7. Project Evaluation and Auditing:

Evaluation:

This is the objective assessment of an ongoing or recently completed project, program or policy, its design, implementation and results. It answers the question "What has happened as a result?"

Evaluation Analyzes why intended results were or were not achieved, Assesses specific casual contributions of activities to results, Examines implementation process, Explores unintended results, Provides lessons, highlights significant accomplishments or program potential and offers recommendations for improvement

Evaluation looks at the relevance, effectiveness, efficiency and sustainability of an intervention. It will provide evidence of why targets and outcomes are or are not being achieved and addresses issues of causality.

Importantly, evaluation is not about fault-finding or judging an individual or a team. Rather, evaluation is an opportunity for internal and external stakeholders to contribute their knowledge and views about a particular intervention. At the end of the process, evaluation provides feedback, recognizing achievements that have been made, identifying ways for improvement and supporting evidence-based decision-making.

Monitoring:

This is the regular systematic collection and analysis of information to track the progress of program implementation against pre-set targets and objectives. It aims to answer the question "did we deliver?"

Monitoring; Clarifies program objectives, Links activities and their resources to objectives, Translates objectives into performance indicators

and sets targets, Routinely collects data on these indicators, compares actual results with targets

And Reports progress to managers and alerts them to problems

Monitoring gives information on where a policy, program or project is at any given time (or over time) relative to respective targets and outcomes. Monitoring focuses in particular on efficiency, and the use of resources.

While monitoring provides records of activities and results, and signals problems to be remedied along the way, it is descriptive and may not be able to explain why a particular problem has arisen, or why a particular outcome has occurred or failed to occur.

Evaluation deals with questions of cause and effect. It is assessing or estimating the value, worth or impact of an intervention and is typically done on a periodic basis – perhaps annually or at the end of a phase of a project or program.

What is Project evaluation?
"Project evaluation is a systematic and objective assessment of an ongoing or completed project.

The aim is to determine the relevance and level of achievement of project objectives, development effectiveness, efficiency, impact, and sustainability."

Key Principle of Project evaluation:

- Improve performance and contribute to organizational learning:
- Reinforce accountability and transparency;
- Form part of a larger dynamic planning and review process;
- Are oriented long term priorities and objectives;
- Focus on results and assume that projects are managed for results;
- Provide for the participation of national constituents and other

partners;

- Reinforce among our project stakeholders a sense of joint ownership;
- Are supported through a highly credible, independent and transparent process;
- Confine the process to one which is technically and administratively reasonable;
- Are conducted in an ethical way including the responsible handling of confidential information.

Evaluation Ethics:

- Evaluators must have personal and professional integrity.

- Evaluators must respect the right of institutions and individuals to provide information in confidence and ensure that sensitive data cannot be traced to its source. Evaluators must take care that those involved in evaluations have a chance to examine the statements attributed to them.

- Evaluators must be sensitive to beliefs, manners and customs of the social and cultural environments in which they work.

- In light of the United Nations Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender inequality.

- Evaluations sometimes uncover evidence of wrongdoing. Such cases must be reported discreetly to the appropriate investigative body. Also, the evaluators are not expected to evaluate the personal performance of individuals and must balance an evaluation of management functions with due consideration for this principle.

Role of Evaluation Manager:

- Determine the target audience for the evaluation and the key evaluation questions the evaluation should answer;
- Prepare the draft TOR for the evaluation (final approval is given by the evaluation focal person) and send a copy of the approved TOR to EVAL for information;
- Identify the evaluation consultant(s), and obtain final approval for their recruitment from the evaluation focal person;
- Ensure smooth organization of the evaluation process and proper support to the evaluation team;
- Ensure proper stakeholder involvement in the entire evaluation process;
- Ensure that gender issues are considered throughout the evaluation process;
- Manage the process of preparing the evaluation report (including circulating the draft report and collecting comments);
- Submit the final evaluation report to the evaluation focal person for final review (EVAL provides final approval);
- Send the final reviewed and approved report to PARDEV for submission to the donor and send copies to all other relevant evaluation stakeholders, including the key national partners;
- Ensure proper follow-up on the recommendations and dissemination of lessons learned within organization.

Types of evaluation:

The type of project evaluation used depends on the reason for the evaluation:

- If the evaluation is being used early in the development of a project, primarily to help to improve the design and delivery of the project, it is often referred to as a **formative evaluation.**

- If the evaluation is being conducted at the end of a project to assess its effectiveness or to help in deciding what to do next, it is usually referred to as a **summative evaluation.**
- Evaluations will also vary in terms of which aspects of a project are being evaluated:
  - ➢ A **process evaluation** focuses on the delivery of the project and assesses how it conforms to the agreed plan and how the project has been implemented;
  - ➢ An **impact evaluation** focuses on the immediate benefits of the project and how well the intended objectives have been achieved;
  - ➢ An **outcome evaluation** focuses on the long-term benefits of the project and how well the overall intent of the project has been realized.

Purpose of evaluation:

Evaluation has several purposes, which include the following:
- It assists to determine the degree of achievement of the objectives.
- It determines and identifies the problems associated with program planning and implementation.
- It generates data that allows for cumulative learning which, in turn, contributes to better designed programs, improved management and a better assessment of their impact. The key words in this scenario are "lessons learned".
- It assists in the reformulation of objectives, policies, and strategies in projects / programs.

It should also be noted that in some cases, evaluation has been used to resolve non-program issues affecting different donors. For instance, two organizations involved in separate but similar programs on land management may undertake an evaluation of the entire program to assess the extent to which they can cooperate. Consequently, evaluation can be seen as a process that determines the viability of programs / projects and facilitates decisions on further resource commitment.

> An ancient story or set of stories, especially explaining the early history of a group of people or about natural events and facts:

Myth #1: Evaluation is a time-consuming activity that generates lots of boring, useless data.

> Fact: More recent evaluations have focused on utility, relevance and practicality at least as much as scientific validity. Focus on data that is meaningful and begin developing your evaluation plan simultaneously with your program plan. Remember that your evaluation plan can be modified as necessary as you move forward with implementation.

Myth #2: Evaluation is a one-time event done only to prove the success or failure of a program.

> Fact: It is important to remember that program success in contingent on continuous feedback. Rather than proving that a program was good or bad, program evaluation verifies that the program is running as originally planned, identifies strengths and weaknesses, and allows for continuing feedback in order to adjust the program accordingly.

Myth #3: Evaluation is an overly complicated process that must be done by an outside expert because it will be a burden to program staff.

> Fact: The truth is, most people regularly undertake some kind of program evaluation. There is no absolute way to conduct a program evaluation. You do not have to be an evaluation expert, just be willing to commit to understanding what is really going on. Staff will ultimately benefit from an evaluation because it validates their efforts and provides information on how to improve their work and better serve their community.

Evaluating is an essential part of the project planning cycle for a number of reasons, including:

- helping to ensure that objectives are met
- identifying successes
- identifying problems and weakness so they can be rectified
- providing information to aid further development
- providing evidence of the benefits and impacts
- contributing to securing funding for further development
- identifying staff training and development needs
- gaining the support of institutional managers
- guiding future plans
- providing information for stakeholders
- developing guidelines which may be useful for other projects
- devising strategies to develop projects into services
- Positioning the project in relation to current learning and research environment.

