Project Initiation is to begin to define the overall parameters of a project and establish the appropriate project management and quality environment required to complete the project.

Resource Allocation: Resource allocation is the distribution of resources – usually financial - among competing groups of people or programs.

9. Case Study Corporate Social Responsibility (CSR) and Project Management

Corporate Social Responsibility (CSR) has gained significant momentum in recent years. The push is on to identify projects that reflect the corporation's sense of social responsibility and to tailor projects to reflect that sense. This is perhaps a

step in the right direction when it comes to the corporation's position in the host community, but is extremely difficult and complex in its implementation. There are two key factors that contribute to its difficulty:

1. Corporations' main goal is still profits; they owe this to their shareholders. Although profits and social responsibility are not necessarily mutually exclusive, there is frequently a price tag associated with CSR projects and this creates a conflict: choose the CSR project, or tailor the project to meet CSR objectives OR focus on increased ROI? Where a project meets both objectives, the conflict is eliminated but you know intuitively that this won't always be the case and indeed there are more and more news reports about cases where this wasn't the case.

2. How does the corporation determine what is socially responsible and what isn't? This is seldom clear cut and in many cases different social groups have goals and objectives that are opposed to one another. The corporation can't satisfy the objectives of both groups and will be seen as irresponsible when it chooses one or the other.

These issues are compounded when a corporate citizen of one country engages in work in another with different social values. The chances of a conflict between two social groups who are stakeholders in the venture increase because of the cultural differences between the stakeholders in the home community and those in the foreign country. Companies have invested millions of dollars developing their CSR persona only to see it destroyed by one ugly conflict that gets media exposure. The results achieved by the CSR investment are not newsworthy while the single incident that tarnishes that image is.

Take the recent debate over the behaviour of Canadian mining companies overseas and in South America for example. The media exposure was triggered by a private members bill (C-300) proposed by a member of the Canadian parliament. The bill asks that the federal government assume the power to investigate complaints that any Canadian mining company failed to comply with international human rights and environmental standards. On the face of it, there doesn't seem to be anything a socially responsible mining company could object to. The problem is that the bill can't guarantee that the accused mining company would have the ability to confront their accuser to answer the charges and that is what the association representing Canadian mining companies is objecting to.

The debate on the bill has spawned two stories in the Toronto Star about potential problems with mining operations in Ecuador, Argentina, and Papua New Guinea. The stories include responses from spokespeople of the mining companies involved, but the exposure of these allegations in a national newspaper has tarnished the CSR reputation built up by the mining companies mentioned. I won't mention those companies here because none of the allegations has been proven. Some of the mining companies have gone to great lengths and expense to build a reputation as socially, economically, and ethically responsible corporate citizens, only to see that reputation threatened by these stories. Now, I'm not suggesting that the allegations are all false. I have no idea as to their validity. What I do know is that in some cases the situation quoted was a no-win situation for the mining company involved. Let's take the example of a Canadian company operating in Ecuador as an example.

According to the article by staff reporter Brett Popplewell in the Monday, November 23, 2009 edition of the Toronto Star, the company is engaged in a project to build an open pit copper mine in Ecuador. The mine has provided jobs for one Ecuadorian community and is popular with it as a result. Another community is fiercely opposed to the project because they fear the mine will negatively impact their small farms and this has led to conflict between the two communities. The Ecuadorian ministry of mines is on-side with the project but apparently has done nothing to quell the conflict between the two communities. Allegations have been made by members of the opposed community that the guards hired by the mining company have used excessive force in dealing with protests against the mine. The guards, of course, are Ecuadorian citizens. Another story in the same paper quotes an accusation of gang rape at a mine in Papua New Guinea, again unproven. The latter allegation is so serious that the paper did not mention the mining company the accusation was leveled at (they did mention the company involved in the Ecuadorian

accusations). A third allegation involved a company operating in Argentina. The allegation is that the company used threats to force an Argentine government official out of office.

The companies claim to have followed all the mining laws, rules, regulations, and standards of the countries they are operating in. They further claim to have followed their own code of ethics. These ethics have been developed and implemented at significant expense in some cases. In some cases the spokesperson answering the allegations on behalf of the companies is the Vice President of Corporate Responsibility which is some indication of the emphasis placed on ethical behaviour by these companies. Whether or not these companies have been effective in adhering to the laws of the countries they operate in and their own codes, it is apparent to me that they have honestly tried to do so. What went wrong then? The problems these companies are currently encountering can be traced back to the factors previously mentioned. Implementing the code of ethics crafted by their CSR organisations will inevitably inflate costs at some point during some projects. Is it possible for a corporation to have two organisations that are in conflict? You bet. Remember we're dealing with people here and as everyone who has worked with others knows, a working relationship leads to differences of opinion. For a team working on a project, the project manager will ask the team members to forsake personal agendas for the good of the project. When the conflicts are operational and conducted at the executive level this approach doesn't always work.

The initiation of the mining project, in the case of the Ecuadorian mine, was enough to initiate a conflict between the two communities in the area of the mine. One suspects that there may have been issues between the two that pre-date the mine. So how does all this concern the project manager? The issues the Canadian mining companies are experiencing demonstrate the difficulties it is possible to face when doing business in a foreign country. These examples are probably extreme. I'm sure that not many software projects will lead to a corporation facing allegations of physical abuse or rape. On the other hand, the underlying factors will affect any project. The question is what can a project manager do to address these factors?

The first step is for the project manager to understand all the issues that can affect the project, including preexisting local issues. Is it reasonable to expect a project manager to have foreseen the conflict between the two communities involved in the Ecuadorian

Unit –V 2 Marks

1. What are the characteristics which makes software project s different from other project? (MAY - 2012)(MAY -2015)

Invisibility: When a physical artifact such as a bridge or road is being constructed the progress being made can actually be seen. With software, progress is not immediately visible. Complexity: Per dollar, pound or euro spent, software products contain more complexity than other engineered artifacts.

