



NPTEL ONLINE CERTIFICATION COURSES

TRAINING AND DEVELOPMENT

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Module : 6

Lecture 26: Defining Evaluation

TRAINING AND DEVELOPMENT

This lecture session will discuss on the concept, features, types and principles of evaluation and its various other issues.

Evaluation

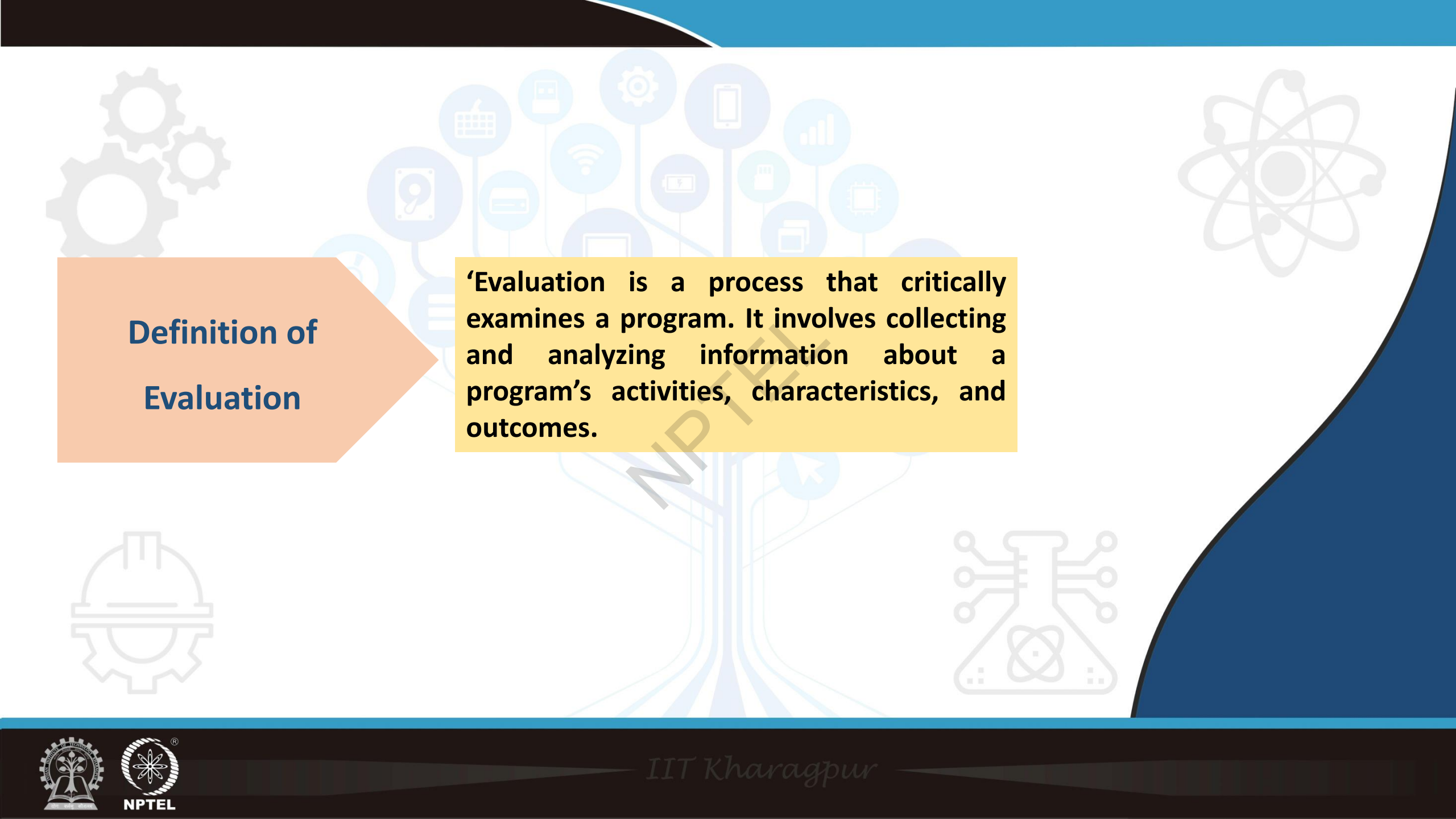
It is to determine the extent to which established goals or objectives have been achieved.

Why Evaluation

It plays a very important role in assessment of the employees' performance. It is to characterize the work or value of something.

Defining Evaluation

Evaluation is the decision making process that leads to suggestions for actions to improve the effectiveness of the employees/members of the team and programme efficiency.



Definition of Evaluation

'Evaluation is a process that critically examines a program. It involves collecting and analyzing information about a program's activities, characteristics, and outcomes.'

What are the Purposes of Evaluation

- To Clarify and define the objectives
- To encourage individual professional growth in areas of interest to the employee
- To improve morale and motivation by treating the employee as a professional in charge of his or her own professional growth.
- To determine the progress of the employees towards achievement of the goals of the tasks assigned to them
- To support employees as they experiment with approaches that will move them to higher levels of performance
- To establish and maintain standards to meet legal, professional and organisational credentials.

Basic Features of Evaluation

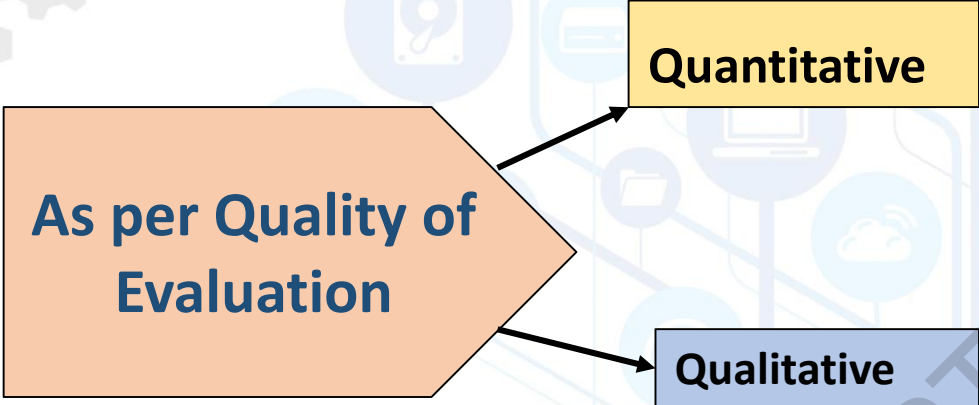
- Evaluation is a continuous process.
- Evaluation is a procedure for improving the products/services
- Evaluation is compound objective observation
- Evaluation is a valuable and indispensable for policies and further action
- Evaluation must form an integral part of operation
- Evaluation is a systematic process
- Evaluation helps in redefining the instructional objectives on the basis of feedback
- Evaluation has reliability and validity

Different Types of Evaluation

The evaluation has been
categorized into following two
types

As per quality
of evaluation

As per time of
evaluation



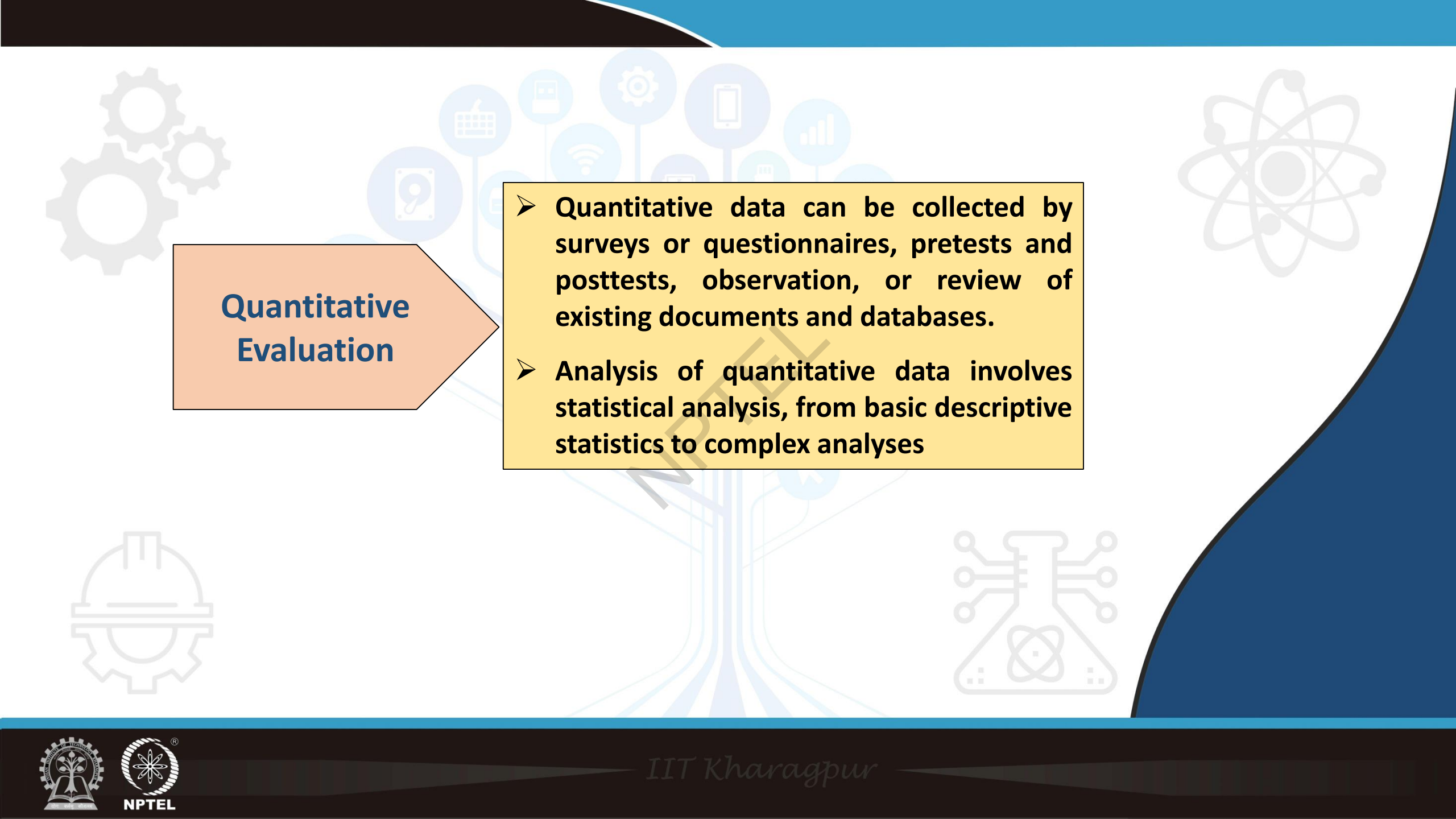
As per Quality of
Evaluation

The diagram features a central orange arrow pointing right, labeled 'As per Quality of Evaluation'. Two black arrows branch off from its right side: one points up to a yellow box labeled 'Quantitative' and the other points down to a blue box labeled 'Qualitative'. The background is decorated with various icons: gears in the top-left, an atom in the top-right, a hard hat in the bottom-left, and a beaker with a circuit board in the bottom-right. A large, faint 'NPTEL' watermark is centered in the background.