Various types of Evaluation based on time:

Evaluation can be applied for different purposes as well as to a specific activity, project or program. It is not restricted to the completion stage only but involves periodic investigations at many stages. The different types of project evaluations carried out are:

(i) ex-ante evaluation: (before the event)

Ex-ante evaluations evaluate plans before starting a project. The evaluation results are used to improve the plan and to judge the relevance of the project. Consequently, the evaluation is first performed primarily with emphasis on relevance.The ex-ante evaluation provides information to serve as a basis for monitoring and evaluation after starting a project

and is an indispensable step to the appropriate management of a project throughout the project cycle.

(ii) on-going evaluation and
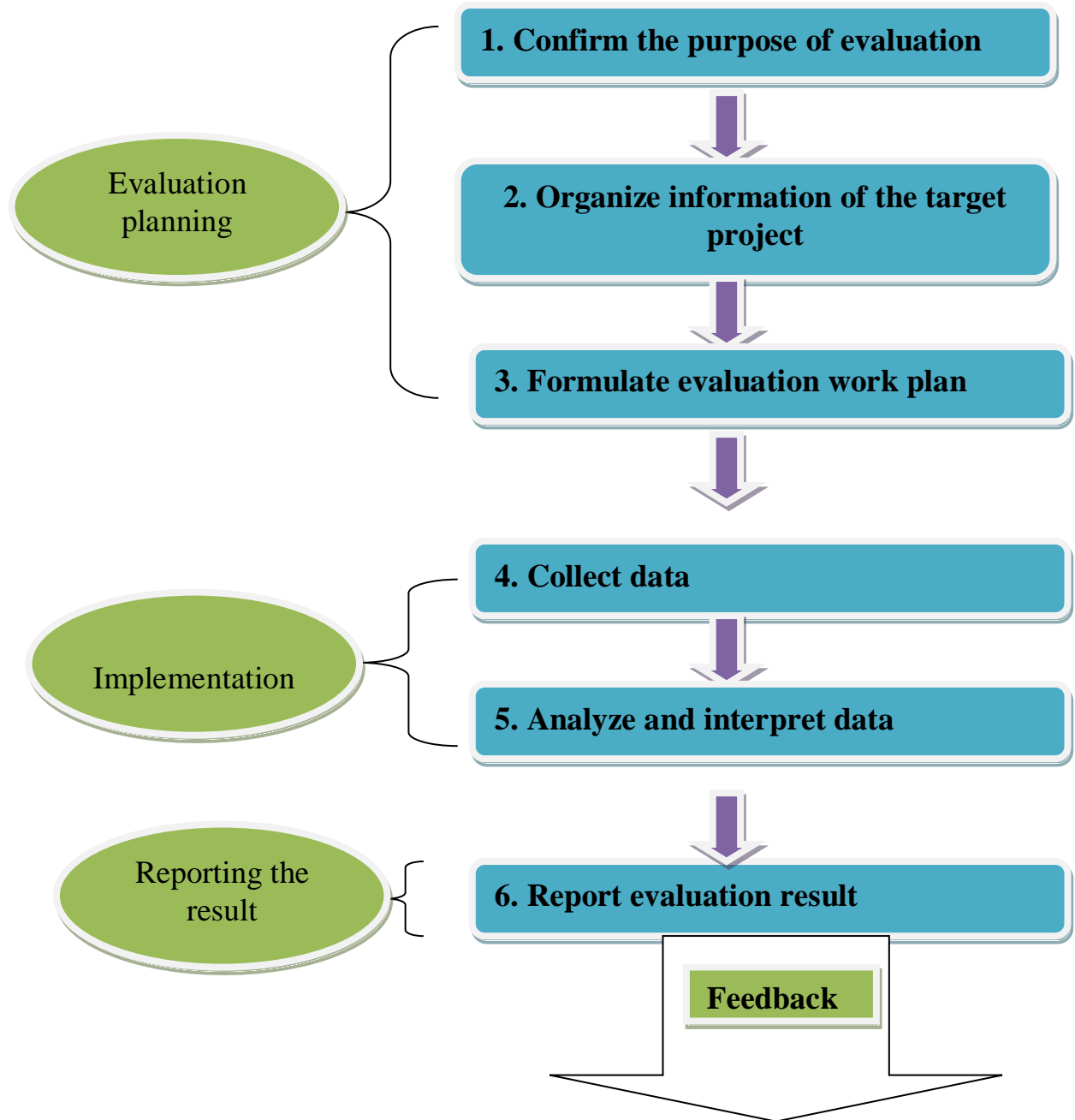(iii) ex-post evaluation.

ii.   On-going/Mid-term Evaluation

The main purpose of an on-going/mid-project evaluation is to assist the project management to make appropriate adjustments in the changed circumstances.

This assesses the progress made towards the achievement of the pre-determined objectives at the end of the project and provides a basis for decisions on future action. Its findings and recommendations are often used to decide whether or not to stop the project or when a new phase is under consideration.

iii.   Ex- Post Evaluation

The purpose of an ex-post or post-hoc evaluation is to discover the actual, as opposed to the projected, results of implementing a project. The aim of evaluation is primarily to compare the actual outcome of the project with the projections made at the appraisal stage. The examination of different aspects of the project can provide important lessons derived from experience for the new projects. The overall impact of the project will result in a number of effects which can be classified as costs and benefits, direct and indirect or tangible and intangible. Ex-post evaluation takes place after the completion of the project and is often more in-depth as it focuses on the analysis of impact. Besides, it is time-consuming, costly and calls for persons with special skills.
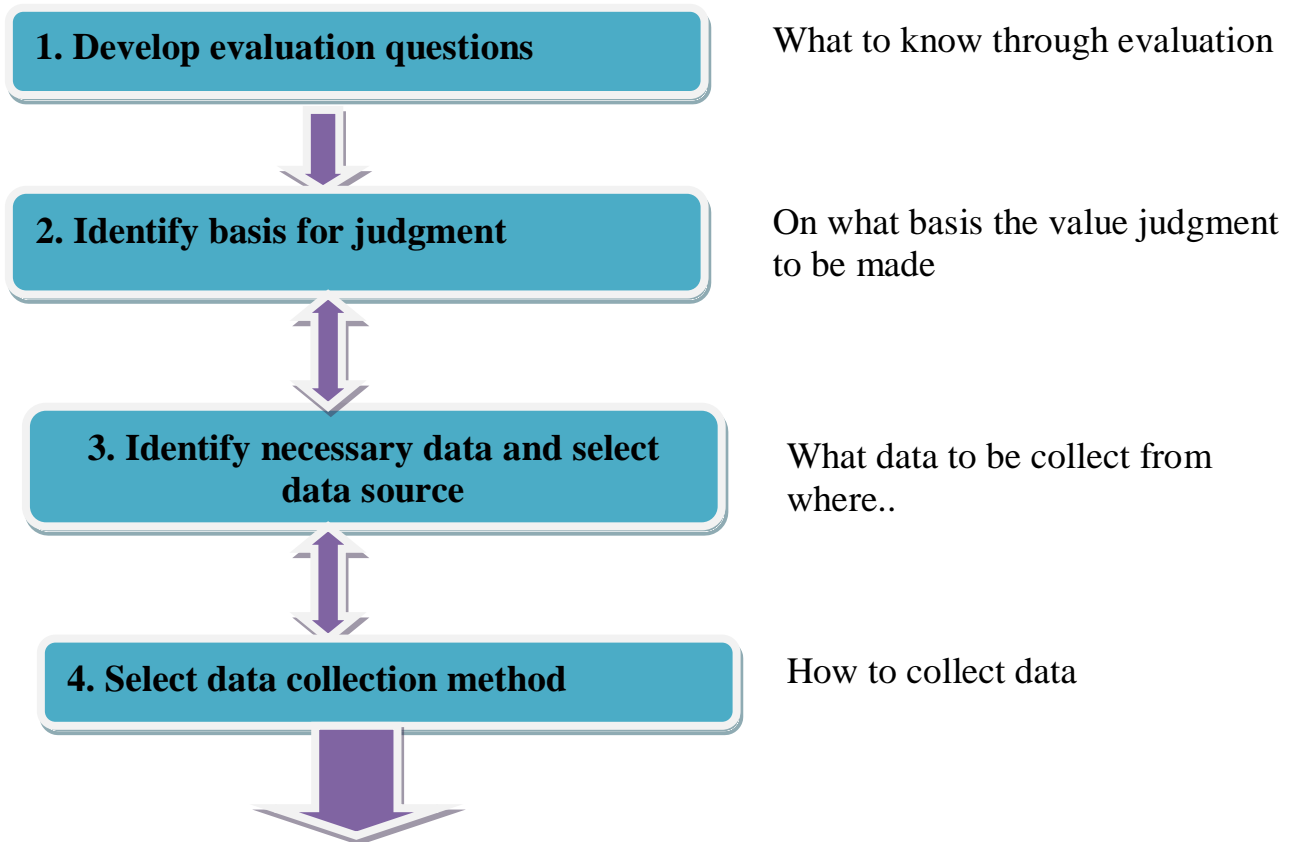
Steps of Evaluation Study:

Evaluation planning

1. Confirm the purpose of evaluation

2. Organize information of the target project

3. Formulate evaluation work plan

Implementation

4. Collect data

5. Analyze and interpret data

Reporting the result

6. Report evaluation result

Feedback

Making an evaluation plan is a process for determining what and how to implement the evaluation in line with its purpose. An evaluation study is usually limited in its budget and time, and therefore an effective and efficient way to conduct the study should be well developed.

The major steps of evaluation planning are described below. These steps are interrelated with each other and thus are in many cases developed at the same time.

1. Develop evaluation questions	What to know through evaluation
⬇	
2. Identify basis for judgment	On what basis the value judgment to be made
⬆⬇	
3. Identify necessary data and select data source	What data to be collect from where..
⬆⬇	
4. Select data collection method	How to collect data

⬇

Common Steps in Project Evaluation:

- Identification of problems and establishing objectives
- Identification of major options
- Design
- Financial analysis
- Economic analysis
- Environmental impact assessment
- Public hearings
- Agency approvals

Prospective and approaches		Key difference
Summative: the evaluation provide a judgment	**Formative:** evaluation is for learning and changing the project	**Status Evaluator:** - summative, shall be independent - formative, he can be from the organization implementing the project (auto - evaluation)
Qualitative: analysis of intangible effect (opinions, perceptions, facts) and narrative approach	**Quantitative:** analysis of tangible effects by sharp measurement.	**Methods:** Qualitative: case studies, interviews, focus group Quantitative: statistical analysis, cost and benefit analysis, counterfactual
Counterfactual: identify what is the impact (net effect)	**Theory based:** identify the casual effects linked the impact/ effect to the project	**Type of projects:** Counterfactual: the impact shall be quantifiable and easy to be identify Theory based: type of impact is not relevant
Participative: involvement of the stakeholders during the whole evaluation process (data collection, analysis, assessment, dissemination)	**Top down:** technically driven and detached from the project actors	**Approach to the Project actors.**

Evaluator:

The evaluator carries out the evaluation and prepares the evaluation report according to the TOR. The team leader of an independent evaluation is always the external evaluation consultant. The evaluator should:

- Adhere to internationally-accepted good practices and solid ethical principals;
- Be skilled in implementing diverse evaluation methodologies;
- Ensure the evaluation is an inclusive and participatory learning exercise; and
- Be culturally- and gender-sensitive.

The evaluator reports to the evaluation manager and submits the draft and final report to him/her. In finalizing the report, the evaluator should not only be receptive to comments from any of the stakeholders concerning factual inaccuracies in the report but also maintain total independence. The evaluator has sole responsibility for the final content of the report and recommendations.

Sample structure and table of content of an evaluation report:

Cover page with key project and evaluation data
1. Abstract
2. Brief background on the project and its logic
3. Purpose, scope and clients of evaluation
4. Methodology
5. Review of implementation
6. Presentation of findings regarding project performance
7. Conclusions
8. Recommendations
9. Lessons learned
10. Annexes

Choosing the best types of evaluation depends on the stage at which project development is. Each evaluation can help us make better decisions by giving the right kind of data at the right time.

Stage of Project	Purpose	Types of Evaluation
Conceptualization Phase	Helps prevent waste and identify potential areas of concerns while increasing chances of success.	• Formative Evaluation
Implementation Phase	Optimizes the project, measures its ability to meet targets, and suggest improvements for improving efficiency.	• Process Evaluation • Outcome Evaluation • Economic Evaluation
Project Closure Phase	Insights into the project's success and impact, and highlight potential improvements for subsequent projects.	• Impact Evaluation • Summative Evaluation • Goals-based Evaluation

Formative Evaluation

Formative evaluation is used before project design or implementation. It generates data on the need and develops the baseline for subsequent monitoring. It also identifies areas of improvement and can give insights on what the project's priorities should be. This helps project managers determine their areas of concern and focus, and increases awareness of your program among the target population prior to launch.

When:

- New program development
- Program expansion

What:

- The need for your project among the potential beneficiaries
- The current baseline of relevant indicators, which can help show impact later

Why:

- Helps make early improvements to the program
- Allows project managers to refine or improve the program

How:

Conduct sample surveys and focus group discussions among the target population focused on whether they are likely to need, understand, and accept program elements.

Questions to ask:

- Is there a need for the program?
- What can do to improve it?

Process Evaluation:
Process evaluation occurs once project implementation has begun, and it measures how effective your procedures are. The data it generates is useful in identifying inefficiencies and streamlining processes, and portrays the program's status to external parties.

When:

- When program implementation begins
- During operation of an existing program

What:

- Whether program goals and strategies are working as they should
- Whether the program is reaching its target population, and what they think about it

Why:

- Provides an opportunity to avoid problems by spotting them early
- Allows program administrators to determine how well the program is working

How:

Conduct a review of internal reports and a survey of program managers and a sample of the target population. The aim should be to measure the number of participants, how long they have to wait to receive benefits, and what their experience has been.

Questions to ask:

- Who is being reached by the program?
- How the program is being implemented and what are the gaps? Is it meeting targets?

Outcome Evaluation: (also known as 'objective-based evaluation')
Outcome evaluation is conventionally used during program implementation. It generates data on the program's outcomes and to what degree those outcomes are attributable to the program itself. It is useful in measuring how effective your program has been and helps make it more effective in terms of delivering the intended benefits.

When:

- After the program has run for some time period
- At an appropriate time to measure outcomes against set targets – usually benchmarked time periods

What:

- How much the program has affected the target population
- Clearly establish the degree of benefit provided by the program

Why:

- Helps program administrators tell whether a program is meeting its objectives
- Insights from outcome-focused feedback can help increase effectiveness

How:

A randomized controlled trial; comparing the status of beneficiaries before and during the program or comparing beneficiaries to similar people outside of the program. This can be done through a survey or a focus group discussion.