Flexibility: The ease with which software can be changed is usually seen as one of its strengths. However this means that where the software system interfaces with a physical or organizational system, it is expected that, where necessary, the software will change to accommodate the other components rather than vice versa. This means the software systems are likely to be subject to a high degree of change

2 .Mention the characteristics of software projects(NOV -2012)(NOV -2013)(Dec – 2014)

Non-routine tasks are involved Planning is required

Specific objectives are to be met or a specified product is to be created The project has a pre-determined time span

Work is carried out for some one other than yourself Work involves several specialisms

Work is carried out in several phases

The resources that are available for use on the project are constrained. The project is large or complex

3. Write short notes about contract management? (May – 2013).

Contract administration is the management of contracts made with customers, vendors, partners, or employees. The client organization will often appoint a project manager to supervise the contract

4 .What are the activities covered by SPM? (MAY -2009)

Feasibility study Planning

Project execution

5. What are the different stages in classic project life cycle? (MAY -2010)

Requirements analysis

Specification

DesignCoding

Verification & Validation Implementation installationMaintenance & Support

6. What are the activities within stepwise planning?

Select project

Identify projects scope and objectives Identify project infrastructure Analyse project characteristics

Identify project products and activities Estimate effort for each activity Identify activity risks

Allocate resources Review/publicize Execute plan

Lower levels of planning

7. What are the things contain product description? (NOV -2012)

The name/identity of the product The purpose of the product

The derivation of the product The composition of the product The relevant standards

8. What is PBS?. Show hierarchial diagram of a sample PBS. (MAY -2012)

A product breakdown structure (PBS) is a tool for analysing, documenting and communicating the outcomes of a project, and forms part of the product based planning technique.

9. Distinguish between objectives & products (Nov -2013)(JUNE-2014)

A project might be to create a product the details of which have been specified by the client.

The client has the responsibility for justifying the product. On the other hand, the project may be required to meet certain objectives.

There could be several ways of achieving these objectives. A new information system might be implemented to improve some service to users inside or outside an organization.

The level of service that is the target would be the subject of an agreement rather than the characteristics of a particular information system.

10 Who are Project Stakeholders? (May-2015)

Project Stakeholder is a person, group of people or an organization that has any kind of interest in your project or is affected by its outcome either directly or indirectly. This may include your project team members, project sponsors, your organization members and people outside to your organization as well.

Project stakeholders can be grouped into two categories:

Internal Stakeholders

External Stakeholders

11. Mention some of the major activities covered by software project management. (May-2016)

Major activities covered by software project management are Project

Planning

□ Scope

Management

12. What are the steps involved in step wise planning?

- Identify project scope and objectives.
- Identify project infrastructure.
- Analyze project characteristics.
- Identify project products and activities.
- Estimate effort for each activity.
- Identify activity risks.
- Allocate resources.
- Review / publicize plan
 - Execute plan/ lower levels of planning. Project Estimation

13. What are the problems with software project from manager's point of view?

Poor estimates and plans.

- Lack of quality standards and measures
- Lack of techniques to make progress visible
- Lack of guidance about organizational Decisions.

Poor role definition. 6. Incorrect success criteria

14. What do you mean by the characteristics of invisibility, complexity and complexity of Software project management?

Invisibility:

The outputs are not seen / visible physically during the software progress. Complexity:

Usually software products contain more complexity than other engineered artifacts. Flexibility:

Software project has the characteristics of changing its code at any time and can produce the expected result.

15. What is the difference between Information systems and embedded systems?

Information systems:-

Information System includes databases that include useful "information". Information Systems is the discipline concerned with the development, use, application and influence of information

systems. An information system, following a definition of Langefors, is a technologically implemented medium for recording, storing, and disseminating linguistic expressions, as well as for drawing conclusions from such expressions. The technology used for implementing information systems by no means has to be computer technology. A notebook in which one lists certain items of interest is, according to that definition, an information system. Likewise, there are computer applications that do not comply with this definition of information systems. Embedded systems are an example. **Embedded Systems:-** Embedded systems include small computers that make things work, such as the computer in your radio, television or the computer that controls your vehicle engine. An embedded system is a computer system that is part of a larger system.

Examples: Washing machine
Car engine control

16. What is cost-benefit analysis? (Nov/Dec 2017)

Cost-benefit analysis (CBA), sometimes called benefit costs analysis (BCA), is a systematic approach to estimating the strengths and weaknesses of alternatives (for example in transactions, activities, functional business requirements); it is used to determine options that provide the best approach to achieve benefits while preserving savings.

Outline the need for risk evaluation. (Nov/Dec 2017)

Risk assessment is a term used to describe the overall process or method where you:

- Identify hazards and risk factors that have the potential to cause harm (hazard identification).
- Analyze and evaluate the risk associated with that hazard (risk analysis, and risk evaluation).
- Determine appropriate ways to eliminate the hazard, or control the risk when the hazard cannot be eliminated (risk control).

What is Management software?

Management software is that which is designed to streamline and automate management processes in order to lessen the complexity of large projects and tasks, as well as encourage or facilitate team cooperation, collaboration and proper project reporting.

Notes Unit 5: Functions of a Project Manager

Objectives

After studying this unit, you will be able to:

- ② Define functions of a Project Manager
- ② Discuss about Roles and Responsibilities of a Project Manager
- ② Describe about Delegation of Authority
- ② Explain about Building Project Team
- ② Discuss about Pure Project Organisation
- ② Explain about Matrix Organisation

Introduction

A project is an allocation of capital and human resources to achieve time-specific objectives. Project management is the procedure and techniques used to achieve project objectives, which includes identifying, prioritising and scheduling tasks to systematically effect rapid change. Many companies are “managing organisations by projects,” using projects as a way to achieve business goals and strategic plans.

1. List out Functions of a Project Manager

The functions are as follows:

1. A project manager has to deliver the performance with better success rates.
2. He is responsible for keeping in touch with the clients who have assigned the project to his company and make them aware of the status of the work finished.
3. He should be able to lead his team and bring out the best in them.
4. A project manager is also responsible for developing a good dialog and communication with the team member for the success of the project.
5. It is his responsibility to perform efficiently and honestly.
6. By the virtue of being a manager, he has to maintain confidentiality.
7. He is responsible for establishing easy communication between the employees and the higher authority.
8. In case of emergency, he should be able to solve problems for his team members.
9. He is responsible for good team building, which is defined by success.
10. He is responsible for accomplishing project objectives and the outcome (success or failure) of the project.