Quantitative

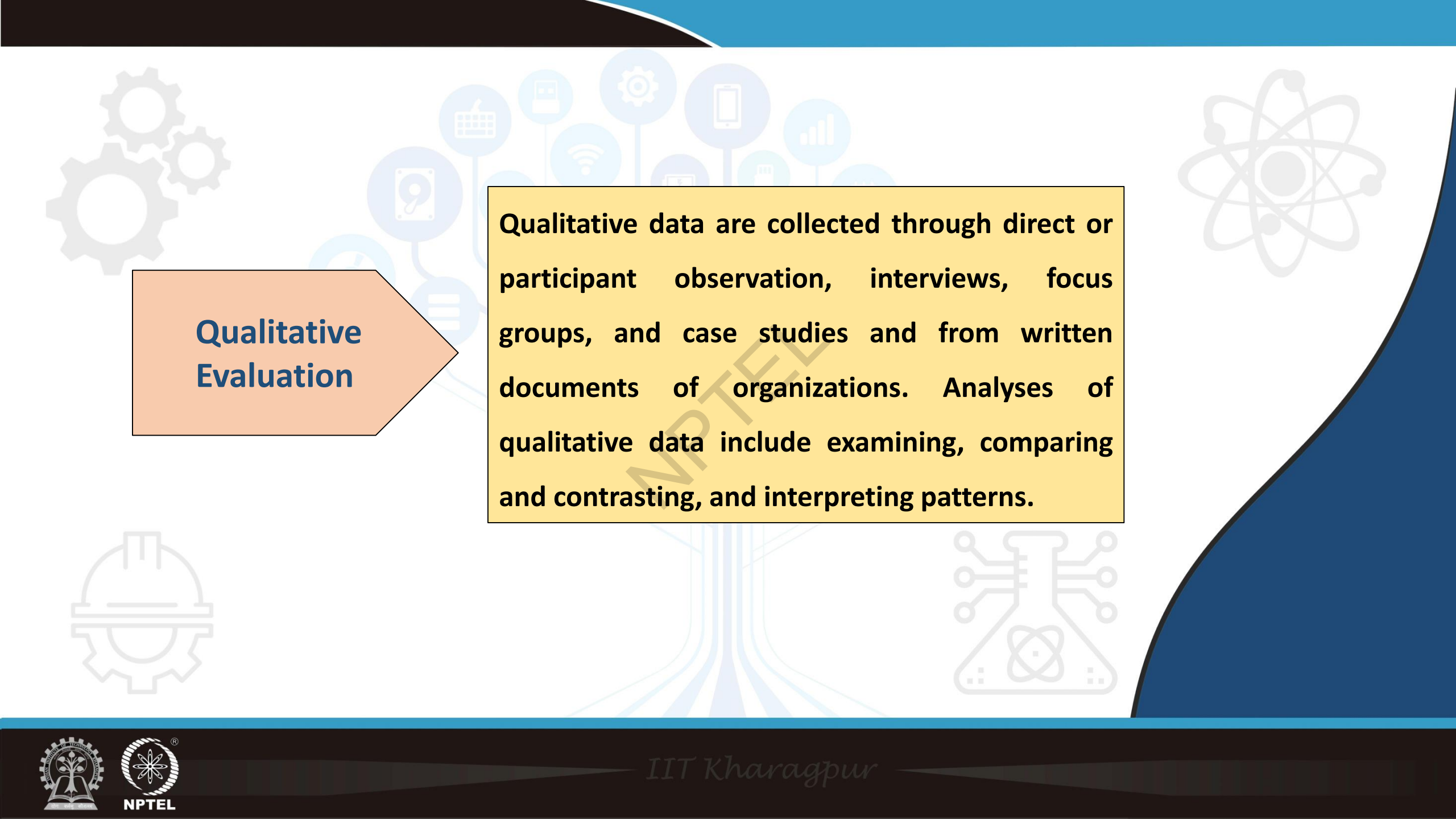
Qualitative





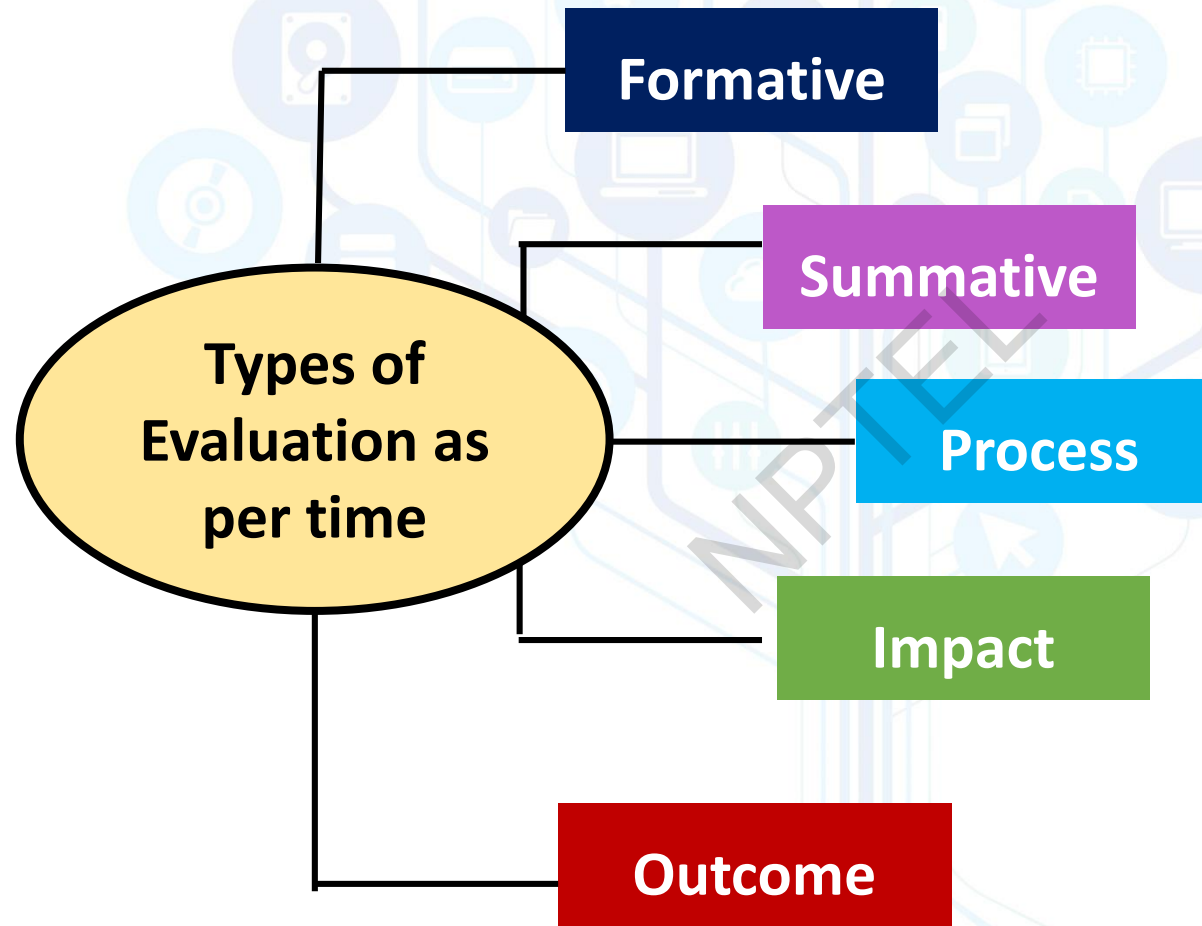
Quantitative Evaluation

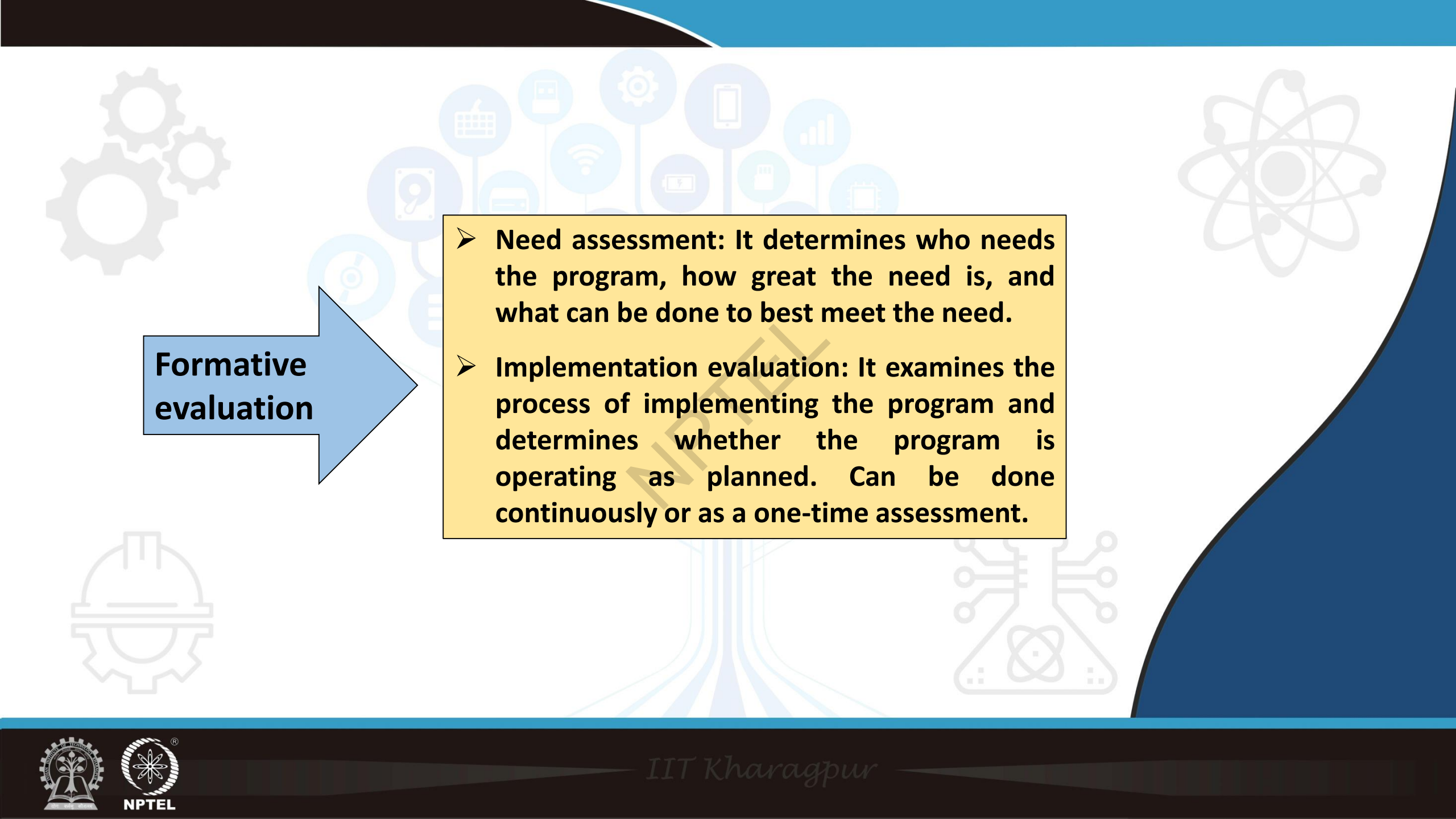
- Quantitative data can be collected by surveys or questionnaires, pretests and posttests, observation, or review of existing documents and databases.
- Analysis of quantitative data involves statistical analysis, from basic descriptive statistics to complex analyses



Qualitative Evaluation

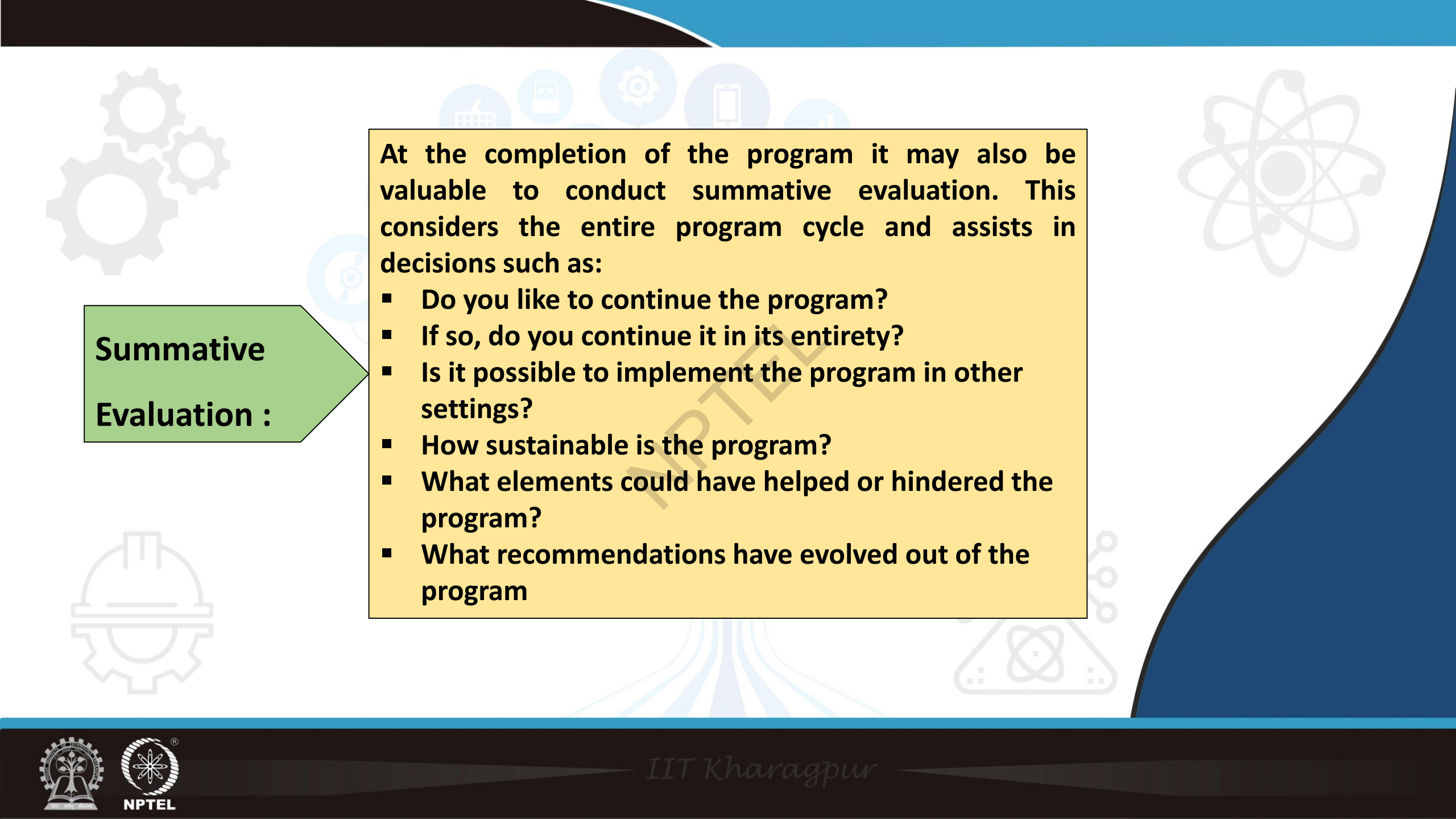
Qualitative data are collected through direct or participant observation, interviews, focus groups, and case studies and from written documents of organizations. Analyses of qualitative data include examining, comparing and contrasting, and interpreting patterns.





Formative evaluation

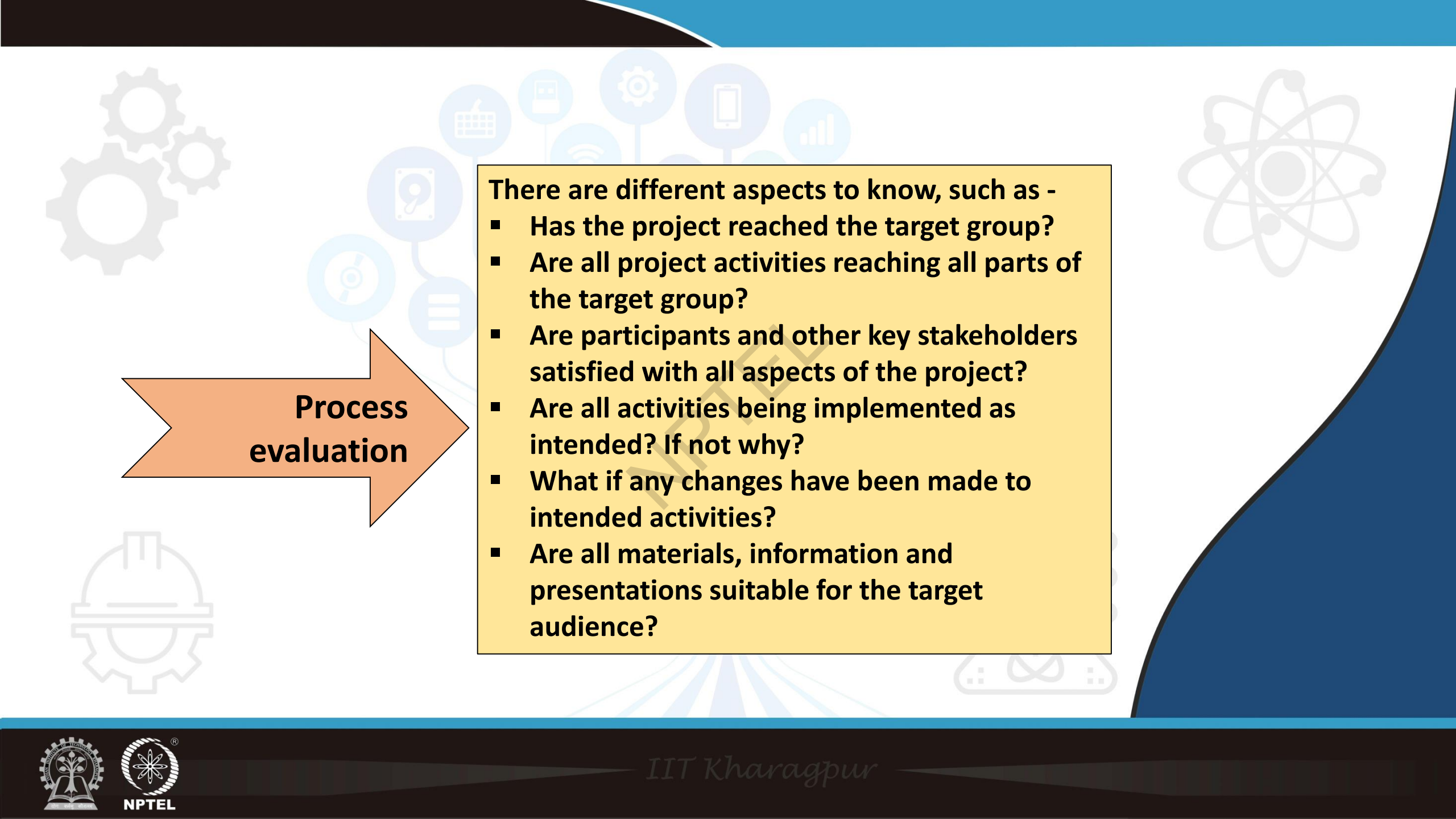
- **Need assessment:** It determines who needs the program, how great the need is, and what can be done to best meet the need.
- **Implementation evaluation:** It examines the process of implementing the program and determines whether the program is operating as planned. Can be done continuously or as a one-time assessment.