Questions to ask:

- Did participants report the desired change after the implementation of the program?
- What are the short or long-term results reported by participants?

Economic Evaluation:
(also known as 'cost analysis', 'cost-effectiveness evaluation', 'cost-benefit analysis', and 'cost-utility analysis')

Economic evaluation is used during the program's implementation and looks to measure the benefits of the programs against the costs. Doing so generates useful quantitative data that measures the efficiency of the program. This data is like an audit, and provides useful information to sponsors and backers who often want to see what benefits their money would bring to beneficiaries.

When:

- At the beginning of a program, to remove potential leakages

- During the operation of a program, to find and remove inefficiencies.

What:

- What resources are being spent and where
- How these costs are translating into outcomes

Why:

- Program managers and funders can justify or streamline costs
- The program can be modified to deliver more results at lower costs

How:

A systematic analysis of the program by collecting data on program costs, including capital and man-hours of work. It will also require a survey of program officers and the target population to determine potential areas of waste.

Questions to ask:

- Where is the program spending its resources?
- What are the resulting outcomes?

Impact Evaluation:
Impact evaluation studies the entire project from beginning to end (or at whatever stage the program is at), and looks to quantify whether or not it has been successful. Focused on the long-term impact, impact evaluation is useful for measuring sustained changes brought about by the program or making policy changes or modifications to the program.

When:

- At the end of the program
- At pre-selected intervals in the program

What:

- Assesses the change in the target population's well-being
- Accounts for what would have happened if there had been no program

Why:

- To show proof of impact by comparing beneficiaries with control groups
- Provides insights to help in making policy and funding decisions

How:

A macroscopic review of the program, coupled with an extensive survey of program participants, to determine the effort involved and the impact achieved. Insights from program officers and suggestions from program participants are also useful, and a control group of non-participants for comparison is helpful.

Questions to ask:

- What changes in program participants' lives are attributable to your program?
- What would those not participating in the program have missed out on?

Summative Evaluation:
Summative evaluation is conducted after the program's completion or at the end of a program cycle. It generates data about how well the project delivered benefits to the target population. It is useful for program administrators to justify the project, show what they have achieved, and lobby for project continuation or expansion.

When:

- At the end of a program
- At the end of a program cycle

What:

- How effectively the program made the desired change happen
- How the program changed the lives of program participants

Why:

- Provides data to justify continuing the program
- Generates insights into the effectiveness and efficiency of the program

How:

Conduct a review of internal reports and a survey for program managers and target populations. The aim should be to measure the change that the project has brought about and compare the change to the costs.

Questions to ask:

- Should the program continue to be funded?
- Should the program be expanded? If so, where? What factors its favor and what worked in worked against it?

Goals-Based Evaluation
Goals-based evaluation is usually done towards the end of the project/program or at previously agreed-upon intervals. Development programs often set 'SMART' targets — Specific, Measurable, Attainable, Relevant, and Timely — and goals-based evaluation measures progress towards these targets. The evaluation is useful in presenting reports to program administrators and backers, as it provides them the information that was agreed upon at the start of the program.

When:

- At the end of the program
- At pre-decided milestones

What:

- How the program has performed on initial metrics

- Whether the program has achieved its goals

Why:

- To show that the program is meeting its initial benchmarks
- To review the program and its progress

How:

This depends entirely on the goals that were agreed upon. Usually, goals-based evaluation would involve some survey of the participants to measure impact, as well as a review of input costs and efficiency.

Questions to ask:

- Has the program met its goals?
- Were the goals and objectives achieved due to the program or externalities?

5 Ways to measure project success:

Project managers often wonder if they are measuring the right things on a project. It's difficult to know how much time to spend evaluating past performance and how much time to spend on keeping the work moving forward.

Of course there are many indicators of project success, but what do you need to be measuring while the project is in motion?

At various points during the project you want to evaluate five points: schedule, quality, cost, stakeholder satisfaction and performance against the business case. You should be doing this informally anyway. A formal project evaluation is of use during the end of a phase or stage as it can give you a clear indication of how the project is performing against the original estimates. This information can then be used to grant (or withhold) approval from moving on with the next chunk of work.

Let's look at the five items you should be evaluating

1. Schedule

Project management success is often determined by whether or not you kept to the original timeline. Experienced project managers know how hard that is, but it's a little bit easier if you continually evaluate your progress as you go.

You'll update your schedule regularly – It is recommended at least weekly. The schedule evaluation is something you can do more formally at the end of the stage or phase, or as part of a monthly report to your senior stakeholder group or Project Board.

Look at your major milestones and check they still fall on the same dates as you originally agreed. Work out the slippage, if any, and how much of an impact this will have on your overall project timescales.

2. Quality

The end of a project phase is a good time for a quality review. You can check both the quality of your project management practices – are you following the change management process every time and so on – and also the deliverables.

A quality review can evaluate whether what you are doing meets the standards set out in your quality plans. Best find out now before the project goes too far, as it might be too late to do anything about it then.

3. Cost

Many executives would rate cost management as one of their highest priorities on a project, so evaluating how you the project is performing financially is crucial. Compare your current actual spend to what you had budgeted at this point. If there are variances, look to explain them.

You'll also want to look forward and re-forecast the budget to the end of the project. Compare that to your original estimate too and make sure it is close enough for your management team to feel that the work is on track. If your forecasts go up too much it is a sign that your spending will be out of control by the end of the project – again, something it is better to know about now.

4. Stakeholder Satisfaction

Your wider team (stakeholders): are essential in getting much of the work done so it's worth checking in with them. Find out how they are feeling about the project right now and what you could be doing differently.

This is a difficult measure to document statistically, although there's nothing to stop you asking them for a rating out of 10. Even if you are evaluating their satisfaction subjectively, it is still a useful exercise. If you notice that stakeholders are not fully supportive, you can put plans in place to engage them thoroughly to try to influence their behavior.

5. Performance to project objective

Finally, see what you originally agreed. How is your project shaping up? Check that the benefits are still realistic and that the business problem this project was designed to solve does still exist. It happens – project teams work on initiatives that sound great but by the time they are finished the business environment has moved on and the project is redundant. No one bothered to check the business case during the project's life cycle and so no one realized that the work was no longer needed.

Don't work on something that nobody wants! Check the performance regularly and evaluate it in light of the current project objectives.

You can add other items to this list. In fact, it should reflect what is important to you and your team – you should be evaluating things that matter, so feel free to add extra elements or ditch some of the ones that

you are less worried about. If you need help working out what's important, this article about how to set up project tracking will help.

When your project is over you'll want to carry out a full and final evaluation. This could be as part of a lessons learned review, but typically it is different. Lessons learned review is where all the project stakeholders' comment on what worked and what didn't. You take away key messages and tasks to improve how projects are delivered in the future. It's an essential part of project closure, but it isn't a formal evaluation. You get a lot of feedback, anecdotes and stories but even the most structured lessons learned workshop generally gives you narrative rather than statistics.

A project evaluation is about figures. The stories form part of it too, but a smaller part. During a project evaluation you look at:

- Schedule
- Quality
- Cost
- Stakeholder satisfaction
- Performance to business case

Sound familiar? Yes, it's the same list of topics that you evaluate as you go through the project. Anything that you are going to be evaluating at the end should also be assessed during the project's life cycle, or you risk not hitting the targets you have set for yourself.