List out Roles and Responsibilities of a Project Manager

Project Manager Duties and responsibilities are closely related to each other. The terms go hand in hand with a fine line of distinction. A project manager’s role in the growth of a company is a significant one. Find in this article a detailed information on the duties and responsibilities of the project manager. A manager is someone who manages the five Ms of a business, namely men, material, machine, money and motivating factors. A project manager receives formal project management training to deal with any

project, closely related with construction, architecture, telecommunications and other infrastructural projects. Project managers also manage projects related to the fields of design, sales and services. Basically, the job description of a project manager is to manage the project that he is assigned with. Hence, he becomes accountable for both, starting the project as slated, and finishing it on time.

Difference between Duty and Responsibility

Duties and responsibilities go hand in hand. However, there is a fine line of distinction between the two. Duty is a task performed by a person out of his job profile and responsibilities are obligations for which he is accountable. All duties may not be responsibilities, but all responsibilities are duties. For example, it is a manager's duty to manage the task, but it is not

his responsibility to pay for someone's mistake. Project management is associated with imparting the duties and responsibilities for a manager. The duties and responsibilities of a project manager have been studied by many management experts and are made to suit business in the most effective ways. Those aspiring to be project managers have to learn to be on an eternal vigil, develop a vision, take proactive decisions and understand the diversity in training. Project management is a discipline of planning, organising and managing a specific task and bring about its completion with Excellency.

1. Project Manager and responsibilities are closely related to each other.
2. A manager is someone who manages the five Ms of a , namely men, material, machine, money and motivating factors.
3. Project managers also manage projects related to the fields of , sales and services.
4. Duty is a task performed by a person out of his profile and responsibilities are obligations for which he is accountable.
5. The duties and responsibilities of a project manager have been studied by many experts and are made to suit business in the most effective ways.

Delegation of Authority

Authority is the key to managerial job. It denotes the right to make decision and command subordinates to confirm these decisions. When the office manager is over burdened with official assignments, he may allocate or divide it among the subordinates to get the work done by them. The process of allocation of office work among the subordinates is called delegation of authority. So delegation of authority means giving the subordinate authority to do something which the executives do not have time to do. The process of delegation gives a gain to the subordinates because they become closer with the supervisor. Delegation of authority involves:

1. Assigning of duties to subordinates.
2. Delegating required amount of authority to the subordinate to enable them to discharge the duties assigned to them.
3. Assumption of responsibility by the subordinates.

Building Project Team

If we are building a project team we should keep following points in our mind:

Suppose that you as a manager have been asked to form a team for the life of a particular project. How should you set about choosing your people and forming them into a well functioning group?

Selecting Your Team

Take care to choose the right people. Pick them for their skills and abilities as they apply to your particular project. You don't necessarily need the person most qualified in absolute terms, but you need the person most qualified for your specific project. Concentrate on the skills you need for the job in hand. Don't be seduced by reams of paper qualifications that you will never need.

You almost certainly need a mixture of team members each with a different set of skills and abilities, rather than a series of clones all with identical skills. Ensure that taken as a group they together represent all the skills you need in the proportions that you need them.

Don't overlook the need to choose people who can all get along with each other and work together as a team. A group of prima donnas is the last thing you want.

Set the Tone and the Ground Rules

Do this at your very first team meeting. Make sure that you call this at the very start of your project and that everyone in your team comes to the meeting. Don't be late yourself and don't allow lateness in others.

This is the meeting where you have to make it clear who is in charge and what you expect from your team. This is where the team hierarchies and reporting structures are restated. This is the time to remove any ambiguities or potential conflicts. Make sure everyone is clear about his role and responsibilities. Delegate tasks as appropriate and make it clear who hold the delegated authority.

Setting Clear Goals

You must set clear achievable goals. You must set them for your team as a whole and you must set them for the individuals within your team. They must be unambiguous and they must be mutually attainable. That is to say, no one individual's goal should in any way conflict with that of another individual. In fact you want it to be in everybody's interest that each individual achieves his own goal. Design the goals accordingly. You must try to build a team that works together with common aims, all working towards the same final goal.

Achievable Early Goals

Make use of your goals to build team spirit and enthusiasm. Do this by setting small, easily-attainable goals early on in your project while your team is still bedding-in and settling down. Make them worthwhile goals, but goals that you are almost certain can be reached. In this way your team will notch up some early successes, which will certainly boost morale and establish a sense of pride in the achievement. Later goals that you set can (and should) be more taxing and testing, but the early successes will do wonders for the spirit of the team. This spirit will endure long into the future as the going gets tougher.

Communication

It is almost impossible to exaggerate the importance of communication within any organisation, and in particular within a project team. Make it your duty to ensure that everyone within your team knows what is going on. Make sure that everyone knows of outside events that will affect the team. Make sure that everyone knows their own goals and objectives and those of the team as a whole. Make sure they

know the objectives of those interfacing to them and of any potential conflicts. Make sure that a problem or a delay in one area is immediately communicated to those whom it may affect. Encourage and foster cooperation, not competition. Make sure it is in no-one's interest to keep information to themselves. Communication will come naturally if it is in everyone's own interest - and this will be the case if you have earlier ensured that you all have common mutually interdependent goals.

These guidelines on their own are certainly not enough to guarantee a fully functional and successful team, but following them will go a long way towards creating one. On the other hand, if you don't follow them your chances of success will be minimal.

Did u know? It is almost impossible to exaggerate the importance of communication within any organisation, and in particular within a project team.

Project Organisation

Establishing the project organisation is one of the more important things to do at the start of a project. This is particularly so for any large project and particularly so for any green field site project where there is no project organisation in existence and no precedent to fall back on.

Setting up a large project from scratch is like setting up a new company. It requires much of the same entrepreneurial drive, skill and imagination. Something like 90% of UK companies employ less than 10 people. Starting up a large project is akin to setting up a company in the top ten percent of UK companies by size. If you were a senior executive and decided to set up a new

subsidiary company that will employ, say, 100 people would you choose a fairly junior manager with no experience of company set up who you don't even know and you don't even bother to interview to set that new company up for you?

And yet executives have been known to entrust the management of large IT projects – even projects with the potential to break the company - to junior managers who have no demonstrated ability to perform the task. And when was the last time you heard of a project board putting candidate project managers through a rigorous interviewing and selection process?

3. Explain Project Organisation Chart in detail?

Why don't they? Well, if they want a Managing Director to set up a new subsidiary they know what questions to ask them; they know what they looking for; the new MD will be someone like them. But a project manager? They wouldn't know what to ask or what to look for. Anyway, surely anyone can manage a project?