Summative Evaluation :

At the completion of the program it may also be valuable to conduct summative evaluation. This considers the entire program cycle and assists in decisions such as:

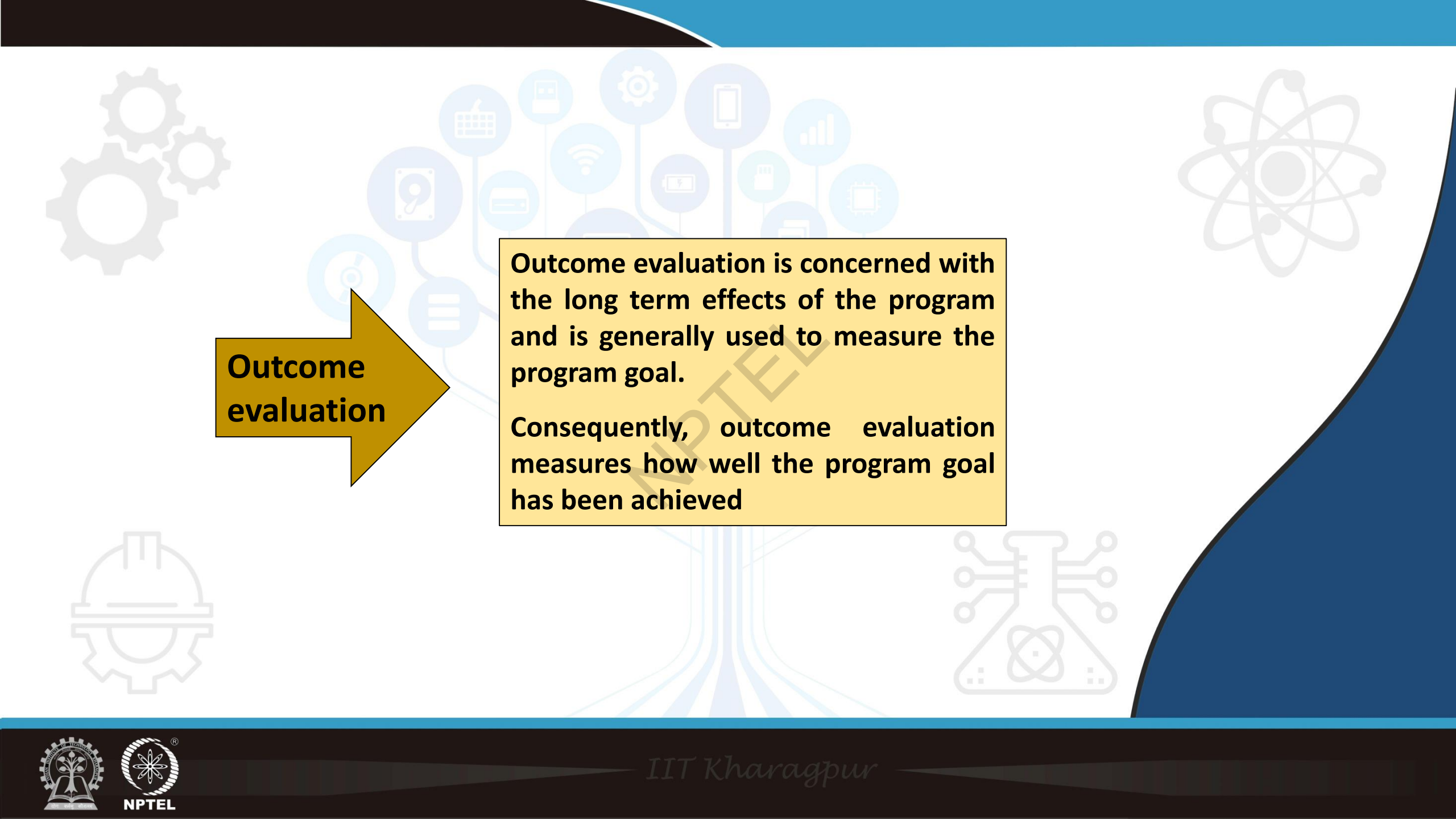
- Do you like to continue the program?
- If so, do you continue it in its entirety?
- Is it possible to implement the program in other settings?
- How sustainable is the program?
- What elements could have helped or hindered the program?
- What recommendations have evolved out of the program



Process evaluation

There are different aspects to know, such as -

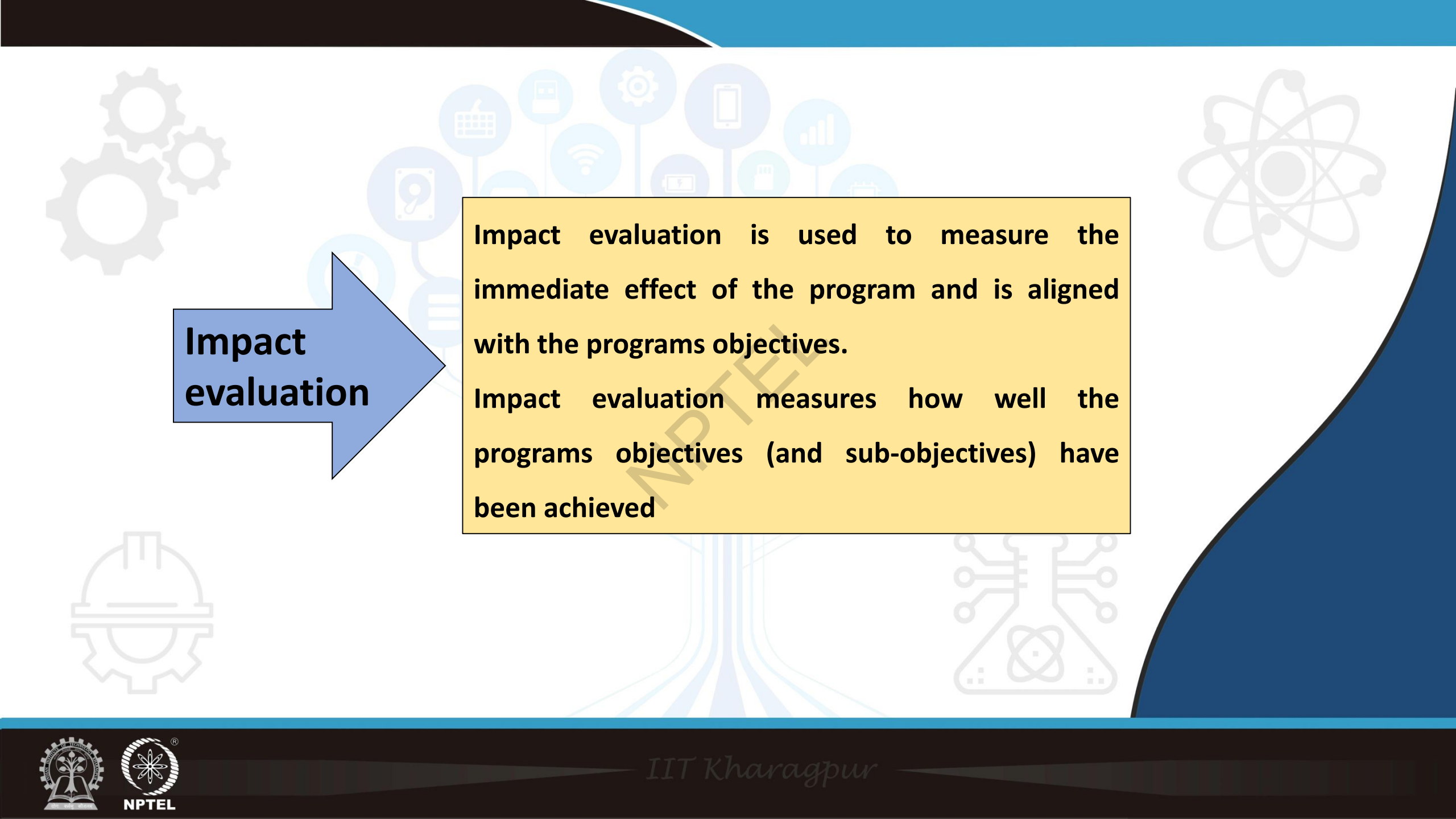
- Has the project reached the target group?
- Are all project activities reaching all parts of the target group?
- Are participants and other key stakeholders satisfied with all aspects of the project?
- Are all activities being implemented as intended? If not why?
- What if any changes have been made to intended activities?
- Are all materials, information and presentations suitable for the target audience?



Outcome evaluation

Outcome evaluation is concerned with the long term effects of the program and is generally used to measure the program goal.

Consequently, outcome evaluation measures how well the program goal has been achieved



Impact evaluation

Impact evaluation is used to measure the immediate effect of the program and is aligned with the programs objectives.

Impact evaluation measures how well the programs objectives (and sub-objectives) have been achieved

Principles of Evaluation

- ❖ Training faculty must be clear about the goals and purpose of evaluation
- ❖ It must be continuous
- ❖ It must be specific
- ❖ It must provide the means and focus for trainers to be able to appraise themselves and their practices
- ❖ It must be based on objective, methods and standards
- ❖ Realistic target dates should be set for each phase of evaluation
- ❖ It must be cost effective.

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- Beeby, J.M., and Rathborn, S. (1983) "Development Training - Using the Outdoors in Management Development" Management Education and Development 14 3, 170-181.



CONCLUSION

This part of lecture session has given clear picture on the concept, features, types of evaluation with an aim to make aware all learners about it and enhance their level of thinking and perception on all these aspects of evaluation.



**THANK
YOU !**



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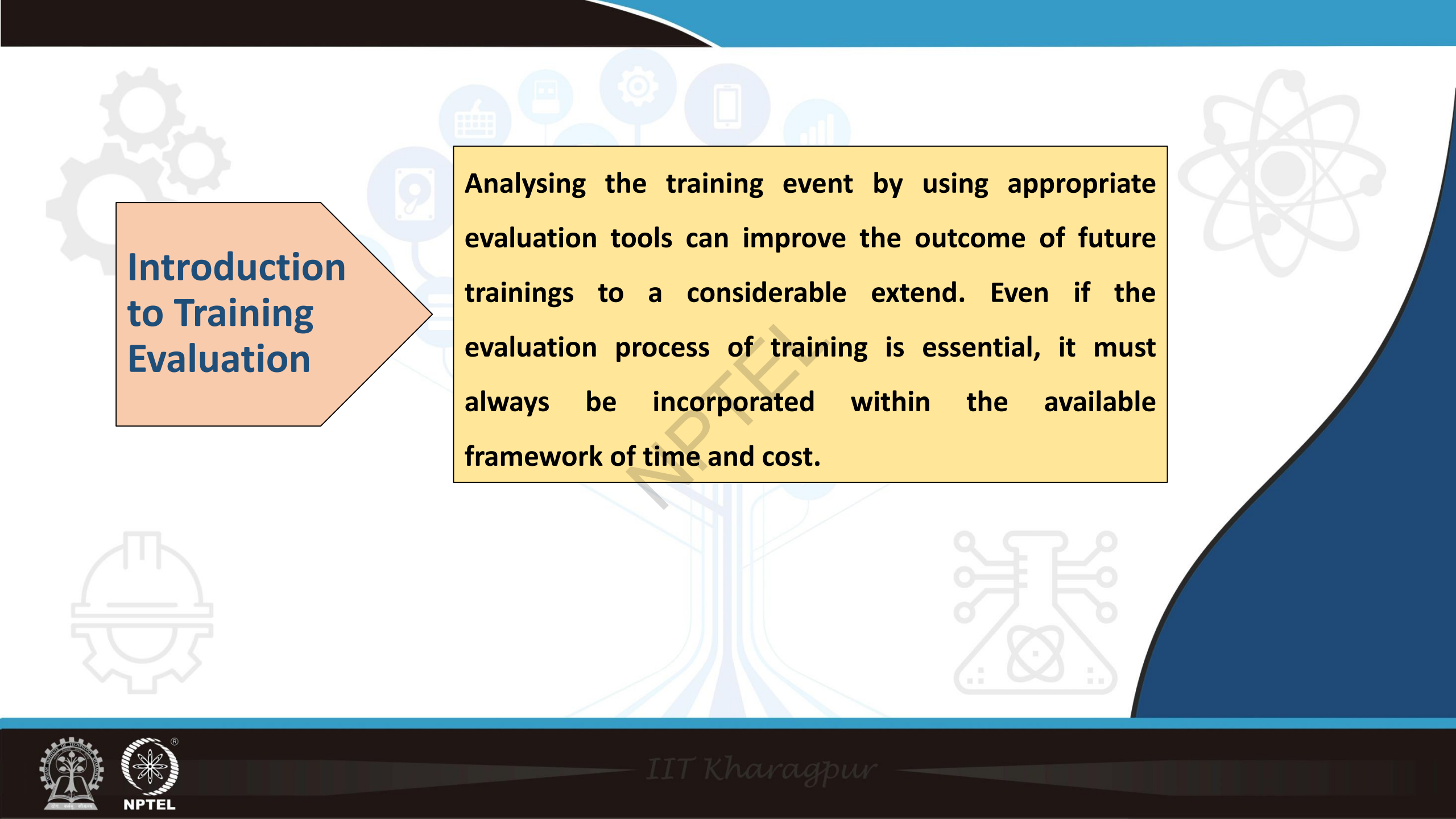
Module : 6

Lecture : 27 Training Evaluation

TRAINING AND DEVELOPMENT

This lecture session will discuss on the training evaluation and its various issues.





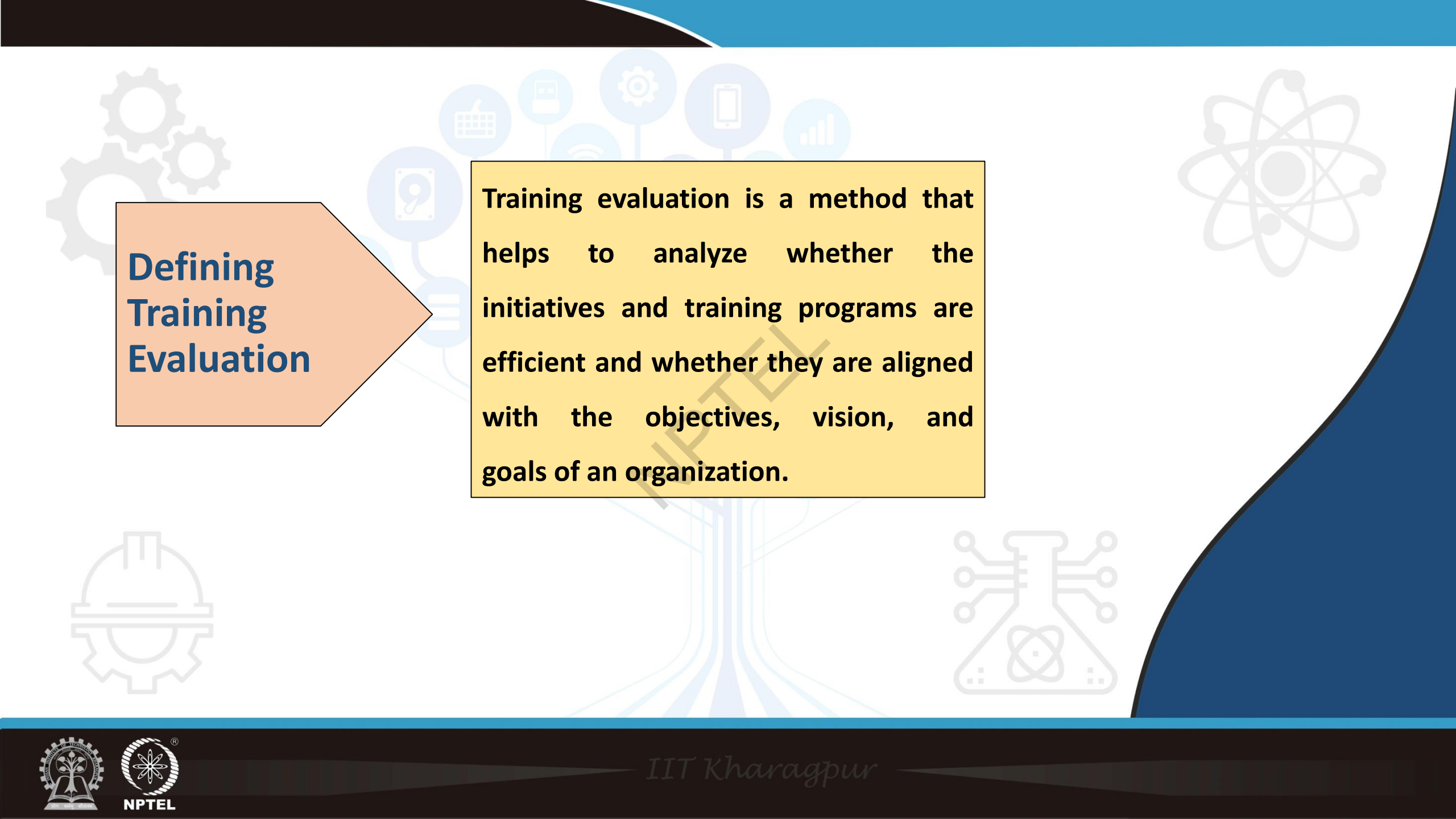
Introduction to Training Evaluation

Analysing the training event by using appropriate evaluation tools can improve the outcome of future trainings to a considerable extent. Even if the evaluation process of training is essential, it must always be incorporated within the available framework of time and cost.