You can include your final end-of-project evaluation in your Project Closure Document (get a template here). Note down how close you were to your original timescales, budget and quality targets. Add a few sentences to describe whether your evaluations showed that stakeholders were satisfied with the end result and also if the project met the needs described in the business case.

The Concept of Project Success and Construction Project Success

Project success is a difficult concept because of the project's complexity and dynamic. Until now, there is no accepted universal definition of project success. Definition of project success may vary depending on each industry, project team, or individuals' point of views (Parfitt and Sanvido 1993). It is different among participants, scope of services, project size, and time-dependent (Shenhar and Levy 1997). "An architect may consider success in terms of aesthetic appearance, an engineer in terms of technical competence, an accountant in terms of dollars spent under budget, a human resources manager in terms of employee satisfaction, and a chief executive officers rate their success in the stock market" (Freeman and Beale 1992 cited in Shenhar and Levy (1997)). However, according to Parfitt and Sanvido (1993), project success definition is different for each participant, but it is based on the basic concept of the overall achievement of project goals and expectations. These goals and expectation includes technical, financial, educational, social, and professional issues.

Liu and Walker (1998) defined project success at two levels. The first level is project's goals concerning time, budget, functionality/quality/technical specification, safety and environmental sustainability. The second level is the satisfaction of the claimant(s).

In the construction industry, the concept of project success varies among different projects depending on participants, project size, scope of services, and the time required to implement a project. Nevertheless, there are common threads across the industry concerning the perceptions and expectations of the designer, owner, or contractor. Contractor selection is an important event for project success. The purpose of all models which are studied to select contractors is to help the owner achieve project success. Therefore, project success can be considered as a reflection to evaluate how good the contractor selection process is.

Distinction between Project Success - Project Management Success, Success Criteria – Success Factors

A distinction should be made between project success and project management success. They are often confused, but they are not the same. De Wit (1988) showed many examples from their research on about 650 completed projects in the USA, and concluded that "a project can be a success despite poor project management performance and vice versa". They stressed that "good project management can contribute towards project success but is unlikely to be able to prevent project failure" (De Wit 1988). Project management plays an important role in project success, but there are many factors which are out of direct control which may affect project success. Project management is considered successful if it satisfies a number of requirements. They include

- effective planning,
- the involvement of a skillful project manager,
- Adequate time to define a project thoroughly,
- Correct planning,
- reliable and sufficient information flows,
- changing activities to adapt to frequent changes in the project,
- meeting employees' expectations regarding performance and rewards,
- and identifying mistakes in project implementation in order to make timely adjustments

From this narrow definition of successful project management, it is believed that the concept of project success includes more than project management success, and they are not directly correlated.

Chua et al. (1999) suggested a set of sixty-seven factors related to project success and categorized them in four groups which were project characteristics, contractual arrangements, project participants, and interactive processes.

Project Success Measurement

Whether the project success can be measured or not has been addressed by many researchers a long time ago. Measuring success is complex because it depends on the stakeholders' points of view and it is time dependent. A project can be perceived as a success for one party but a failure for another. De Wit (1988) believed the concept that "one can objectively measure the success of a project is an illusion". Nevertheless, he pointed out that it is possible and valuable to evaluate project at the post-completion stage. He also provided evidence, the Project Management Institute conference help in Montreal in 1986, to demonstrate the possibility of success measurement. The purpose of this conference was to examine the importance of good measurement indicators of project success. It received the earlier version of papers related to "measuring success" implying a message that project success is possible to determine.

Result measure, process measure, and relationship measure are three types of measures of the partnering in the construction industry. All of them are important and strong in their proper place. Among them, result measure is the most difficult to evaluate, but it is the most useful for future strategy adjustments. Project success is considered at the completed stage.

A list of six criteria for success was developed from Songer et al. (1997). They are:

1. **On budget**(refers to the completion of project within the contracted cost)
2. **On schedule** (means this completion is achieved prior to or on the date as shown in the contract.)
3. **Meets specifications** (suggests the ability to meet or exceed the entire owner's provided specifications of technical performance.)
4. **Conforms to user's expectations** [is the ability to meet or exceed the envisioned functional goals of the user (fitness for purpose).]
5. **High quality of workmanship**(an ability to meet or exceed the standards required for workmanship in all areas)

6. **Minimizes construction aggravation**(using a construction process that does not causes overwhelming workload to the owner's project management staff)

Basic inputs required for project evaluation are:
1. Initial Investment
2. Consumer Demand for the Product
3. Price of the Product or Service
4. Cost of the Product
5. The Life of the Project
6. Salvage Value
7. Transfer Restrictions
8. Tax Laws
9. Exchange Rate Variations
10. The Required Rate of Return.

1. Initial Investment
A project's initial investment is not only equal to the investment required to start the project but also the working capital required to run the operating cycle of the project. Working capital margin is needed until the revenue generated from the project is sufficient to cope with working capital requirement. The parent's initial investment will also indicate the sourcing of funds.

A projection of consumer demand is very important for determining cash flows. It is very difficult to forecast the demand in a foreign country for the product which is either being introduced newly or will be competing with the existing domestic product. In the first case, the market has to be created for the product where as in the later; share for itself has to be carved out. However, there is a lot of uncertainty associated with such forecasts.

3. Price of the Product or Service

To forecast the price of the product, the firm needs to study the price of the competitive product. However, for a new product, the pricing is done on the basis of cost of production and the prospective customer segment of the population.

4. Cost of the Product

The cost of the product has two components:
(i) Variable cost, and

(ii) Fixed costs.

The forecasts on these two types of costs are also to be developed because the project usually conceived and prepared earlier than it actually is initiated and the projects have time lags. These costs may also be dependent on price of inputs whether procured indigenously or imported.

a. Variable Cost:
Variable costs forecasts can be developed by assessing prevailing comparative costs statistics for variable inputs such as labour energy and raw material. It is needed to forecast variable costs quite accurately.

b. Fixed Costs:

Fixed costs may be easier to predict as compared to the variable cost because normally it is not sensitive to the changes in demand for fixed factors.

5. The Life of the Project

In the case of some projects, the life of the project can be assigned, while in other cases it may not be possible. In the case of the definite life time of the project-capital budgeting decision making is easier. But one aspect of the MNC's capital budgeting is that, MNCs does not have complete control over the life time of the project and it may be terminated any time due to political reasons, explained earlier.

6. Salvage Value

The salvage value in the case of most of the projects is difficult to predict. Its value depends on several factors including the attitude of the host government, change in taste and fashions of society, technology upgradation, etc.

7. Transfer Restrictions

There may be restrictions on the transfer of earnings from subsidiary to the parent. The restriction may encourage the MNC to spend locally so that there is no huge transfer of funds. This makes the project viable for the subsidiary and unviable for the parent.

8. Tax Laws

If the parent country does not tax the foreign earnings because it provides incentive to foreign earnings, the cash flows may increase. In capital budgeting, the tax effects must be accounted for.

9. Exchange Rate Variations

The cash flows from international project may vary because of exchange rate variation. The exchange rate variations are difficult to forecast. The short run positions can be hedged but long run project cannot be hedged. Moreover, it is difficult to know the exact amount of cash flow to be hedged, over the time span of the project.

10. The Required Rate of Return.

Once the relevant cash flows of the proposed project are estimated, these can be discounted at the required rate of return which differs from the MNC's cost of capital because of additional risk involved in the launching of the new project at a foreign location.