And if you were setting up that new subsidiary would you pick someone whose only qualification was that they had been on a 5 day business management course and had a certificate to prove it? But he's done a 5 day project management course and got a certificate? Give him the job!

We read in the press about major companies that have significant and costly business problems because new IT systems don't work properly. The public sector has its own horror stories too. There are, as always, many causes for such problems but amongst them will be a lack of a proper project organisation, symptomatic of which are comments such as these from senior executives:

1. "the project is being done for us by the software house"
2. "the IT Director's in charge - isn't he?"
3. "the project manager? Some guy from IT, I think."

4. "we don't need a project manager - the software house is managing it for us."
5. "my responsibilities? How do you mean?"
6. "dedicate our people to the project? Why do you think we employed the software house?"

Project Organisation chart starts at the top. That is, the top of the company. If the Chief Executive does not hold anyone responsible for the project not only will a key - the key - accountability be missing, but accountability will probably not be assigned further down the project organisation hierarchy.

This course therefore covers not just the things that the project manager and team members should do and be accountable for. It starts at the top and addresses how to get proper accountability established at company board level and how this should be propagated down through the project organisation. And how the same kind of thought processes that would go into setting up the organisation of a new company should go into the setting up of a large project.

The course covers the things that each person in the project organisation should be accountable for and then goes on to examine the practicalities - the mechanics - of how they should do things like risk management, estimating, planning, reporting and a host of other things.

4. Give Example of Pure Project Organisational Structure?

In organisational theory, nothing is "pure." The pure types of organisation exist for the sake of analytical clarity, not as a description of how things work. A "pure project organisational structure" is one such "pure" form that does not really exist. However, many aspects of social and economic life come close to it. The pure organisation is applicable in both business and political life, though actual examples can be found mostly in the political arena.

Pure Organisation

A "pure project organisation" is a model of a business where project managers have total control over the project they oversee. Central control at the managerial level must be weak for this to occur. Put simply, a "pure project organisation" might also be termed a "task force." In the case of a "pure project," the leader of this task force would have to be given total authority for a limited period to solve a particular problem. In business, it is a great challenge to find an example of such purity.

The Task Force

In politics, the concept of a "task force" that approximates the total control over a specific project under a "manager" of sorts is not hard to find. In Latin America, poor and divided governments have struggled to control the drug lords who can outshoot and outspend the state. From the 1960s to 2011, Latin American states have dealt both with leftist terrorism and drug violence — occasionally the same thing, as in Peru — by either declaring a state of emergency or installing a military government.

Guatemala

On December 19, 2010, the president of the impoverished state of Guatemala, Alvaro Colom, declared a state of emergency in the northern state of Alta Verapaz. This area is heavily wooded and difficult to police and has become a major staging ground for Mexican drug gangs to gather their forces and ship cocaine to the United States. On the January 21, 2011, Colom extended the state of emergency in that state, placing all military and police control under Interior Minister Carlos Menocal. To some extent, Menocal is leading a multi-jurisdictional task force to wipe out the drug gangs from this state bordering Mexico. This comes very close to acting as a "pure project organisation."

Menocal and Colom

This example, like most examples of a pure project structure, is political and is a response to an extreme emergency. Since 2000, the murder rates in northern Guatemala have doubled, reaching higher than the death rate during that country's civil war. Menocal is, as of early 2011, declaring an early success, holding that drug flights bound for the U.S. have been almost totally halted. In January 2011, soldiers under the Interior Ministry had seized more than \$1 million worth of military equipment and drugs from criminal groups in that area. While it is true that Menocal does not have total, dictatorial power over the army as the "pure" form demands, he does have a large degree of temporary control over the deployment of troops for the time being. Hence, his is a good example of a "pure project structure" in the political arena.

Matrix Organisation

Matrix Organisation was introduced in USA in the early 1960s. It was used to solve management problems in the Aerospace industry. Matrix Organisation is a combination of two or more organisation structures. For example, matrix organisation include Functional Organisation and Project Organisation. The organisation is divided into different functions, e.g. Purchase, Production, R&D, etc. Each function has a Functional (Departmental) Manager, e.g. Purchase Manager, Production Manager, etc. The organisation is also divided on the basis of projects, e.g. Project A, Project B, etc. Each project has a Project Manager, e.g. Project A Manager, Project B Manager, etc. The employee has to work under two authorities (bosses). The authority of the Functional Manager flows downwards while the authority of the Project Manager flows across (side wards). So, the authority flows downwards and across. Therefore, it is called " Matrix Organisation". An example of matrix organisation is shown in the following table:

Did u know? Employees in a matrix organisation report on day-to-day performance to the project managers whose authorities flow in horizontal directions.

5 Features of Matrix Organisation

The peculiarities or characteristics or features of a matrix organisation are:

1. Hybrid Structure: Matrix organisation is a hybrid structure. This is so, because it is a combination of two or more organisation structures. It combines functional organisation with a project organisation. Therefore, it has the merits and demerits of both these organisation structures.
2. Functional Manager: The Functional Manager has authority over the technical (functional) aspects of the project.

The responsibilities of functional manager are:

- (a) He decides how to do the work.
- (b) He distributes the project work among his subordinates.
- (c) He looks after the operational aspects.

3. **Project Manager:** The Project manager has authority over the administrative aspects of the project. He has full authority over the financial and physical resources which he can use for completing the project.

The responsibilities of project manager are:

- (a) He decides what to do.
- (b) He is responsible for scheduling the project work.
- (c) He coordinates the activities of the different functional members.
- (d) He evaluates the project performance.

4. **Problem of Unity of Command:** In a matrix organisation, there is a problem of the unity of command. This is so, because the subordinates receive orders from two bosses viz., the Project Manager and the Functional Manager. This will result in confusion, disorder, indiscipline, inefficiency, etc. All this will reduce the productivity and profitability of the project.

5. **Specialisation:** In a Matrix organisation, there is a specialisation. The project manager concentrates on the administrative aspects of the project while the functional manager concentrates on the technical aspects of the project.

6. **Suitability:** Matrix organisation is suitable for multi-project organisations. It is mainly used by large construction companies that construct huge residential and commercial projects in different places at the same time. Each project is looked after (handled) by a project manager. He is supported by many functional managers and employees of the company.