What is Training Evaluation?

Evaluation of training is an attempt to obtain information/feedback on the effects of a training and to assess the value of the training in the light of that information.

Evaluation provides feedback to help identify if training achieved the intended outcomes, and helps to make decisions about future trainings.



Defining Training Evaluation

Training evaluation is a method that helps to analyze whether the initiatives and training programs are efficient and whether they are aligned with the objectives, vision, and goals of an organization.

What are Needs for Training Evaluation?

- i. To determine whether training objectives are accomplished
- ii. To ensure that any changes in trainees are due to training not for any other
- iii. To identify who is benefitted more from training
- iv. To assess the credibility of training that the organization has been benefitted
- v. To see the changes in training plan and its effectiveness to achieve goals of the organizations

Type of Training Evaluation

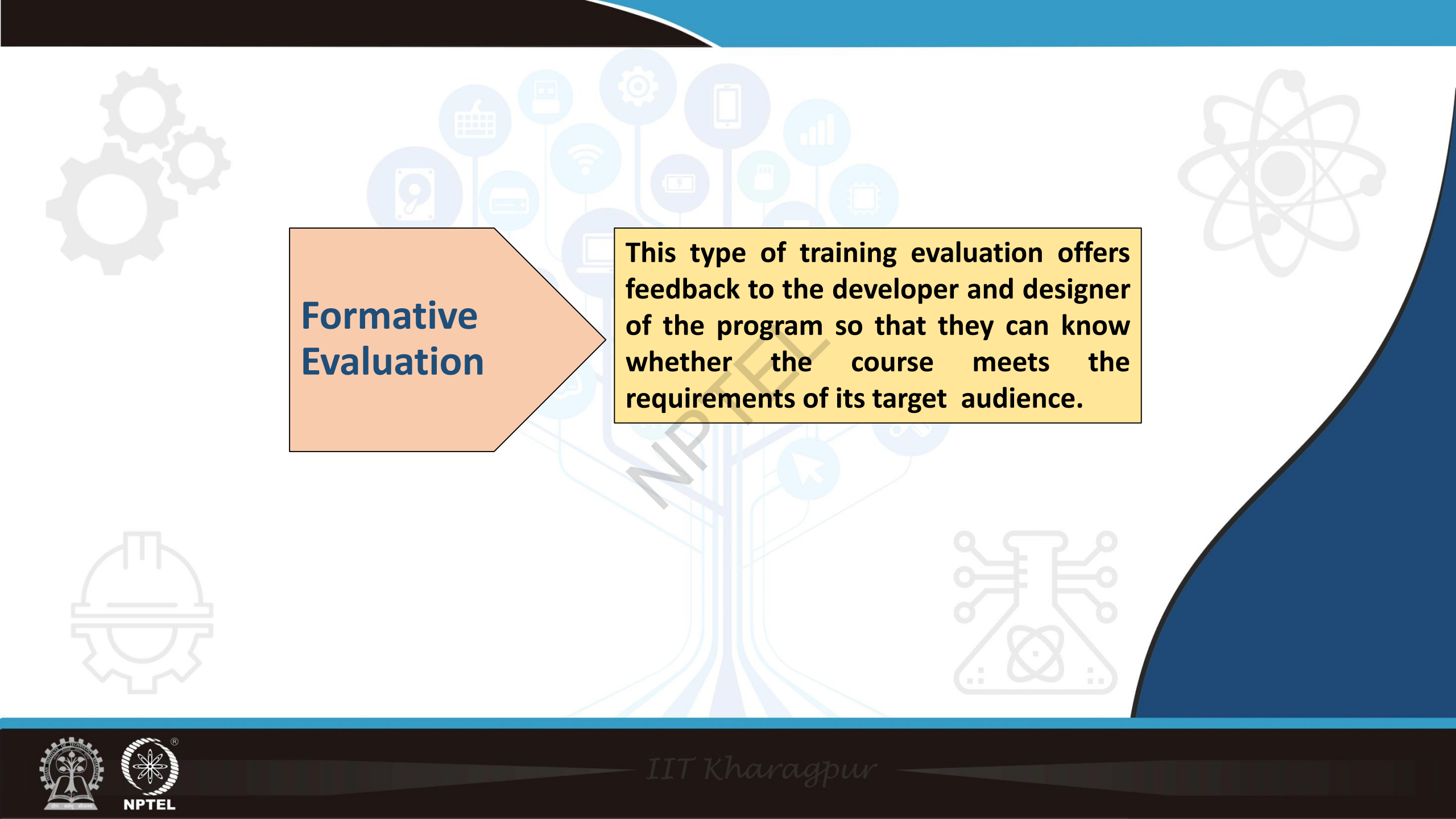
Formative evaluation

Process evaluation

Outcome evaluation

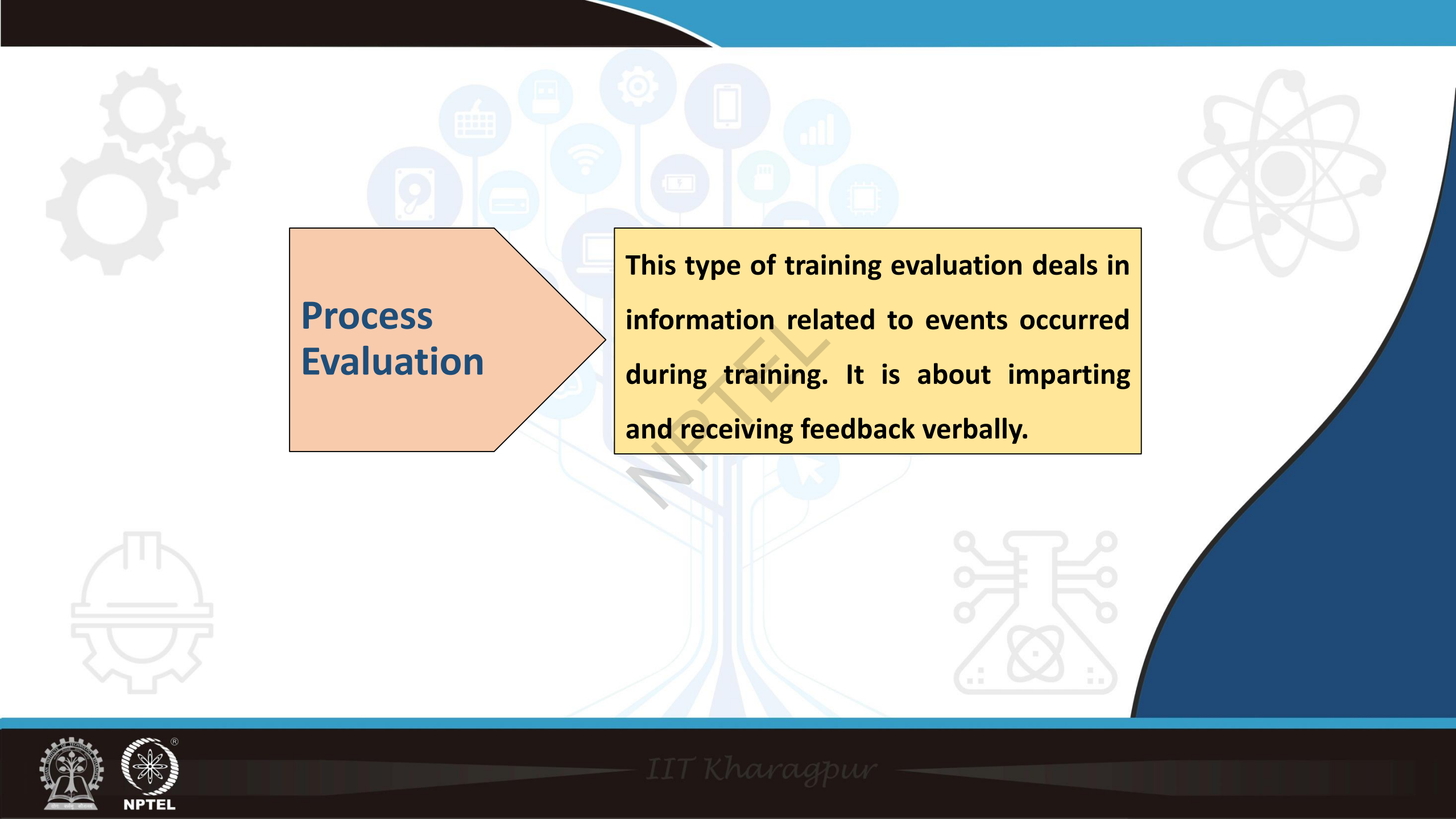
Impact evaluation





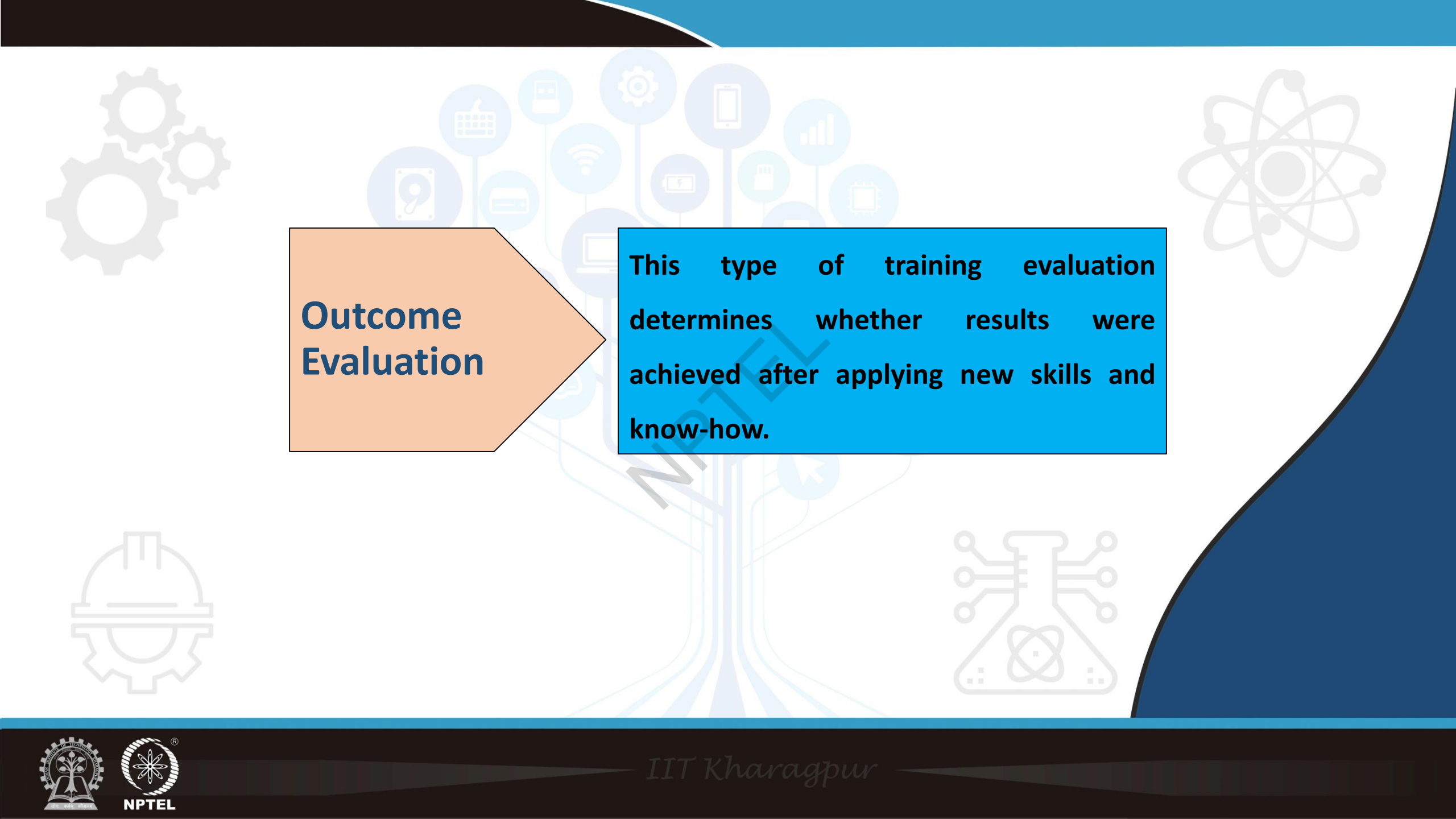
Formative Evaluation

This type of training evaluation offers feedback to the developer and designer of the program so that they can know whether the course meets the requirements of its target audience.