What is Audit?

An audit is a systematic and independent examination of books, accounts, statutory records, documents and vouchers of an organization to ascertain how far the financial statements as well as non-financial disclosures present a true and fair view of the concern. It also attempts to ensure that the books of accounts are properly maintained by the concern as required by law.

The definition of an audit is the process of evaluation or analysis of something to determine its accuracy or safety, or is the document that declares the result of such an analysis or evaluation.

An audit is an objective examination and evaluation of the financial statements of an organization to make sure that the records are a fair and accurate representation of the transactions they claim to represent. The audit can be conducted internally by employees of the organization, or externally by an outside firm.

Types of Audit:

In general, an audit is an investigation of an existing system, report, or entity. There are a number of types of audits that can be conducted, including the following:

1. Compliance audit: This is an examination of the policies and procedures of an entity or department, to see if it is in compliance with internal or regulatory standards. This audit is most commonly used in regulated industries or educational institutions.

2. Construction audit: This is an analysis of the costs incurred for a specific construction project. Activities may include an analysis of the contracts granted to contractors, prices paid, overhead costs allowed for reimbursement, change orders, and the timeliness of completion. The intent is to ensure that the costs incurred for a project were reasonable.

3. Financial audit: This is an analysis of the fairness of the information contained within an entity's financial statements. It is conducted by a CPA firm, which is independent of the entity under review. This is the most commonly conducted type of audit.

4. Information systems audit. This involves a review of the controls over software development, data processing, and access to computer systems. The intent is to spot any issues that could impair the ability of IT systems to provide accurate information to users, as well as to ensure that unauthorized parties do not have access to the data.

5. Investigative audit: This is an investigation of a specific area or individual when there is a suspicion of inappropriate or fraudulent activity. The intent is to locate and remedy control breaches, as well as to collect evidence in case charges are to be brought against someone.

6. Operational audit: This is a detailed analysis of the goals, planning processes, procedures, and results of the operations of a business. The audit may be conducted internally or by an external entity. The intended result is an evaluation of operations, likely with recommendations for improvement.

7. Tax audit: This is an analysis of the tax returns submitted by an individual or business entity, to see if the tax information and any resulting income tax payment is valid. These audits are usually targeted at

returns that result in excessively low tax payments, to see if an additional assessment can be made.

- Time and money limit the depth of an audit
- Audits are distracting to those working on the project
- A poor audit result will lower morale on the project

- All significant projects should be audited
- Larger projects may be audited several times
- An audit may also be conducted after the projects is over (Post-Project Audit)

The project audit is the process of verification of the extent to which the project realization complied with the rules and principles of project management for the concrete project. It is a formal review of any aspect of a project. An audit is a systematic, independent, documented assessment using standards and set criteria.

Project auditing can be defined as the process of detailed inspection of the management of a project, its methodology, its techniques, its budget, its expenses and its level of completion.

The key concepts in project auditing are as follows.

- **Verification:** audits evaluate compliance to regulations or other set criteria.
- **Systematic:** audits are carried out in a planned and methodical manner.
- **Periodic:** audits are conducted to an established schedule.
- **Objective:** information gained from the audit is reported free of opinions.

- **Documented:** notes are taken during the audit and the findings recorded.
- **Management tool:** audits can be integrated into the management system (such as a quality management system or environmental management system).

The various types of audits you will come across during your project management preparation are,

Normal Audit or Inspection

A normal audit or simply 'audit' is part of Monitoring and controlling process group. It is also termed as Inspection as it is basically a QC process. Inspection is done after the product is built

Quality Audit

Quality audits are part of execution process group. These are reviews of your project by your company. They figure out whether or not you are following the company's process

Risk Audit

Risk audits are part of Monitoring and controlling process group. These help with overall process improvement. The risk responses (that were implemented) are analyzed to determine if they were effective in handling the risks and their root causes. Similarly, you can also audit and gauge the effectiveness of the risk management processes in the project as a whole too

Procurement Audit

Procurement Audit is part of closing process group. As part of procurements closure, a structured overall review flushes out issues, sets-up lessons learned, helps ensure problems are resolved for future projects

and also identifies successes and failures that warrant transfer to other procurements

<mark>Life Cycle of Project Audit:</mark>

- Project audit initiation
- Project baseline definition
- Establishing an audit database
- Preliminary analysis of the project
- Audit report preparation
- Project audit termination

<mark>Process of Project Audit:</mark>

The project audit process can be structured and modified in accordance with individual project phases. The audit can be realized during the realization of each individual phase, during the completion of each individual phase or after the completion of the whole project, upon the discretion of the methodology user.

<mark>1. Preparatory phase:</mark>
- Introducing the project audit methodology to the auditor
- Understanding the audited object and learning about the audited project
- Determining the audit goals
- Determining the audit subject (audited phase)
- Creating the audit team – the audit team must always have at least two members to meet the objectivity criteria. Due to the fact that the project manger is the main source of information during the questionnaire inspection, it is not recommended to include the PM in the audit team.
- Creating the audit time schedule
- Providing the required body of evidence, choosing the appropriate audit techniques
- Obtaining data – list of required documentation

2. Performance phase:

- The audit is realized in accordance with the determined goal and extent or audit subject
- Using individual tools: documentation analysis, completing questionnaires, conducting interview, recording into check-lists
- Obtaining other additional data, materials, if required

3. Evaluation/analytical phase:

- Analysis of results
- Obtaining and analyzing other additional data, materials

4. Conclusion phase:

- Identification and description of findings within the audit, including the seriousness of the results
- Making a draft of the audit report for the project, interpretation of results, including recommendations of the audit team for individual results
- Introducing the draft report to the audit team and determining a deadline for its statement on the findings included in the report.
- Creating a final report including recommendations based on the audit team statement
- Delivering the final report version to the audit team and submitting a request for accepting measures with regards to recommendations included in the report
- Processing measures (what are the measures, when will they be implemented) for recommendations stated in the audit team report
- Delivering the audit report, including suggested measures, to the management

Methods of Project Auditing:
The following methods are recommended for the project audit:
- ➢ Analysis of audit documentation
- ➢ Checklist – checking performed tasks, created documents through created checklists.
- ➢ Interview – additional questions to the checklist
- ➢ Self-assessment questionnaire

Continuous Audit Implementation Steps

1. Establishing Priority Areas
2. Identifying Monitoring and Audit Rules
3. Determining Process Frequency
4. Configuring Paramenters
5. Following up
6. Communicating results

Process Control Panel

Responsibilities of the Project Auditor/Evaluator

⌘ First and foremost, the auditor should "tell the truth"

⌘ The auditor must approach the audit in an objective and ethical manner

⌘ Must assume responsibility for what is included and excluded from consideration in the report

⌘ The auditor/evaluator must maintain political and technical independence during the audit and treat all materials as confidential

Benefit of Project Audits

Project audits can help identify when a project is about to go off-course. In addition, a project audit can provide the following benefits:

- Improve project performance.
- Increase customer and stakeholder satisfaction.
- Save costs.
- Control scope and avoid scope creep.
- Provide early problem diagnostics.
- Clarify performance/cost/schedule relationships.
- Identify future opportunities for improvement.
- Evaluate performance of the project team.

- Inform client of project status/prospects.
- Reconfirm feasibility of/commitment to project.