Advantages of Matrix Organisation

The benefits or merits or advantages of a matrix organisation are:

- 1. **Sound Decisions:** In a Matrix Organisation, all decisions are taken by experts. Therefore, the decision are very good.
- 2. **Development of Skills:** It helps the employees to widen their skills. Marketing people can learn about finance, finance people can learn about marketing, etc.
- 3. **Top Management can concentrate on Strategic Planning:** The Top Managers can spend more time on strategic planning. They can delegate all the routine, repetitive and less important work to the project managers.
- 4. **Responds to Changes in Environment:** Matrix Organisation responds to the negative changes in the environment. This is because it takes quick decisions.
- 5. **Specialisation:** In a matrix organisation, there is a specialisation. The functional managers concentrate on the technical matters while the Project Manager concentrates on the administrative matters of the project.
- 6. **Optimum Utilisation of Resources:** In the matrix organisation, many projects are run at the same time. Therefore, it makes optimum use of the human and physical resources. There is no wastage of resources in a matrix organisation.
- 7. **Motivation:** In a matrix organisation, the employees work as a team. So, they are motivated to perform better.
- 8. **Higher Efficiency:** The Matrix organisation results in a higher efficiency. It gives high returns at lower costs.

Limitations of Matrix Organisation

The demerits or disadvantages or limitations of a matrix organisation are:

1. Increase in Work Load: In a matrix organisation, work load is very high. The managers and employees not only have to do their regular work, but also have to manage other additional works like attending numerous meetings, etc.
2. High Operational Cost: In a matrix organisation, the operational cost is very high. This is because it involves a lot of paperwork, reports, meetings, etc.
3. Absence of Unity of Command: In a matrix organisation, there is no unity of command. This is because, each subordinate has two bosses, viz., Functional Manager and Project Manager.
4. Difficulty of Balance: In a matrix organisation, it is not easy to balance the administrative and technical matters. It is also difficult to balance the authority and responsibilities of the project manager and functional manager.
5. Power Struggle: In a matrix organisation, there may be a power struggle between the project manager and the functional manager. Each one looks after his own interest, which causes conflicts.
6. Morale: In a matrix organisation, the morale of the employees is very low. This is because they work on different projects at different times.
7. Complexity: Matrix organisation is very complex and the most difficult type of organisation.
8. Shifting of Responsibility: If the project fails, the project manager may shift the responsibility on the functional manager. That is, he will blame the functional manager for the failure.

Project Team and Human Factors

The real critical success factor of any implementation project is the ability to break through “fixed ideas.” The extent to which this can be done will have a decided impact not only on the

success of the implementation, but also the success of the system once it is in production. The importance of breaking through the fixed ideas. One example of this is just the view people adopt about the role of technology in an implementation. Whether you are talking about new roles – changing processes, using technology to work more effectively and efficiently, you are generally talking about breaking down fixed ideas.

One of these fixed ideas in project implementation is the concept that success lies in finding the perfect technology solution to the problem – nothing could be further from the truth. While consistently getting more focus, probably because they are more clear cut, the technology issues in an implementation are normally the more easily resolved in the typical project; while the less clear cut human factors are pushed to the back burner. In reality the success or failure of any project implementation rests on the ability of the principals involved to manage the “human factors” of the project. Another common example of fixed ideas is the adherence to procedures simply because that is the way “we have always done it”. Many opportunities are lost in system implementations because the people involved refuse to view the implementation as an opportunity to evaluate current processes and look for better ways of working.

If success is measured both in terms of bringing the project in on time and within budget as well as the satisfaction with and the ability of the users to use the new system, then managing these “human factors” is the real key to the success of any implementation. This puts a lot of pressure on the project leadership and/or perhaps even more pressure on those who appoint that leadership team.

Introduction

Project ideas are generated through different sources like customers, competitors and employees. Sometimes they are discovered through accident. Project manager should try to enhance people's creativity, scan the entire business environment and appraise the company's strengths and weaknesses to generate a large number of ideas. Techniques like attribute listing, brainstorming, and delphi technique are useful for improving the creativity at individual and group level.

The project managers should analyze the business environment that consists of the economic sector, the governmental sector, the technological sector, the socio-demographic sector, the competition sector and the supplier sector. Once a pool of ideas has been generated, the project manager should carefully screen them. The Project Rating Index method helps managers.

6.Explain the Procedures for Idea Generation

"We need to think differently!" "This needs some fresh ideas!"

"We have got to be more creative around here!"

Notes Are messages like these popping up more and more in your workplace? Faced with complex, open-ended, ever-changing challenges, organizations realize that constant, ongoing innovation is critical to stay ahead of the competition.

This is why we need to be on the lookout for new ideas that can drive innovation, and it's why the ability to think differently, generate new ideas, and spark creativity within a team becomes an important skill.

You need to work actively on building and cultivating this skill, and it can be done!

Often, though, we make the mistake of assuming that good ideas just happen. Or worse still, we get caught in the mind trap that creativity is an aptitude; some people have it, others don't. Then there is the other self-defeating belief – "I am not intelligent enough to come up with good ideas."

These assumptions are rarely true. Everyone can come up with fresh, radical ideas – you just need to learn to open your mind and think differently. This article shows you how to do so.

1. **How to Generate New Ideas:** Standard idea-generation techniques concentrate on combining or adapting existing ideas. This can certainly generate results. But here, our focus is on equipping you with tools that help you leap onto a totally different plane. These approaches push your mind to forge new connections, think differently and consider new perspectives.

A word of caution – while these techniques are extremely effective, they will only succeed if they are backed by rich knowledge of the area you're working on. This means that if you are not prepared with adequate information about the issue, you are unlikely to come up with a great idea even by using the techniques listed here.

Incidentally, these techniques can be applied to spark creativity in group settings and brainstorming sessions as well.

2. **Breaking Thought Patterns:** All of us can tend to get stuck in certain thinking patterns. Breaking these thought patterns can help you get your mind unstuck and generate new ideas. There are several techniques you can use to break established thought patterns:

(a) **Challenge assumptions:** For every situation, you have a set of key assumptions. Challenging these assumptions gives you a whole new spin on possibilities.