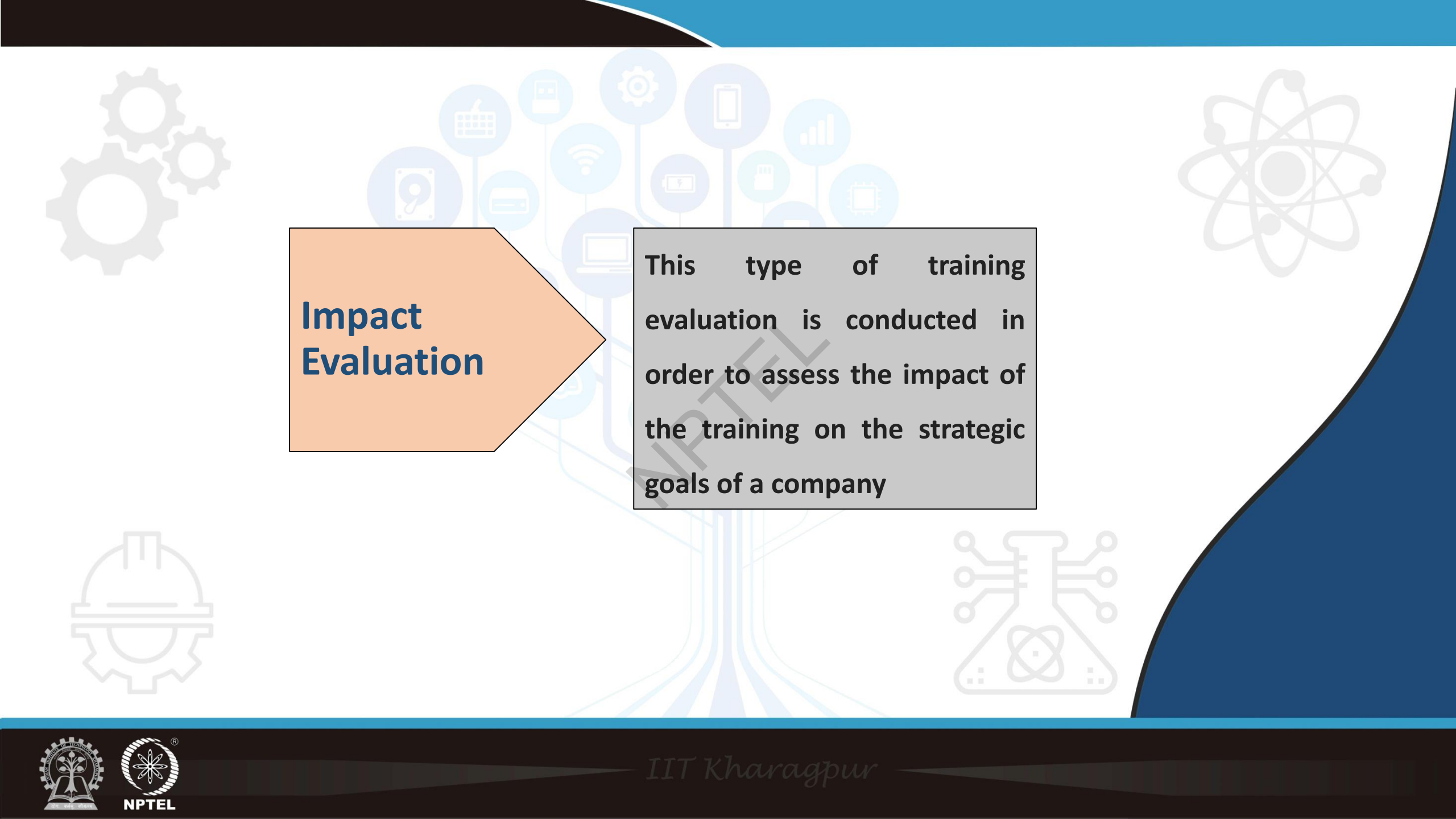
Process Evaluation

This type of training evaluation deals in information related to events occurred during training. It is about imparting and receiving feedback verbally.



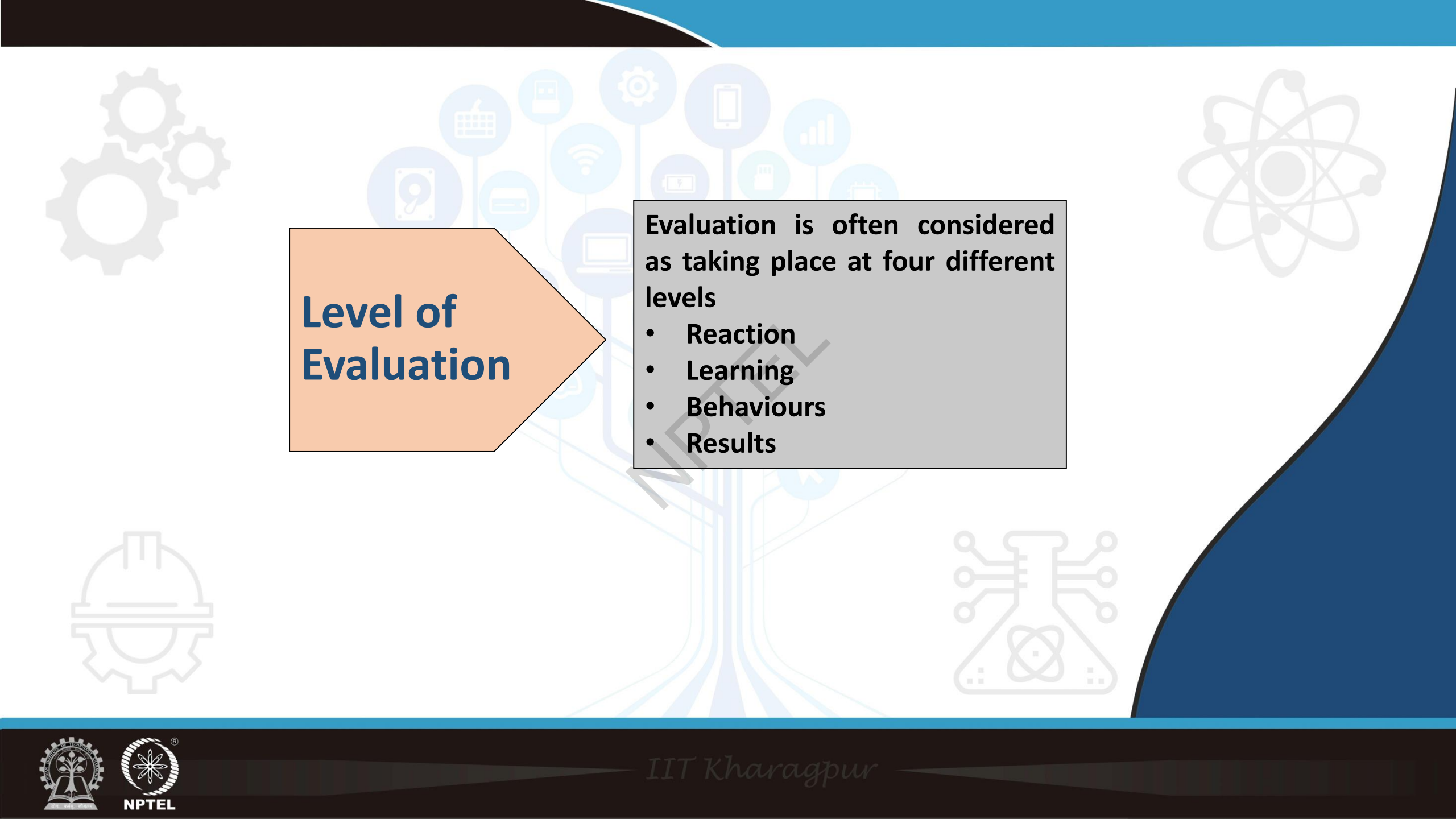
Outcome Evaluation

This type of training evaluation determines whether results were achieved after applying new skills and know-how.



Impact Evaluation

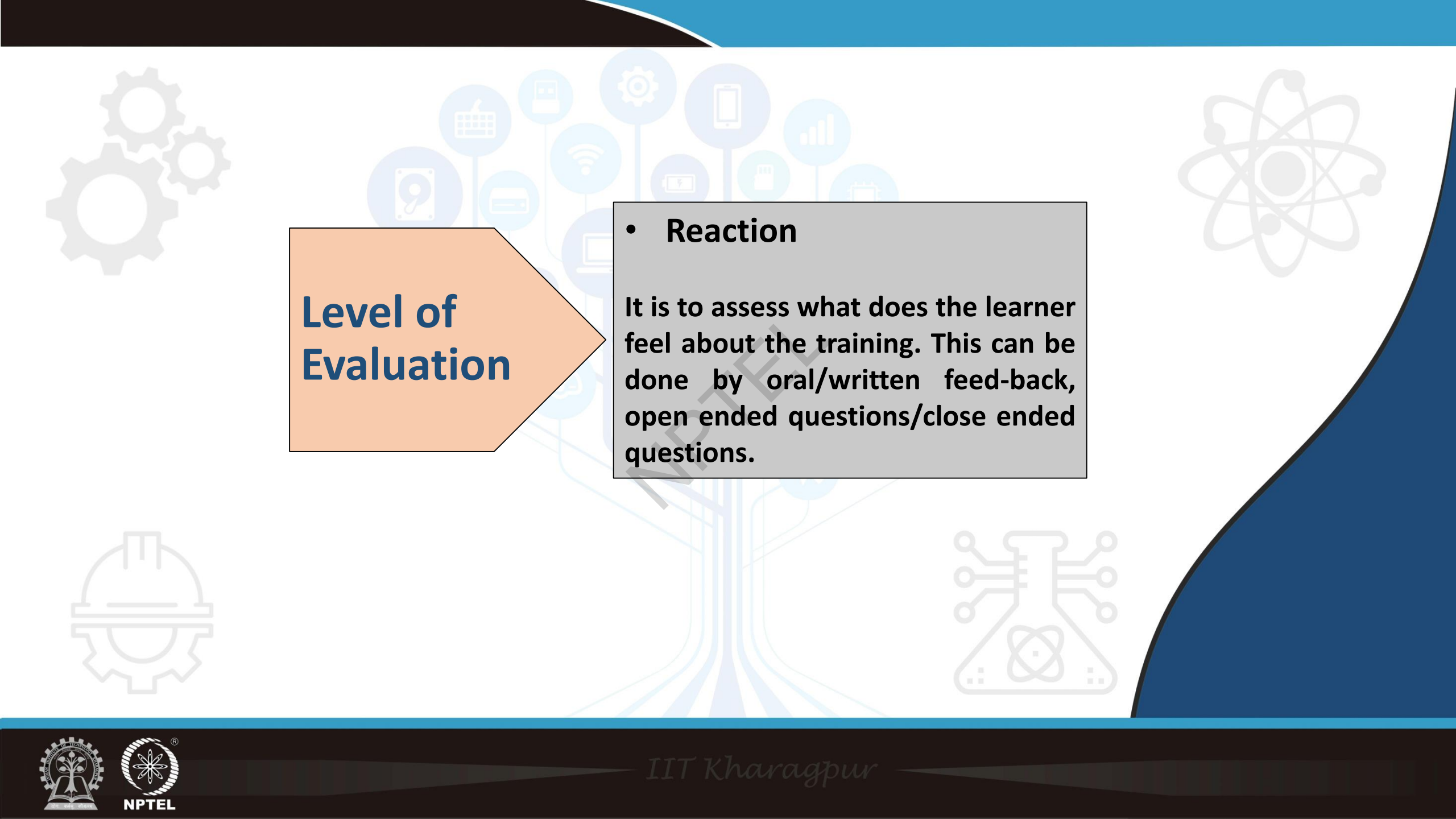
This type of training evaluation is conducted in order to assess the impact of the training on the strategic goals of a company



Level of Evaluation

Evaluation is often considered as taking place at four different levels

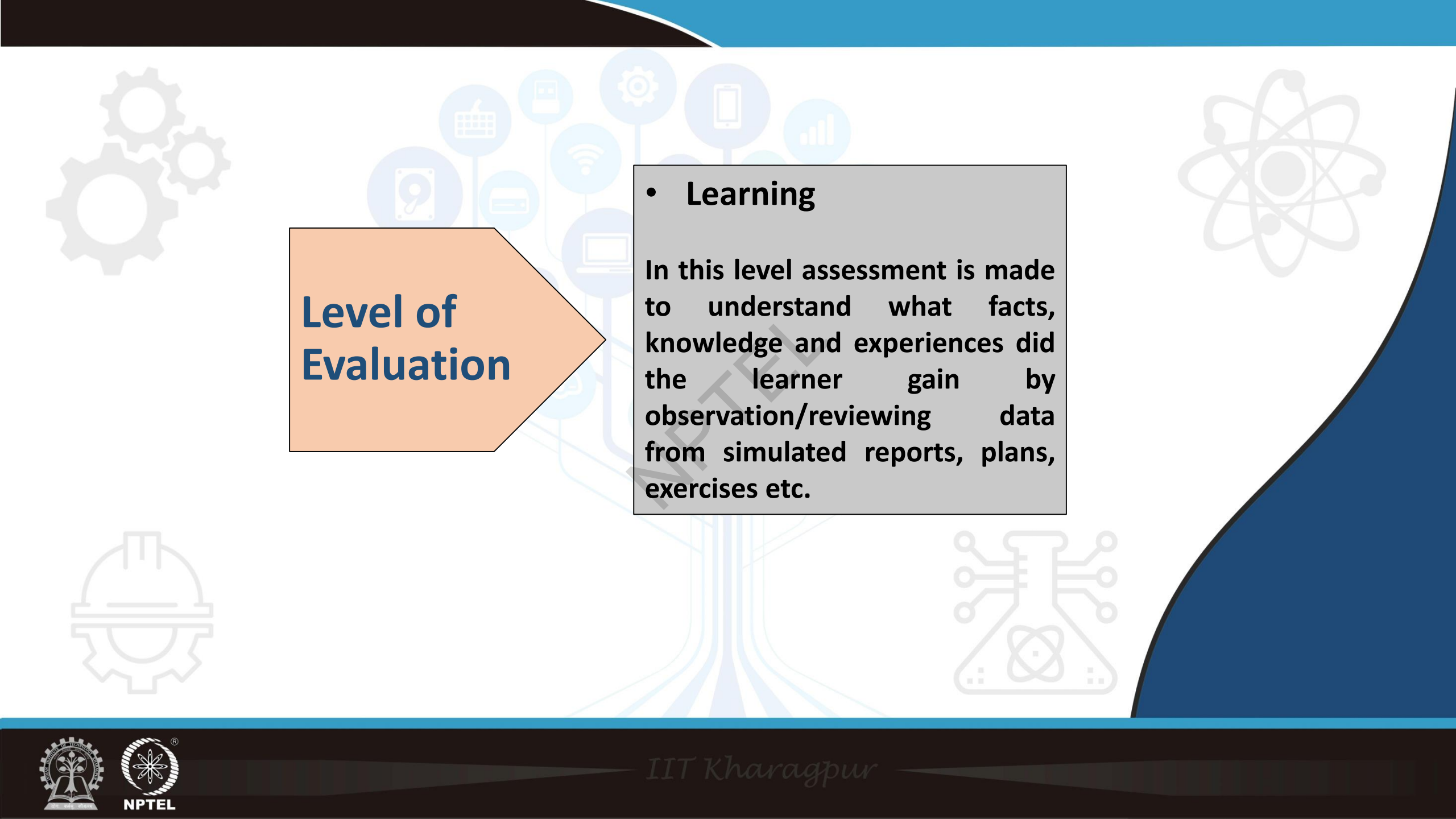
- Reaction
- Learning
- Behaviours
- Results