The benefits of project audits become especially evident in large organizations running large projects. Multi-million dollar projects can easily derail due to poor management techniques causing the investors millions of dollars. In this scenario, the cost of not performing periodic project audits can be much higher than the cost of performing it. Multiple audits, perhaps one per phase, are recommended for large projects.

Preparing for the Project Audit

The aim is to ensure that the audit team receives full and uninterrupted access to all required information, people and facilities during their audit. This includes, but is not limited to, emails, and documents developed by the project team. Having everything at your fingertips makes it easy to answer questions when they arise.

When auditing the project, interview the PM as a starting point and review the project library to ensure you know where to find the information you are looking for.

When you conduct an audit, determine whether the PM has addressed the key items in each phase of the project lifecycle. This includes, but is not limited to:

1. Initiation Phase:

- Identify the main objective of the project.
- Write the project charter.
- Get sign-off on the project charter.

After you complete reviewing the Initiation Phase, review the actual project plan or Work Breakdown Structure (WBS). You should focus on how well defined the WBS is and how well tasks and dependencies have

been scheduled. A Visio or flow diagram is also a good alternative. Ask the PM what software has been used to create the required documents. Make sure the planning is sound. Failing to plan is planning to fail. Again, the key items that must be reviewed after initiation are:

2. Planning Phase:

- Create a Project Management Plan.
- Establish project deliverables.
- Write a scope statement.
- Determine a project budget.
- Distinguish project activities.
- Work out a schedule.
- Determine special skills needed to complete planned tasks.

Once the planning phase has been reviewed, the execution phase review takes place. Many projects suffer from scope creep during this phase. Has the project team stuck to their scope? Poor communication, misunderstandings and lack of information may have caused issues. Some of the tasks to review are listed below.

3. Execution Phase:

- Put together the project team.
- Administer and guide the project team.
- Conduct status review meetings.
- Communicate project information.
- Implement quality assurance measures.

Make sure the control measures are sound and the correction procedures are well described.

4. Controlling Phase:

- Measure performance against the plan.
- Evaluate the corrective measures.
- Manage change requests.

Once most of the work of the project is done, we approach to closing phase. Has the project been documented and closed properly?

5. Closing Phase:

- Manage acceptance of project deliverables.
- Document lessons learned during the project.
- Archive project records.
- Formalize the closing of the project.
- Release project resources.
- Write final Status Report.

A project audit is a project of its own, and as such, no one size fits all. It takes an experienced and knowledgeable project manager to conduct an audit from beginning to end, and to adapt it according to the environment.

Some final words on the success of audits: Identify the constraints that the customer is most concerned about, and focus on these. Track the costs, schedules, scope, quality, human resources, customer satisfaction, and any other indicator that can be a symptom of trouble. Map the customer project processes into PMI processes. Try to find the pains, the flaws, and the problems, and clearly document them and present your findings to the customer. Come up with creative solutions and propose them along with a very good rationale on why the solution proposed would work.

Financial Audit:

A financial audit is a compliance audit that is instituted by law and is primarily concerned with the examination of financial statements and records, and serves as a control mechanism for reporting and safeguarding of assets and resources. Its objectives are to protect shareholders and public interests by detecting errors and fraud, and ascertaining whether accounts or procedures are a true and fair reflection of what has become known under the period of review.

During a financial review, financial reports are examined to ascertain whether reports agree with actual costs incurred, payment application processing conform to established procedures and internal procedures have been adhered to. The audit is not only interested in the detection of errors and fraud, but also the provision of process improvement recommendations for the project management team in the management of resources.

Basic Procedures for a Financial Audit

Generally, four key phases are outlined for financial audit process. These phases include planning the audit, determining the working of internal control, testing significant assertions about the data and evaluating compliance, and reporting the evaluations.

These phases are explained below:

- **Planning**

The process of financial audit begins with a plan that involves the method of collecting data to form an opinion about the organization or company's financial status. A way is planned to collect a sample reflecting a point in time in the life of the company or organization. The financial transactions and documents are then looked at. It is noteworthy that the sample should show compliance with GAAP.

- **Internal controls**

The next step involves giving a look at the internal controls. The auditor demands info, looks closely at the records, and watches financial procedures in action. Without these steps, the auditor cannot give a statement about the financial status of the organization.

- **Testing**

Testing implies checking whether the internal controls are working or not. An auditor requests more info, returns to the company for more inspections, and watches how financial procedures are being performed. If the evidence demonstrates GAAP compliance, the auditor determines that the company successfully detects and prevents the errors.

- **Reporting**

The final step in financial audit involves giving a conclusion on how the company adheres to accounting standards. The audit from a CPA gives the organization an unqualified approval, a qualified approval, a disclaimer, or an adverse finding. The unqualified approval is considered as the best result and the adverse finding is considered to be the worst result.

Technical audit

A technical audit is the systematic and independent investigation of specific processes and activities carried out by a person(s), with the aim of ascertaining whether the activities and processes and their consequent outcomes conform to set standards, have been executed efficiently and are appropriate to achieve set goals. It is a kind of snapshot of the technical condition.

It concentrates only on the technical aspects of a project by principally examining the extent to which personnel have followed agreed processes/standards and exercised reasonable and satisfactory professional skill in performing their duties.

Thus the technical auditing of construction projects assesses the extent to which the specifications and conditions of contract have been adhered to by all parties involved in the planning, designing, construction and management of the project in achieving the project objectives of desired quality, cost, time and safety.

Objectives of Technical audit

The objectives of a technical audit include:

- the determination of how well established project objectives are being realized, and if not the reasons for non-compliance
- recommending measures to curb future repetition of non-compliance with procedures and requirements
- Objectively ascertaining whether project staff has exercised reasonable skill and care in executing their technical duties.

How Technical audit is carried out in a project:

Pre-tendering stage:

At this stage the audit reviews land availability, acquisition, usage and conditions by assessing all environmental reports and the impact that the project will have on adjourning properties and land generally in the vicinity earmarked for construction. In addition to cost analysis been carried out to ascertain the economic feasibility of the project, the procurement methods and contract forms to be used for the project are also considered. Associated risks in carrying out the project are identified, documented and planned for at this stage. Design drawings by architects and engineers are examined to ensure they are in line with the client's needs and are constructible.

Tendering stage:

At this stage of the audit, the tendering process is assessed to ascertain whether the best and most economically responsive tendered has been selected to execute the project. Issues of bonds, guarantees, payments, works schedule, contract forms and agreements are also assessed at this stage to ensure best practice is adhered with.

Construction stage:

Works (being) executed are examined to ensure they are in line with the conditions of contract and specifications as regards the project. This includes the examination of the works methods, technologies, changes in the scope of works, delays, supplies, site instructions and records, the performance of contractors, technical consultants and other professionals engaged on the project. The audit also examines advance payments, interim payments, claims, interests, penalties and final accounts

Benefits of Technical audit:

The benefits of the technical auditing for construction projects are:

1. Identifying weaknesses in project management processes and recommending solutions to same
2. Enhancing the credibility and accountability of the construction industry to taxpayers and clients
3. Ensuring reasonable care and skill are been employed by personnel in the discharge of laid down procedures and requirements
4. Lowering the cost of finance by eliminating corruption
5. Reinforcing professionalism in the construction industry
6. Enforcing compliance with laid down procedures, requirements and standards
7. Provision of information for tax compliance
8. Provision of information for dispute resolution

9. The audit report forms the basis for decision making and serves as a communication tool amongst project participants
10.   Provision of an independent valuation of the performance of project participants, with the view of ascertaining how well established goals are being achieved, and with the additional objective of identifying opportunities for improvement

Environmental audit:

Environmental auditing is essentially an environmental management tool for measuring the effects of certain activities on the environment against set criteria or standards. Depending on the types of standards and the focus of the audit, there are different types of environmental audit. Organizations of all kinds now recognize the importance of environmental matters and accept that their environmental performance will be examined by a wide range of interested parties. Environmental auditing is used to

- investigate
- understand
- identify

These are used to help improve existing human activities, with the aim of reducing the adverse effects of these activities on the environment. An environmental auditor will study an organization's environmental effects in a systematic and documented manner and will produce an environmental audit report. There are many reasons for undertaking an environmental audit, which include issues such as environmental legislation and pressure from customers.