You want to buy a house but can't since you assume you don't have the money to make a down payment on the loan. Challenge the assumption. Sure, you don't have cash in the bank but couldn't you sell some of your other assets to raise the money? Could you dip into your retirement fund? Could you work overtime and build up the kitty in six months? Suddenly the picture starts looking brighter.

(b) **Reword the problem:** Stating the problem differently often leads to different ideas. To reword the problem look at the issue from different angles. "Why do we need to solve the problem?", "What's the roadblock here?", "What will happen if we don't solve the problem?" These questions will give you new insights. You might come up with new ideas to solve your new problem.

In the mid 1950s, shipping companies were losing money on freighters. They decided they needed to focus on building faster and more efficient ships. However, the problem persisted.

Then one consultant defined the problem differently. He said the problem the industry should consider was "how can we reduce cost?" The new problem statement generated new ideas. All aspects of shipping, including storage of cargo and loading time, were considered. The outcome of this shift in focus resulted in the container ship and the roll-on/roll-off freighter.

(c) **Think in reverse:** If you feel you cannot think of anything new, try turning things upside-down. Instead of focusing on how you could solve a problem/improve operations/enhance a product, consider how could you create the problem/worsen operations/downgrade the product. The reverse ideas will come flowing in. Consider these ideas – once you've reversed them again – as possible solutions for the original challenge.

(d) **Express yourself through different media:** We have multiple intelligences but somehow, when faced with workplace challenges we just tend to use our verbal reasoning ability. How about expressing the challenge through different media? Clay, music, word association games, paint, there are several ways you can express the challenge. Don't bother about solving the challenge at this point. Just express it. Different expression might spark off different thought patterns. And these new thought patterns may yield new ideas.

3. **Connect the Unconnected:** Some of the best ideas seem to occur just by chance. You see something or you hear someone, often totally unconnected to the situation you are trying to resolve, and the penny drops in place. Newton and the apple, Archimedes in the bath tub; examples abound. Why does this happen? The random element provides a new stimulus and gets our brain cells ticking. You can capitalize on this knowledge by consciously trying to connect the unconnected.

Actively seek stimuli from unexpected places and then see if you can use these stimuli to build a connection with your situation. Some techniques you could use are:

(a) **Use random input:** Choose a word from the dictionary and look for novel connections between the word and your problem.

(b) **Mind map possible ideas:** Put a key word or phrase in the middle of the page. Write whatever else comes in your mind on the same page. See if you can make any connections.

(c) **Pick up a picture:** Consider how you can relate it to your situation.

(d) **Take an item:** Ask yourself questions such as "How could this item help in addressing the challenge?", or "What attributes of this item could help us solve our challenge?"

Did u know? Seeking stimuli and building connection between the stimuli seeked and the situation can help in generating better ideas.

4. **Shift Perspective:** Over the years we all build a certain type of perspective and this perspective yields a certain type of idea. If you want different ideas, you will have to shift your perspective. To do so:

(a) **Get someone else's perspective:** Ask different people what they would do if faced with your challenge. You could approach friends engaged in different kind of work, your spouse, a nine-year old

child, customers, suppliers, senior citizens, someone from a different culture; in essence anyone who might see things differently.

Notes (b) Play the “If I were” game: Ask yourself “If I were ...” how would I address this challenge? You could be anyone: a millionaire, Tiger Woods, anyone.

The idea is the person you decide to be has certain identifiable traits. And you have to use these traits to address the challenge. For instance, if you decide to play the millionaire, you might want to bring traits such as flamboyance, big thinking and risk-taking when formulating an idea. If you are Tiger Woods you would focus on things such as perfection, persistence and execution detail.

5. Employ Enablers: Enablers are activities and actions that assist with, rather than directly provoke, idea generation. They create a positive atmosphere. Some of the enablers that can help you get your creative juices flowing are:

(a) Belief in yourself: Believe that you are creative, believe that ideas will come to you; positive reinforcement helps you perform better.

(b) Creative loafing time: Nap, go for a walk, listen to music, play with your child, take a break from formal idea-generating. Your mind needs the rest, and will often come up with connections precisely when it isn't trying to make them.

(c) Change of environment: Sometimes changing the setting changes your thought process. Go to a nearby coffee shop instead of the conference room in your office, or hold your discussion while walking together round a local park.

(d) Shutting out distractions: Keep your thinking space both literally and mentally clutter-free. Shut off the Blackberry, close the door, divert your phone calls and then think.

(e) Fun and humor: These are essential ingredients, especially in team settings.:

Caution The project manager should be positively reinforced. It will help him perform better. He should believe that he is creative.

6. Key Points: The ability to generate new ideas is an essential work skill today. You can acquire this skill by consciously practicing techniques that force your mind to forge new connections, break old thought patterns and consider new perspectives.

Along with practicing these techniques, you need to adopt enabling strategies too. These enabling strategies help in creating a positive atmosphere that boosts creativity.

Monitoring the Environment

Organizational environment consists of both external and internal factors. Environment must be scanned so as to determine development and forecasts of factors that will influence organizational success. Environmental scanning refers to possession and utilization of information about occasions, patterns, trends, and relationships within an organization's internal and external environment. It helps the managers to decide the future path of the organization. Scanning must identify the threats and opportunities existing in the environment. While strategy formulation, an organization must take advantage of the opportunities and minimize the threats. A threat for one organization may be an opportunity for another.

Internal analysis of the environment is the first step of environment scanning. Organizations should observe the internal organizational environment. This includes employee interaction with other employees, employee interaction with management, manager interaction with other managers, and management interaction with shareholders, access to natural resources, brand awareness, organizational structure, main staff, operational potential, etc.

Also, discussions, interviews, and surveys can be used to assess the internal environment. Analysis of internal environment helps in identifying strengths and weaknesses of an organization. As business becomes more competitive, and there are rapid changes in the external environment, information from external environment adds crucial elements to the effectiveness of long-term plans. As environment is dynamic, it becomes essential to identify competitors' moves and actions. Organizations have also to update the core competencies and internal environment as per external environment. Environmental factors are infinite, hence, organization should be agile to accept and adjust to the environmental changes. For instance, Monitoring might indicate that an original forecast of the prices of the raw materials that are involved in the product are no more credible, which could imply the requirement for more focused scanning, forecasting and analysis to create a more trustworthy prediction about the input costs. In a similar manner, there can be changes in factors such as competitor's activities, technology, market tastes and preferences.