Level of Evaluation

- **Reaction**

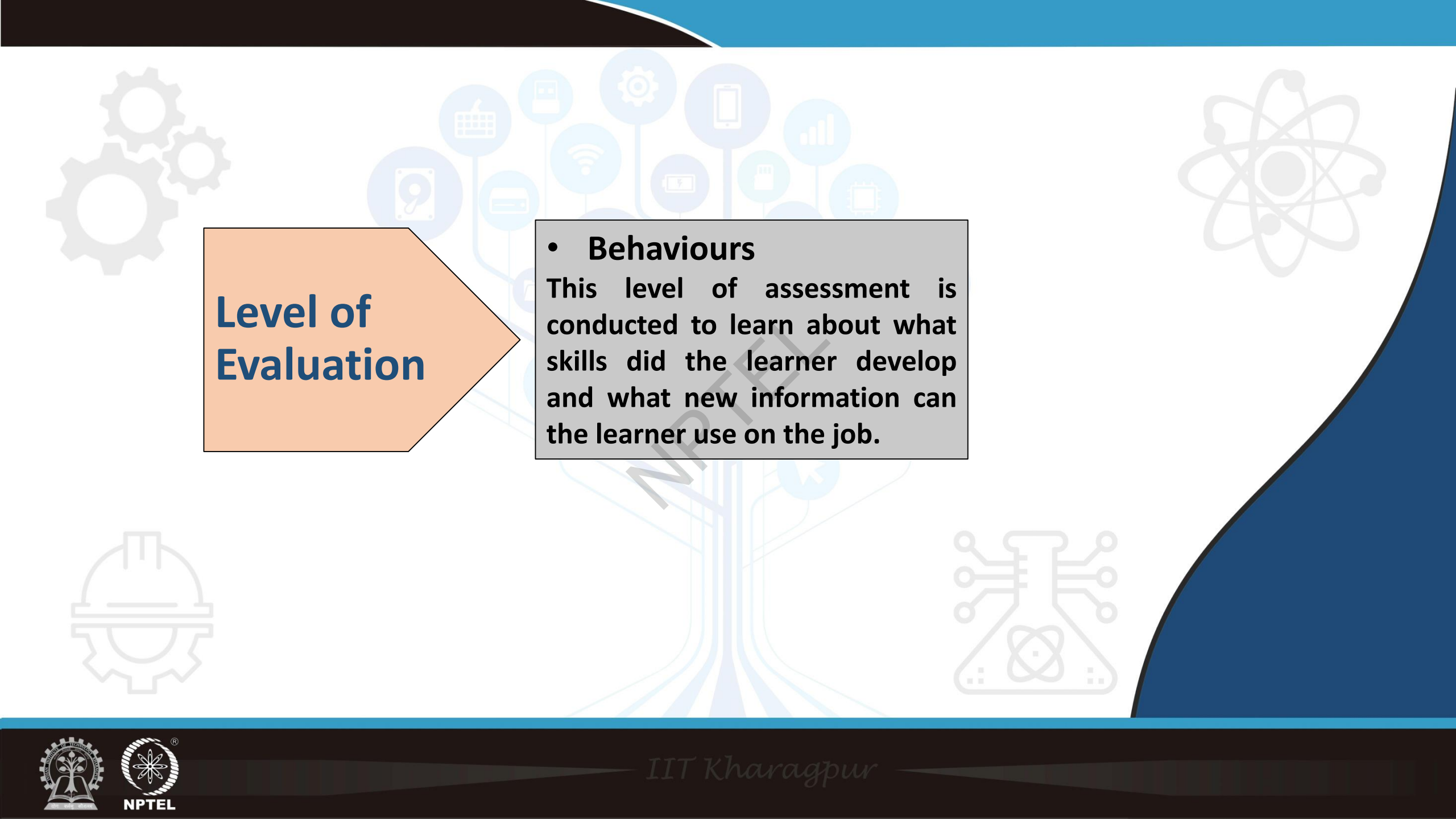
It is to assess what does the learner feel about the training. This can be done by oral/written feed-back, open ended questions/close ended questions.



Level of Evaluation

- **Learning**

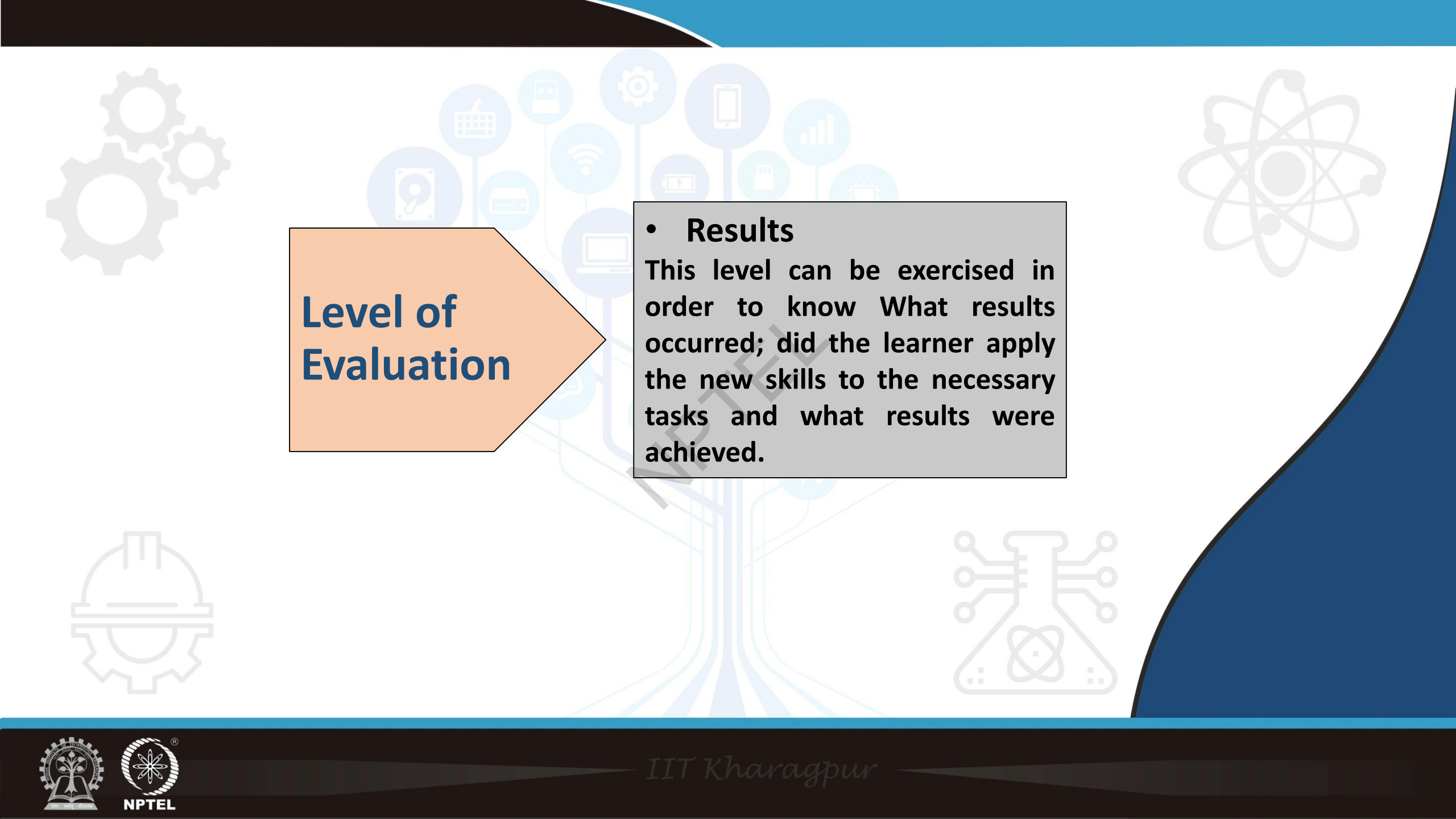
In this level assessment is made to understand what facts, knowledge and experiences did the learner gain by observation/reviewing data from simulated reports, plans, exercises etc.



Level of Evaluation

- **Behaviours**

This level of assessment is conducted to learn about what skills did the learner develop and what new information can the learner use on the job.



Level of Evaluation

- **Results**

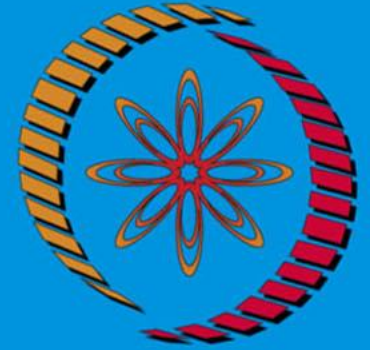
This level can be exercised in order to know What results occurred; did the learner apply the new skills to the necessary tasks and what results were achieved.

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- Aswathappa, K.(2014). Organisational Behaviour, Text, Cases Games. Himalaya Publishing
- Noe, R.A & Kodwani, A.D. (2019). Employee Training and Development, Mc Graw Hill, Chennai.
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CONCLUSION

This part of lecture session has given clear picture on the concept, purpose, types and level of training evaluation with an aim to make aware all learners about it and enhance their level of thinking and perception on all these aspects of training evaluation.



**THANK
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Module 6:

Lecture 28 : Training Evaluation Process

TRAINING AND DEVELOPMENT

This part of lecture session will be held on the training evaluation process.



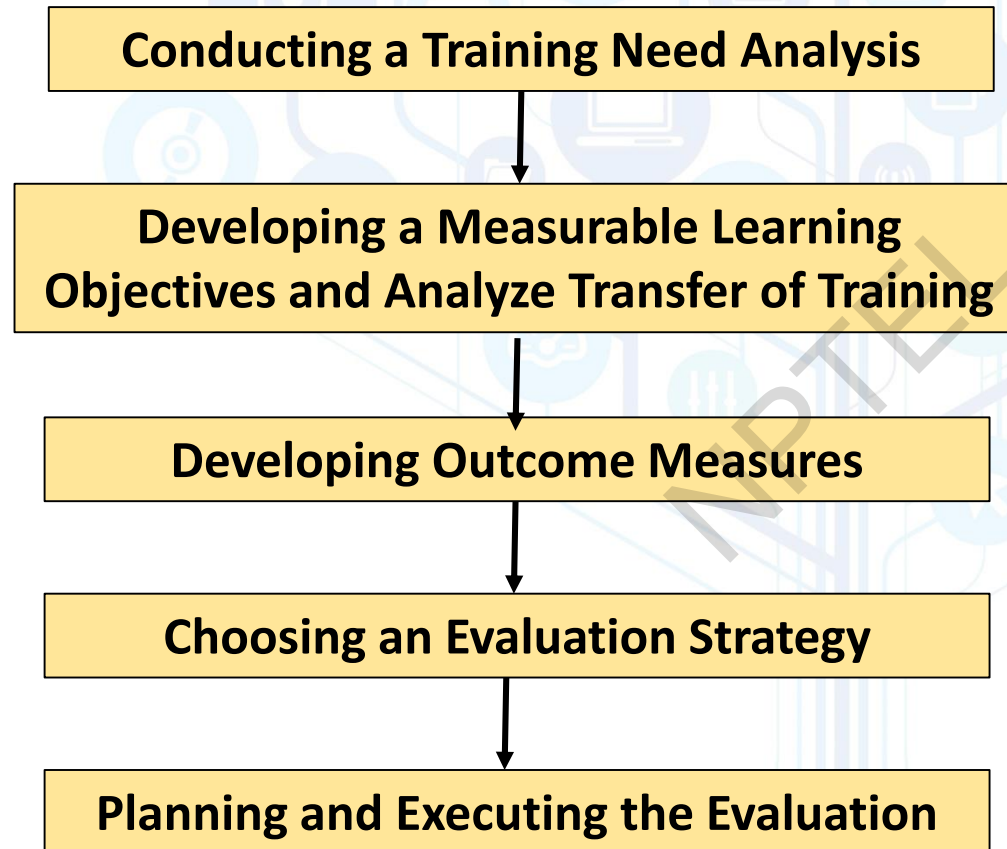
Introduction

Evaluating a training programme focuses on whether the learning objectives were met up and the participants enjoyed the programme.

However, assessment of training only those aspects not sufficient enough because the ultimate success of a training is how effectively the participants are able to apply what they learned to effectively do their job functions.



Training Evaluation Process at a Glance



Source:
Noe, A., & Kodwani, A. D. (2019)



Training Evaluation Process

➤ Conducting a training need analysis

Training needs analysis is a systematic process of identifying which kind of training is required and provide the details related to training implementation. It is also known as a tool to identify the new skills, knowledge and attitudes which employees need to acquire in order to improve performance.



Training Evaluation Process

➤ Role of a training need analysis

Generally, the role of training needs analysis in HRM is to understand the difference between the current and desired performance of the employee and provide information about-

- Which employee needs training.
- What kind of training is required to them,
- How company can design effective training program.
- What will be the impact of this training.
- What will be the cost and resources requirement.



Training Evaluation Process

➤ Developing a measurable learning objectives

These are based on a set of cognitive learning levels that training aspires to produce in a learner. These include:

- Knowledge = Remembering previously taught materials
- Comprehension = Grasping, interpreting and translating taught material
- Application = Using learned concepts in concrete new situations



Training Evaluation Process

- **Developing a measurable learning objectives**
(continued)
 - **Analysis = Breaking down material learned into component parts to facilitate understanding of inter-relationships**
 - **Synthesis = Putting parts of analyzed material back together again to create new concepts or constructs**
 - **Evaluation = Using specific criteria to make judgments about learning being taught**



Training Evaluation Process

➤ Developing outcome measures

Measuring training outcomes is fast becoming one of the most widely growing research areas of management. Most organizations develop strategies for outcome measurement because they are asked to do so by the higher management in order to analyze the impact of training.

Organizations are more interested in hiring employees who can deliver outcomes on the ground, rather than people who are termed good performers because they cleared some test



Training Evaluation Process

➤ Benefits of outcome measures

- Measuring Training Outcomes helps managers to first ask and then answer all the tough questions that they ask of themselves and their teams, such as:
- What are the difficulties and challenges of Employee Skill Development?
- How are you responsible for the development of your team?
- What developments in training are facing problems?
- How to initiate training measures?



Training Evaluation Process

➤ Determining whether outcome are appropriate

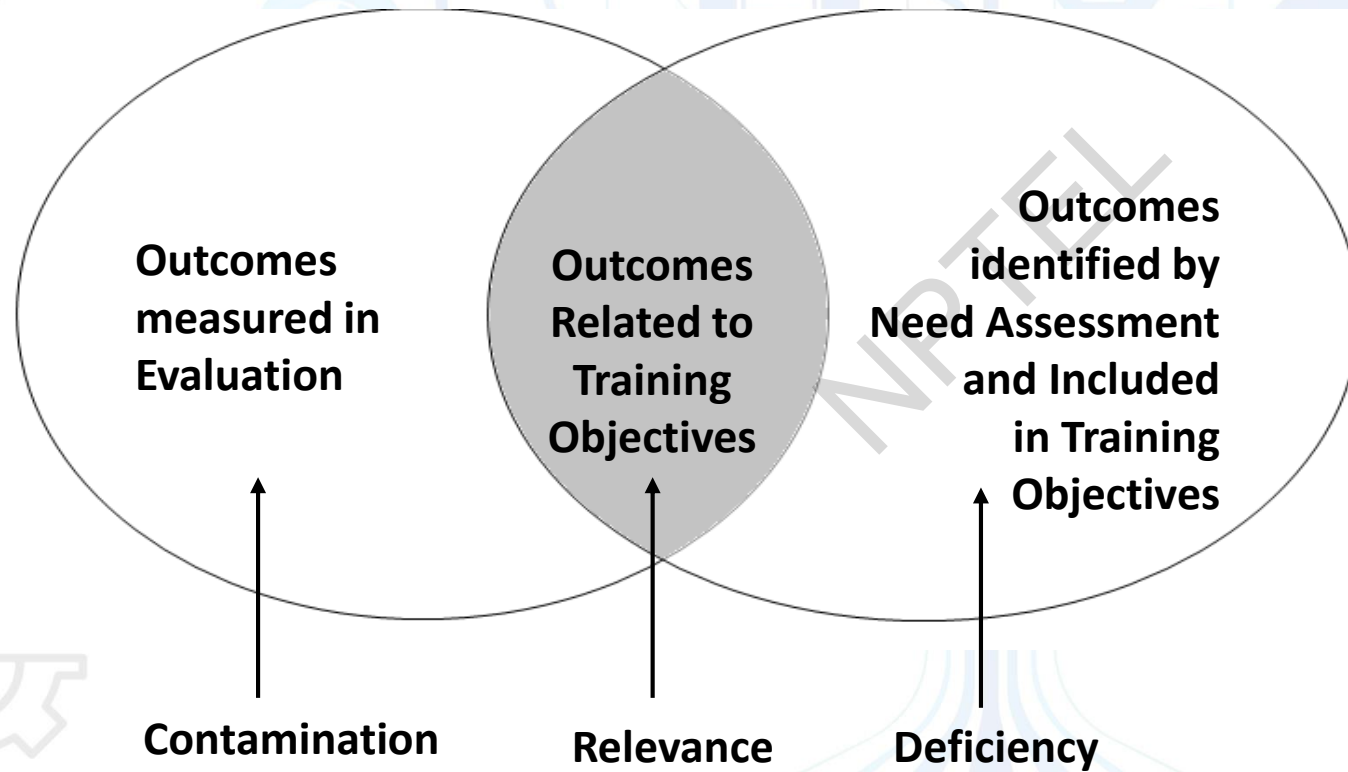
An important issue in choosing outcomes is to determine whether they are appropriate. Are those outcomes the best one measure to determine whether the training programme is effective?