Environmental auditing should not be confused with environmental impact assessment (EIA). Both environmental auditing and EIA are environmental management tools, and both share some terminology, for

example, 'impact', 'effect', and 'significant', but there are some important differences between the two.

Environmental auditing is carried out when a development is already in place, and is used to check on existing practices, assessing the environmental effects of current activities (ex post). Environmental auditing therefore provides a 'snap-shot' of looking at what is happening at that point in time in an organization.

The International Organization for Standardization (ISO) has produced a series of standards in the field of environmental auditing. These standards are basically intended to guide organizations and auditors on the general principles common to the execution of environmental audits. These are addressed elsewhere in this module.

Environmental auditing means different things to different people. Environmental auditing is often used as a generic term covering a variety of management practices used to evaluate a company's environmental performance. Strictly, it refers to checking systems and procedures against standards or regulations, but it is often used to cover the gathering and evaluation of any data with environmental relevance - this should actually be termed an environmental review. The distinction between an environmental audit and an environmental review has become blurred, but the table in 2.1.1 should enable you to understand the differences between the two.

Objectives of Environmental audit:

The broad objectives of environment monitoring and audit are:

(i)   To clarify and identify sources of pollution, impact and nuisance from the works;

(ii)   To establish a record of change associated with the implementation of a project;

(iii) To verify all or selected parameters measured are in compliance with legal and contract specifications, internal policies and standards;

(iv) To provide an early warning system for impact prevention;

(v) To provide a database of environmental parameters against which to determine any short term or long term environmental impacts;

(vi) To propose timely, cost-effective and viable solutions to actual or potential environmental issues;

(vii) to setup event and action plans and determine the degree and scope of any necessary remedial measures in case of exceedance of compliance, for which environmental monitoring forms the basis, or the recommendation of environmental controls in the event that the environmental objectives are not achieved;

(viii) To monitor performance of the mitigation measures and to assess their effectiveness and, whenever necessary, identify any further need for additional measures;

(ix) To verify the EIA predicted impacts and compare the impact predictions with actual impacts for the purpose of assessing accuracy of impact predictions in EIA;

(x) To collate information and evidence for use in public and Government consultation; and

(xi) To audit the environmental performance.

Difference between Financial & Environmental audit:

	Financial Audits	Environmental audit
Legal basis of audit	Part of regulatory (legal) process, organizations have to perform it	With few exceptions, environmental audits are voluntary affairs. Even the preparatory environmental review which is mandatory under ISO 14001 is voluntary as the standard is voluntary
Frequency	Annual affairs	Whenever the organization decides to perform one
Who dose it	Performed by external staff, certified to do so	Performed by external and/or internal staff. Professional indemnity considerations, there are no legal requirements of auditors to be competent or trained, although professional bodies in many countries try to stop this
Methodology	Financial audits are based on comparative standards which are publicly available - General Principles of Accounting etc	Varies very much between auditors and projects
Assess to audit	The results are public documents in the form of annual reports	Very few audits are public, although some results are often published in the Environmental Reports
Liability	Auditors are partially liable for their reports. They have to provide a 'true and fair' view of the organization	With few exceptions that are negotiated between auditor and auditee, there is no external liability implication in environmental audits

Social Audit is a process in which, details of resource, both financial and non financial, used by public agencies for development initiatives are shared with the people, often through a public platforms. Social Audits allow people to enforce accountability and transparency, providing the ultimate users an opportunity to scrutinize development initiatives.

Social audit is a continuous evaluation process, that can be integrated in the regular activity cycle of a company/organization – planning, evaluation, reporting – and can be considered an essential condition in the achievement of the entities' and organizations' progress and concessions with the society they belong to.

The corporate social responsibility (CSR) activities of the companies must comply with their sustainable development policy. And this is the point in which the social audit starts playing its role. The social audit tests the coherence between the corporate social responsibility activities and the sustainable development policies of the company, aiming at the improvement of its social and environmental performance. This leads us to the necessity of the social audit.

Things should be considered for effective and efficient Social audit Implementation

Here are some of the suggestions that could be used to make the social audits more effective and efficient:

1. While conducting a social audit, it is required that the purpose is clearly defined.
2. The stakeholders should be properly identified.
3. A note should be made of whether marginalized social groups, which are normally excluded, have a say on local development issues and activities and have their views on the actual performance of local elected bodies.

4. The auditor must obtain information from reliable sources. After the introduction of Right to Information Act, the task of obtaining statistics and other information from the government departments had become a lot easier than before.
5. The performance indicators adopted by the society at large should be taken as standards in order to judge the performance.
6. Regular meetings and follow ups must take place in order to ensure the continuity and effectiveness of audits.
7. Proper mechanisms must be set up in order to recover the swindled money from the corrupt officials.
8. Substantive procedures are required to be devised instead of compliance procedures to gauge the performance.
9. Hierarchy needs to be defined for conducting social audits.
10. External Parties such as NGOs should be involved in conducting audits.

Benefits of Social Audit

Social audit offers certain distinct benefits. The principal benefits derived from social audit are as follows:

1. It provides a recognized method for bringing the social point of view to the attention of management
2. Person outside the company appraises the individual corporations. Hence, they can give an unbiased and disinterested view about the activities of the company employees.
3. The social audit report is made to the company and not to the public. Hence the social auditor can give a frank opinion about the social welfare schemes of the company.

Besides there are several other benefits which are worth mentioning.

1. It supplies data for comparison of policies and standards.

2. It encourages greater concern for social performance throughout the organization.

3. It provides data for comparing effectiveness of different types of social welfare program.

4. It helps the organization to build up the image and reputation of the organization in the minds of the public.

5. The shareholders shall realize the importance of socially beneficial schemes and extend their full cooperation to the company's program of social welfare and development.

6. By carrying out the social obligations the company can achieve a higher degree of efficiency and unparalleled performance in industrial peace. It creates team spirit and develops discipline. All these factors shall finally result in higher productivity.

7. The whole community will cooperate with company. This will enable the company to maintain its profit volume unaltered. It can also pay a fair dividend to its shareholders in spite of the various constraints faced by the company.

1) Explain about the project evaluation myths. As a Project manager of a construction company, how you evaluate reasons for project success or failure?

2) Define the term 'depth of audit'. Explain in details about steps in technical audit process. Critically review each steps in context of Nepal giving strength and weakness of Nepalese technical auditor.

3) Define project evaluation and technical audit in construction project. Write down and explain the steps in the technical audit process.

4) Explain about types of project evaluation based on time and its importance.

5) Critically evaluate the reasons for project success and failure in Nepalese construction industry.

6) Discuss the need and importance of technical audit and social audit