While in external analysis, three correlated environment should be studied and analyzed:

1. immediate/industry environment
2. national environment
3. broader socio-economic environment/macro-environment

Examining the industry environment needs an appraisal of the competitive structure of the organization's industry, including the competitive position of a particular organization and its main rivals. Also, an assessment of the nature, stage, dynamics and history of the industry is essential. It also implies evaluating the effect of globalization on competition within the industry. Analyzing the national environment needs an appraisal of whether the national framework helps in achieving competitive advantage in the globalized environment. Analysis of macro- environment includes exploring macro-economic, social, government, legal, technological and international factors that may influence the environment. The analysis of organization's external environment reveals opportunities and threats for an organization.

Strategic managers must not only recognize the present state of the environment and their industry but also be able to predict its future positions.

Corporate Appraisal

Different types of resources (tangible, intangible that include all assets, capabilities, organisational processes, information, knowledge, etc.) lying with an organisation reflect certain type of behaviour (organisational behaviour). These resources as and when used as per need along with their behaviour develop synergy with an organisation. This determines their strength or weaknesses in their specific field of business. The resource based view of a firm can better discuss the internal environment of that organisation. The developed synergy elaborates the level of competency of a firm showing its capability which leads to its strategic advantage. The resources, behaviour, strengths and weaknesses, synergistic effects and competencies of an organisation determine the nature of its internal environment.

The assessment of strengths and weaknesses is an early stage in strategic thinking, and one where it is very easy to end up with meaningless lists of so-called strengths and weaknesses. The unit will explore five ways of looking at strengths and weaknesses: assessment by managers, often resulting in what many books call SWOT analysis; equilibrium analysis, which is one way of forcing managers to make a more careful consideration of strengths and weaknesses; a process

Notes to 'audit' the facts, drawing conclusions from a detailed analysis of the organisation; the critical success factor approach; and the core competency approach. For each method, the unit deals both with the concept and ways of operationalising it in a real situation.

So far we have examined the broader aspects of strategic management and has looked at the process of planning in relation to a changing environment. It is now time to concentrate on a very specific step in the process the assessment of corporate strengths and weaknesses. Planning literature refers to this important stage under various headings: the corporate appraisal, the position audit, and assessing the present position. The particular terminology used is not important: the action itself is vital.

The corporate appraisal should be one of the first steps in the process of preparing strategic plans, and should provide both the platform from which the corporate objectives are established and the baseline of the strategic plan.

One important reason for formulating marketing strategy is to prepare the company to interact with the changing environment in which it operates. Implicit here is the significance of predicting the shape the environment is likely to take in the future. Then, with a perspective of the company's present position, the task ahead can be determined. Study of the environment is reserved for a later article. This is devoted to corporate appraisal. An analogy to corporate appraisal is provided by a career counselor's job. Just as it is relatively easy to make a list of the jobs available to a young person, it is simple to produce a superficial list of investment opportunities open to a company. With the career counselor, the real skill comes in taking stock of each applicant; examining the applicant's qualifications, personality, and temperament; defining the areas in which some sort of further development or training may be required; and matching these characteristics and the applicant's aspirations against various options. Well-established techniques can be used to find out most of the necessary information about an individual. Digging deep into the psyche of a company is more complex but no less important. Failure by the company in the area of appraisal can be as stunting to future development in the corporate sense as the misplacement of a young graduate in the personal sense.

Did u know? In the process of preparing strategic plans, corporate appraisal should be one of the first steps.

Corporate appraisal refers to an examination of the entire organization from different angles. It is a measurement of the readiness of the internal culture of the corporation to interact with the external environment. Marketing strategists are concerned with those aspects of the corporation that have a direct bearing on corporate-wide strategy because that must be referred in defining the business unit mission, the level at which marketing strategy is formulated.

Self Assessment

Fill in the blanks:

1. The ability to generate new ideas is an work skill today.
2. refers to an examination of the entire organization from different angles.
3. One important reason for formulating is to prepare the company to interact with the changing environment in which it operates.
4. Strategic must not only recognize the present state of the environment and their industry but also be able to predict its future positions.
5. deep into the psyche of a company is more complex but no less important.

8.Explain Project Definition Rating Index

The Project Definition Rating Index (PDRI) for Building Projects is a powerful and simple tool that helps meet this need by offering a method to measure project scope definition for completeness. It is adapted from the PDRI for Industrial Projects.

The PDRI offers a comprehensive checklist of 64 scope definition elements in an easy-to-use score sheet format. Each element is weighted based on its relative importance to the other elements. Since the PDRI score relates to risk, those areas that need further work can easily be isolated. (A PDRI score of 200 or less has been shown to greatly increase the probability of a successful project.)

The PDRI identifies and precisely describes each critical element in a scope definition package and allows a project team to quickly predict factors impacting project risk. It is intended to evaluate the completeness of scope definition at any point prior to the time a project is considered for development of construction documents and construction. Building type projects may include the following:

1. Offices
2. Schools (classrooms)
3. Banks
4. Research and laboratory facilities
5. Medical facilities
6. Stores and shopping centers
7. Institutional buildings
8. Apartments
9. Dormitories
10. Parking structures
11. Hotels and motels
12. Light assembly and manufacturing
13. Warehouses
14. Airport terminals
15. Recreational and athletic facilities
16. Public assembly and performance halls
17. Industrial control buildings

Benefits of PDRI

Effective early project planning improves project performance in terms of both cost and schedule. The majority of industry participants recognize the importance of scope definition during the

Notes early stages of a project and its potential impact on project success. Until now, however, the building industry has been lacking a practical, non-proprietary method for determining the degree of scope development on a project. The PDRI for buildings is the first publicly available tool of its kind in this sector. It allows a project planning team to quantify, rate, and assess the level of scope development on projects prior to beginning development of construction documents.

A significant feature of the PDRI is that it can be utilized to fit the needs of almost any individual project, small or large. Elements that are not applicable to a specific project can be zeroed out, thus eliminating them from the final scoring calculation.