Appropriate training outcomes need to be relevant, reliable, discriminative and practical. (Shown in the diagram in next slide)



Training Evaluation Process

Determining whether outcome are appropriate



Training Evaluation Process

➤ Determining whether outcome are appropriate

Relevance: It is the extent to which training outcomes are related to the learned capabilities emphasized in training program.

Criteria contamination is extent that training outcomes measure inappropriate capabilities.

Criteria deficiency is the failure to measure training outcomes that were emphasized in training objectives

Reliability: It is the degree to which outcomes can be measured consistently over time.



Training Evaluation Process

➤ Choosing an evaluation strategy

Training evaluation strategy is one that informs stakeholder decisions and results in action—decisions pertaining to whether the training was worth the investment along with the efficiency and effectiveness of the training itself.

Be it technology-based training or classroom-based, every activity in the training has to be designed well in advance to enable the capture of learning data, the data that provide insights into the learner's individual performance.



Training Evaluation Process

➤ Planning and executing the evaluation

Evaluation is the final phase that provides feedback to help identify if the training achieved the intended outcomes, and helps to make decisions about future trainings. It is important to make evaluation plan early in the training design process to identify:

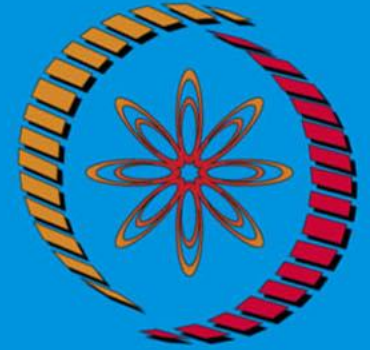
- the evaluation purpose,
- the evaluation questions, and
- the data collection methods.

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CONCLUSION

This part of lecture session has given clear picture on various stages of training evaluation process with an aim to make aware all learners about it and enhance their level of thinking and perception on all these aspects of training evaluation process.



**THANK
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Module 6:

Lecture 29 : Tools and Techniques of Training Evaluation

TRAINING AND DEVELOPMENT

This part of lecture session will be held on the tools, techniques and approaches of training evaluation.



Introduction

Training evaluation is conducted with a view to obtain information on the effectiveness of the training program. It is to check whether the training event has met its objectives and whether the participants are able to implement their learning their jobs.

The result of evaluation helps training professional to modify future training strategies to meet objectives and implement learning to p job performance.



Levels of Conducting Training Evaluation

Levels of Conducting Training Evaluation

There are three major levels of training evaluation which are conducted based on four different criteria, these are- reaction of trainees, behavioral changes, knowledge acquired, and job performance. However, the level of training are-

- Pre-Training Evaluation
- Intermediate Training Evaluation
- Post-Training Evaluation.

Levels of Conducting Training Evaluation

Levels of Conducting Training Evaluation

In addition, Kirkpatrick, D.L.(1996). has proposed four sequential levels of evaluation as noted below:

- I. Reaction: How do participants react to the training program;
- II. Learning: What have participants learned;
- III. Behavior: how has the behaviour of participants changed after training programme;
- IV. Results: What is occurred as the final results;



Training Evaluation Tools and Techniques

Training evaluation tools are those used to collect relevant data on the training programme with variety of forms. These may be categorized as follows:

2.
Interviews

1.
Questionnaires

6.
Performance
records

3. Focus group

4.
Observations

5.
Tests

Training Evaluation Tools and Techniques

1. Questionnaires

Questionnaires are the set of questions delivered to individual participants of training for obtaining necessary information on the particular training. It can be of different forms include-

- Brief or extensive
- Closed questions, open-ended,
- Multiple choice or scaled

These can be conducted by paper, email or by online mode



Training Evaluation Tools and Techniques

1. Questionnaires

Advantages of this tools are as follows:

- Requires minimum time to administer
- Cost effective
- Gather a large amount of data on training
- Has consistency since everyone is asked individually
- Provide an wide scope of data about learners' opinion
- Easily encompass a large number of participants



Training Evaluation Tools and Techniques

2. Interviews

Interviews can also be used especially when qualitative information is needed about the impact of the training program. Interviews have three types from which a suitable one will be selected for each survey.

- **Structured interview:** the questions are set in advance.
- **Semi-structured interview:** the general content is pre-determined but additional exploration is allowed.
- **Unstructured interview:** free-flowing conversation rather than a specific set of questions

Training Evaluation Tools and Techniques

2. Interviews

Interviews have the following advantages & disadvantages:

Advantages of interviews:

- Good for uncovering feelings and hidden causes.
- Non-verbal signals can indicate key issues.
- Spontaneity – follow the unexpected issues.

Disadvantages of interviews:

- Time-consuming.
- An unrepresentative sample can skew the results.
- Can be difficult to quantify.
- Very dependent on the skills of the interviewer.



Training Evaluation Tools and Techniques

3. Focus group discussion

Focus group discussion is also used specially when qualitative information is required about the effectiveness of training programme. It is used to collect necessary information from group of trainees at a time.

Online focus groups (e.g., using web-based discussion boards) can be used when participants cannot be brought together at the same location in a given time.

The advantages are

- It is cost effective
- Coverage of trainees are large in size at a time
- Reliability of information shared are judged by group



Training Evaluation Tools and Techniques

4. Observation

The observations enables training to be evaluated and improved, and to accurately inform self assessment at an individual and organisation level. Observations also enable examples of good practice to be identified and promoted to help continuously raise the standards of training for all trainees. It helps in the following ways:

- Checking the venue, start time and level of trainees
- Understanding any barriers to learning for each trainees
- Identifying examples of good practices and promoting
- Organise appropriate peer assessment
- Gathering information on actual behaviour

Training Evaluation Tools and Techniques

5. Tests

The same set of questions prepared for interviews/questionnaires may be given to the training participants on the first day of training before all the sessions start and those are to be collected on the last day of training after all the sessions have been completed.

This can be categorized as

- **Pre-test:** To understand the background, education, basic skills and objective of attending training from the learners
- **Post-test:** It is to learn the extent of learning to which the learners set their objectives.



Training Evaluation Tools and Techniques

6. Performance records

These are very effective tools to analyse the extent of training progress. In most of the employees' trainings, participants are given notepads for keeping records of important learning from each training session as well as they are given print materials for learning further. These are helpful in different ways which include-

- Suggestions on how to measure both hard and soft skills
- Guidance on measuring required and mandated programs
- Procedures for comparing different delivery systems
- Information on how to sample people and documents

Methods and Data Sources for Evaluation

Methods/Tools	Data Sources	Type of Data
Written/oral responses: Surveys questionnaires interviews journals	Training participants Trainees, co-workers, supervisors and others	Content knowledge Attitudes, feelings Self-reports of trainees' behavior Reports of perceived outcomes Reports of provider's behavior understanding
Group feedback: Focus group Notes, checklists	Trainees, co-workers, supervisors, patients, stakeholders Trained observers	Perceptions regarding programs Perceptions regarding needs, outcomes, changes, notes, checklists Trained observers for observations of trainee behavior in the classroom or a simulated work setting

Methods and Data Sources for Evaluation

Methods/Tools	Data Sources	Type of Data
Document review: Personal records & Institutional records	Records and Documentations	Data on trainees note book, provider's performance, population level performance data

Training Evaluation Approaches

The following are some of the evaluation models and approaches pointed out in various literatures:

- **Behavioural objectives approach**

Focuses on the degree to which the objectives of a program have been achieved

- **Responsive evaluation**

Evaluators are responsible for the information needs of various audiences or stakeholders

- **Goal free evaluation**

Focuses on the actual rather than intended outcomes of a program.

- **Expertise approaches**
- **Participatory evaluation approach**



Training Evaluation Approaches

- **Expertise approaches**

The purpose is to provide professional judgments of the quality of programs based on expert opinions.

- **Participatory evaluation approach**

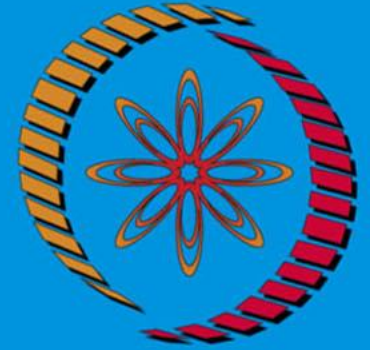
Emphasize the engagement of stakeholders in the evaluation process so that they may better understand the evaluation, the program be evaluated and ultimately use the evaluation findings for decision-making

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- Aswathappa, K.(2014). Organisational Behaviour, Text, Cases Games. Himalaya Publishing
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CONCLUSION

This part of lecture session has given clear picture on the tools, techniques and approaches of training evaluation about which learners may enhance the level of thinking and perception on all these tools, techniques and approaches of training evaluation.



**THANK
YOU !**



NPTEL ONLINE CERTIFICATION COURSES

TRAINING AND DEVELOPMENT

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Module 6:

Lecture 30 : Training Evaluation Design

TRAINING AND DEVELOPMENT

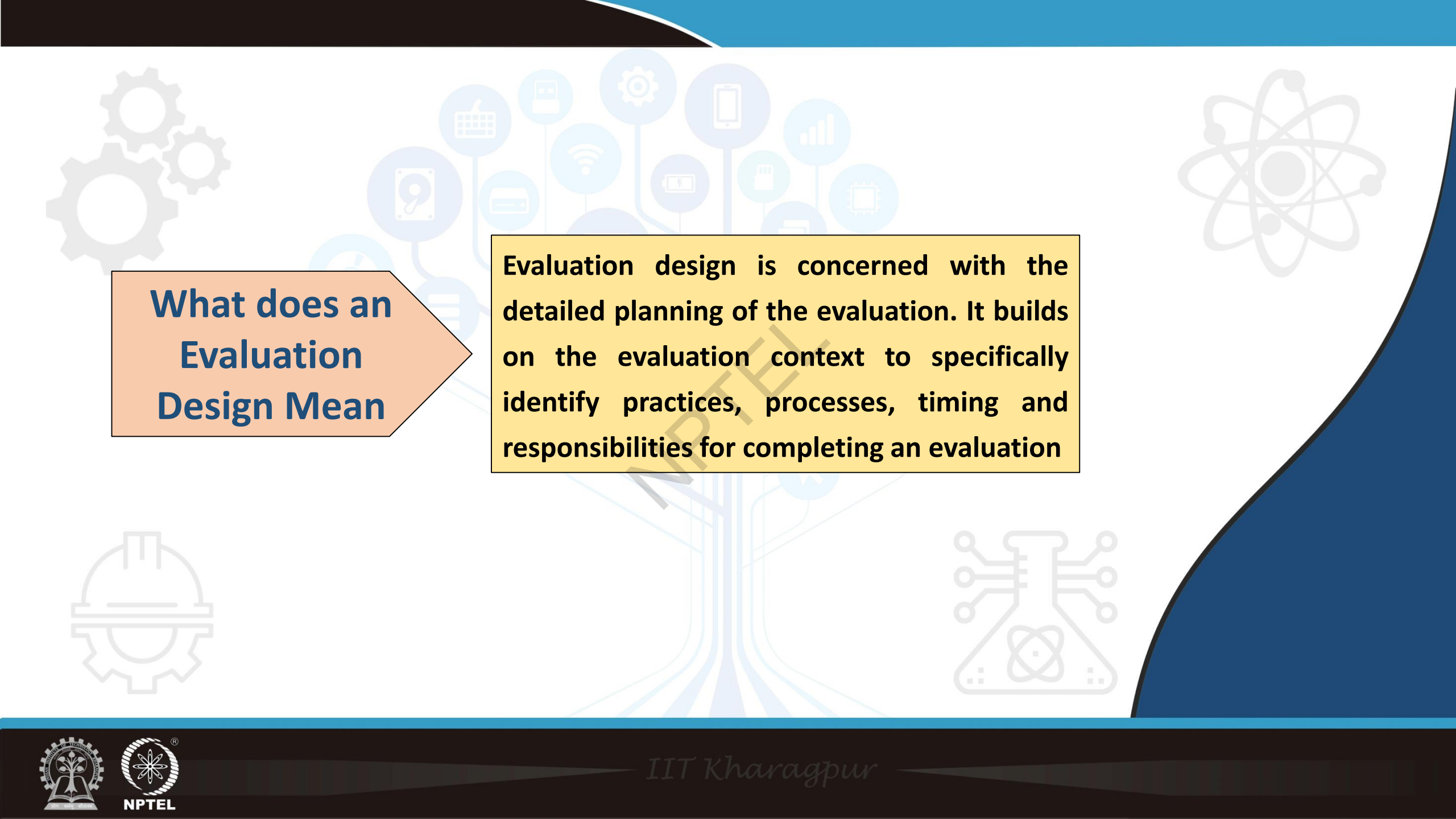
This lecture session will discuss on various issues relating to the training evaluation design.

Introduction

The design of the evaluation of training determines the confidence that can be a kind of results on how a company can be sure that the training has impact for changes in evaluation outcome or has failed to influence the outcomes.