The PDRI is quick and easy to use. It is a “best practice” tool that will provide numerous benefits to the building industry. A few of these include:

1. A checklist that a project team can use for determining the necessary steps to follow in defining the project scope
2. A listing of standardized scope definition terminology throughout the building industry
3. An industry standard for rating the completeness of the project scope definition package to facilitate risk assessment and prediction of escalation, potential for disputes, etc.
4. A means to monitor progress at various stages during the front end planning effort
5. A tool that aids in communication and promotes alignment between owners and design contractors by highlighting poorly defined areas in a scope definition package
6. A means for project team participants to reconcile differences using a common basis for project evaluation
7. A training tool for organizations and individuals throughout the industry
8. A benchmarking tool for organizations to use in evaluating completion of scope definition versus the performance of past projects, both within their organization and externally, in order to predict the probability of success on future projects.

9. Why should use the PDRI?

The PDRI can benefit facility owners such as NASA, as well as designers and constructors. NASA planners can use it as an assessment tool for establishing a comfort level at which they are willing to move forward with projects. Designers and constructors working with NASA can use it as a method of identifying poorly defined project scope definition elements. The PDRI provides a means for all project participants to communicate and reconcile differences using an objective tool as a common basis for project scope evaluation.

Caution The front end planning process of a PDRI should consider the following factors:

1. Feasibility
2. Concept
3. Detailed scope
4. Design and construction
- :
6. A significant feature of the is that it can be utilized to fit the needs of almost any individual project, small or large.
7. Effective early improves project performance in terms of both cost and schedule.
8. The PDRI can benefit facility owners such as , as well as designers and constructors.
9. The PDRI provides a means for all project participants to communicate and reconcile differences using an objective tool as a common basis for project scope
10. A means for participants to reconcile differences using a common basis for project evaluation.

Summary

Project ideas are generated through different sources like customers, competitors, and employees.

- ❑ The project managers should analyze the business environment that consists of the economic sector, the governmental sector, the technological sector, the socio-demographic sector, the competition sector and the supplier sector.
- ❑ Standard idea-generation techniques concentrate on combining or adapting existing ideas.
- ❑ Enablers are activities and actions that assist with, rather than directly provoke, idea generation.
- ❑ The ability to generate new ideas is an essential work skill today.
- ❑ Organizational environment consists of both external and internal factors.
- ❑ Internal analysis of the environment is the first step of environment scanning.
- ❑ Organizations should observe the internal organizational environment.
- ❑ One important reason for formulating marketing strategy is to prepare the company to interact with the changing environment in which it operates.
- ❑ Corporate appraisal refers to an examination of the entire organization from different angles.
- ❑ The Project Definition Rating Index (PDRI) for Building Projects is a powerful and simple tool that helps meet this need by offering a method to measure project scope definition for completeness.

Corporate Appraisal: It refers to an examination of the entire organization from different angles.

Environmental Scanning: It refers to possession and utilization of information about occasions, patterns, trends, and relationships within an organization's internal and external environment.

Notes PDRI: The Project Definition Rating Index (PDRI) for Building Projects is a powerful and simple tool that helps meet this need by offering a method to measure project scope definition for completeness.

Project Manager: A project manager is a professional in the field of project management. Project managers can have the responsibility of the planning, execution and closing of any project, typically relating to construction industry, architecture, Aerospace and Defence, computer networking, telecommunications or software development.

Standard Idea-generation Techniques: They concentrate on combining or adapting existing ideas.

❑

10. Case Study Low-budget Guide for Web World

In the Web world, hearing businesses and freelancers alike complain about low-budget projects is not too uncommon. Let's say that a local coffee shop needs to update its Web presence and contacts you for a redesign. It also requires a blog so that it can announce new events and so on. However, during the course of the first meeting, the client mentions that they don't have a budget.

Being the inquisitive business person that you are, you say, "Well, we work with budgets of almost any size. What price range were you thinking of?" The owner of the coffee shop reveals that he has only \$1500 to spend on the website. Thinking it would be a waste of time, you walk away.

This is where our design studio found ourselves. We had potential projects all over the place, but the budgets were all smaller than we thought we could handle. In the Web world, demand for small websites is up. There are always start-up companies and small businesses around that need some form of a Web presence. And, as a Web design community, our job is to answer those needs in the most utilitarian way possible.

We began questioning our business practices. We knew that there was money to be made on smaller projects, but it wasn't until we sat down and did some simple math that we realized the business opportunity we had been missing.

Here's the simple premise on which we began to transform our business: if you turn away 10 to 15 small projects a year at \$1500 per project, that's declining between \$15,000 and \$22,500 every year.

Any amount of money adds up over time

Our company was a start-up business once, too, and it still is. Perhaps we were delusional in our belief that big projects grow on trees. We were struggling to find work. It became clear to us that we needed to take a serious look at our business practices, our development and design processes, and ourselves. We needed to find a way to make money. Let's take a few minutes to discuss how we overhauled our operations and started making a living off of small projects.

(Smashing's side note: Have you already bought the Smashing Book #3? The book introduces the latest practical techniques and a whole new mindset for progressive Web design. Get your book today!)

It's All About the Process

As a Web community, we are well equipped to handle any low-budget projects that come our way. We have more frameworks and streamlined solutions than we've ever had access to in the past, such as WordPress, HTML5 Boilerplate and ThemeForest. Learning how to leverage these tools is key to understanding how to make money on small projects. And mastering these tools gives us the flexibility to stray from cookie-cutter solutions.

However, before you decide to take on a workload filled with small projects, let's stress a key point. Some clients are extremely demanding about their design process and the functionality of their websites. Be careful to set clear boundaries with the client so that you don't end up working for less than minimum wage. We'll cover a few techniques for this below.

Over the years, we've picked up knowledge from many different sources. One of the best summaries of how we try to systematize our own work flow comes from Bill Beachy over at Go Media. He recently released a short podcast episode discussing business systems, which I strongly encourage you to check out.

But first, let's look quickly at the various methods we use to cut down on our website build time.

Write Down Your Processes

During the course of working on projects, we've developed a master document that we call the Low-Budget Guide. It details every single step of building a website on a budget. We have sections on the fastest ways to deploy a test WordPress installation on various hosting providers, documentation on common WordPress settings, plugins and problems, as well our standard step-by-step process. We'll review this process in a case study later in the article.

The Low-Budget Guide helps us address several important aspects of our work. First, it prevents us from forgetting to do anything. Having a step-by-step guide eliminates any errors that might cost several hours of development time.