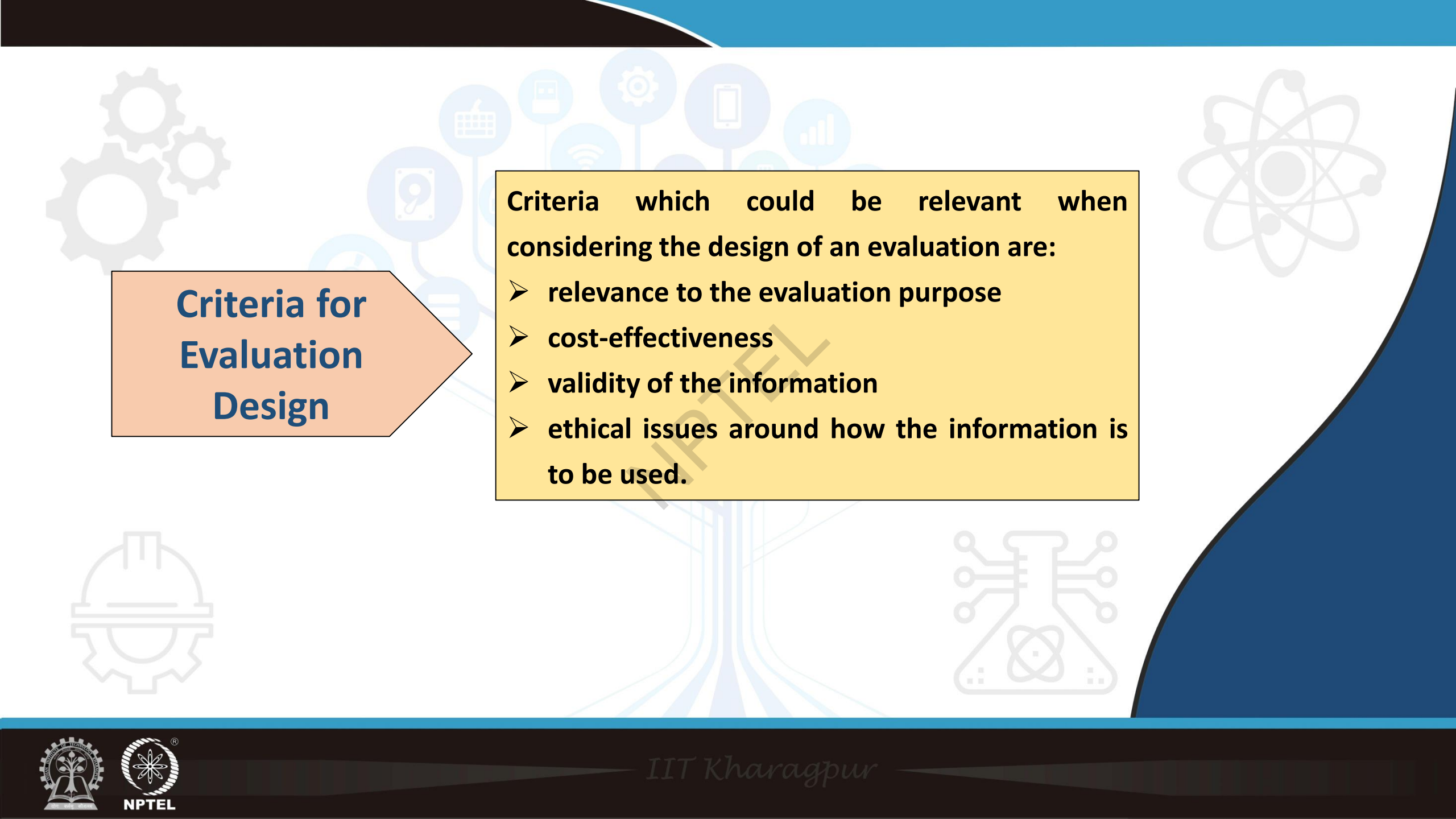
Training evaluation design that fits the goals and objectives of training evaluation may also be helpful to identify and choose between the many quantitative and qualitative methods available.





What does an Evaluation Design Mean

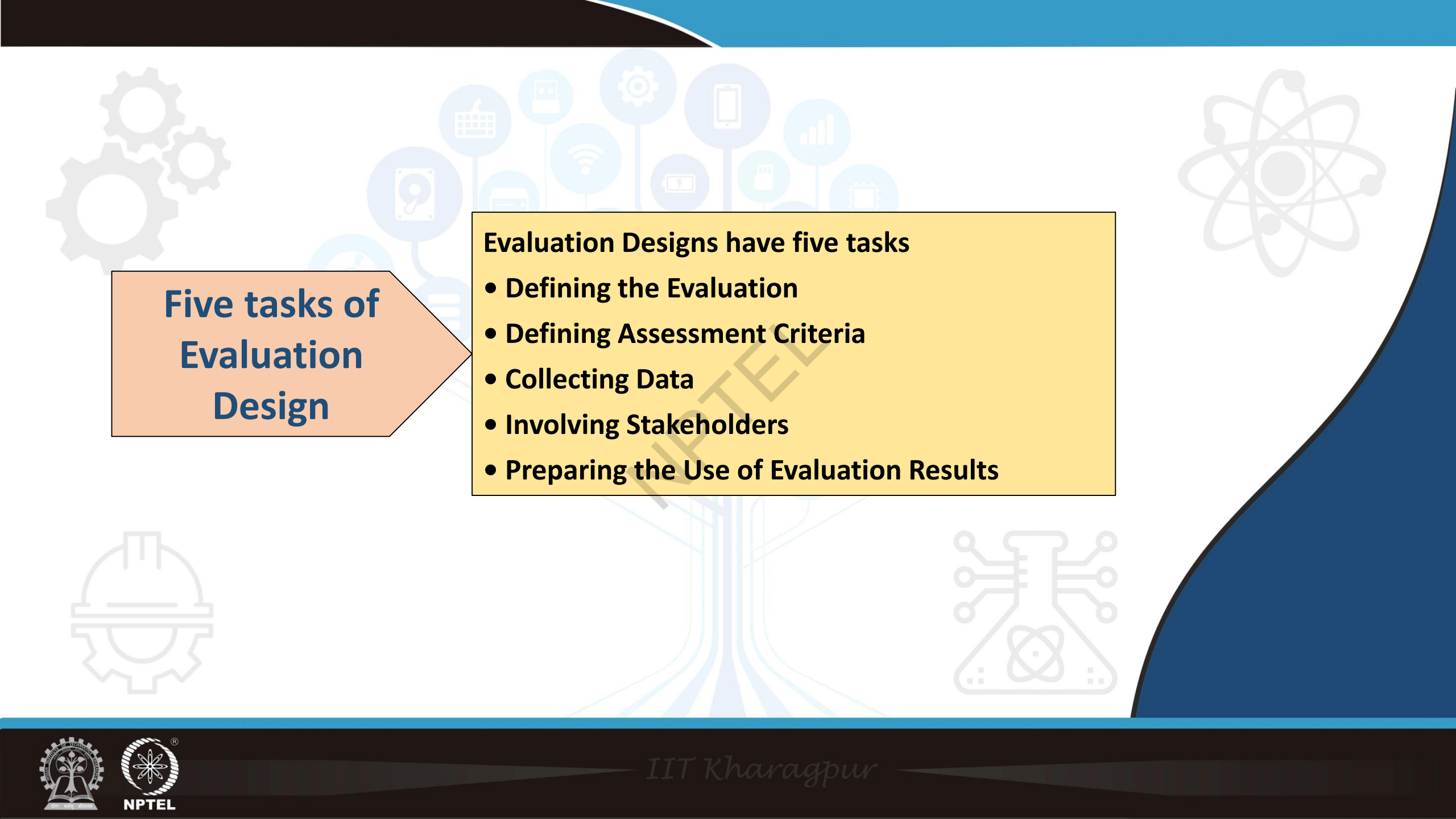
Evaluation design is concerned with the detailed planning of the evaluation. It builds on the evaluation context to specifically identify practices, processes, timing and responsibilities for completing an evaluation



Criteria for Evaluation Design

Criteria which could be relevant when considering the design of an evaluation are:

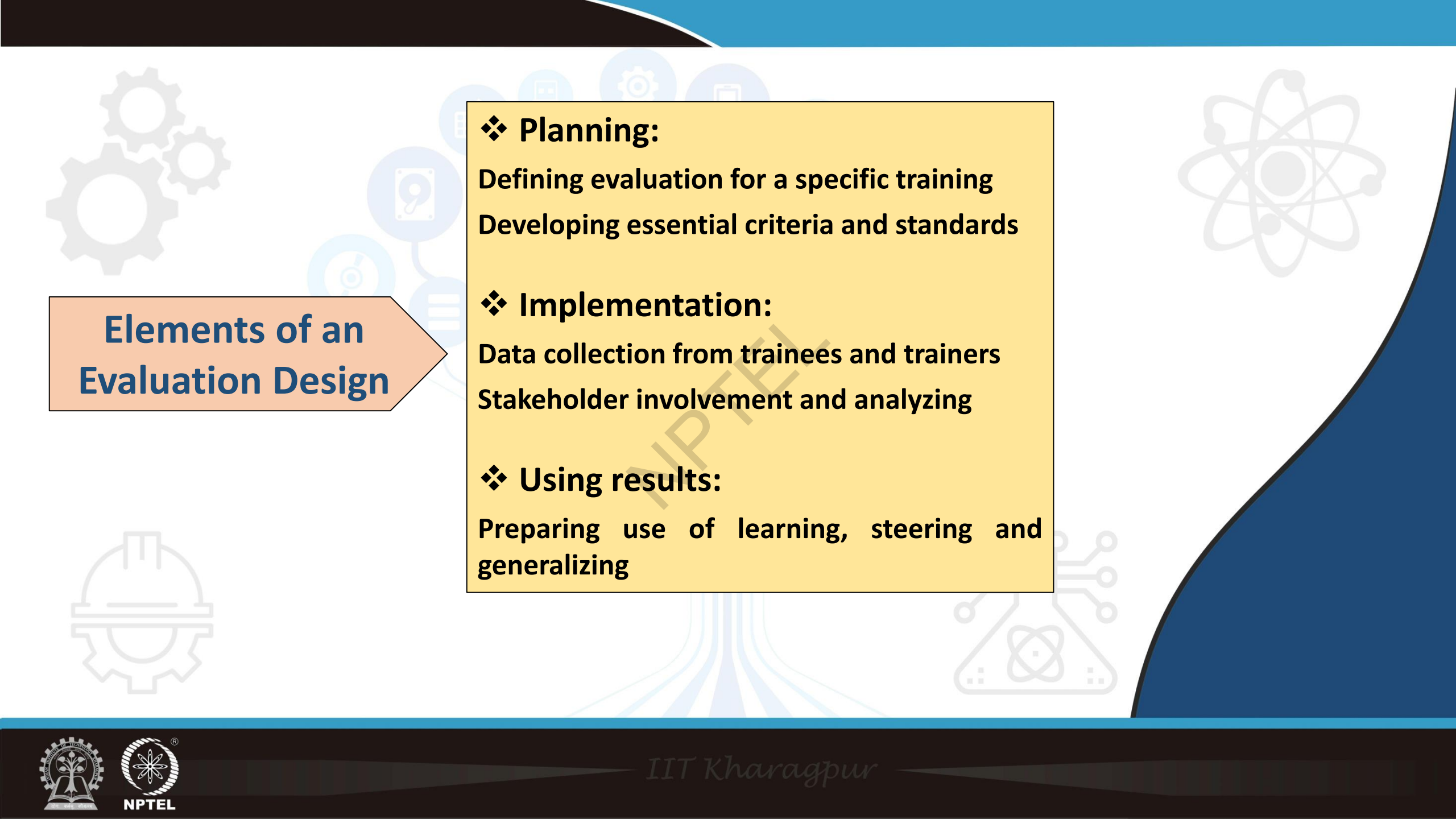
- relevance to the evaluation purpose
- cost-effectiveness
- validity of the information
- ethical issues around how the information is to be used.



Five tasks of Evaluation Design

Evaluation Designs have five tasks

- **Defining the Evaluation**
- **Defining Assessment Criteria**
- **Collecting Data**
- **Involving Stakeholders**
- **Preparing the Use of Evaluation Results**



Elements of an Evaluation Design

❖ Planning:

Defining evaluation for a specific training
Developing essential criteria and standards

❖ Implementation:

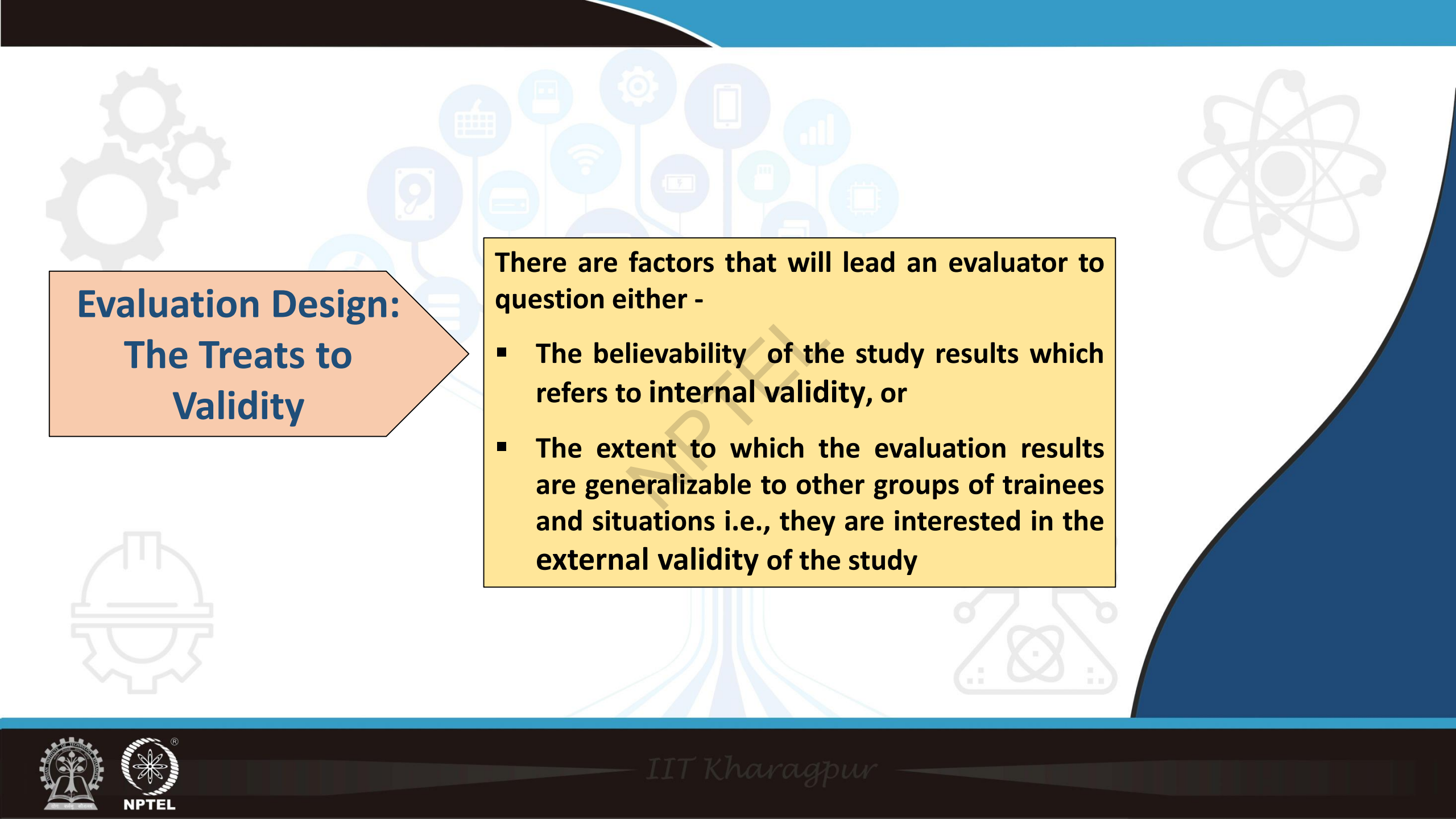
Data collection from trainees and trainers
Stakeholder involvement and analyzing

❖ Using results:

Preparing use of learning, steering and generalizing

Considerations for Evaluation Design

- Stakeholder's participation for designing evaluations.
- Evaluation should be comparable
- Quantitative and qualitative data for comparative analysis
- Using results for learning, planning and strategic decisions
- Should detect specifics and aim for specifics
- Should aim for training potentials



Evaluation Design: The Treats to Validity

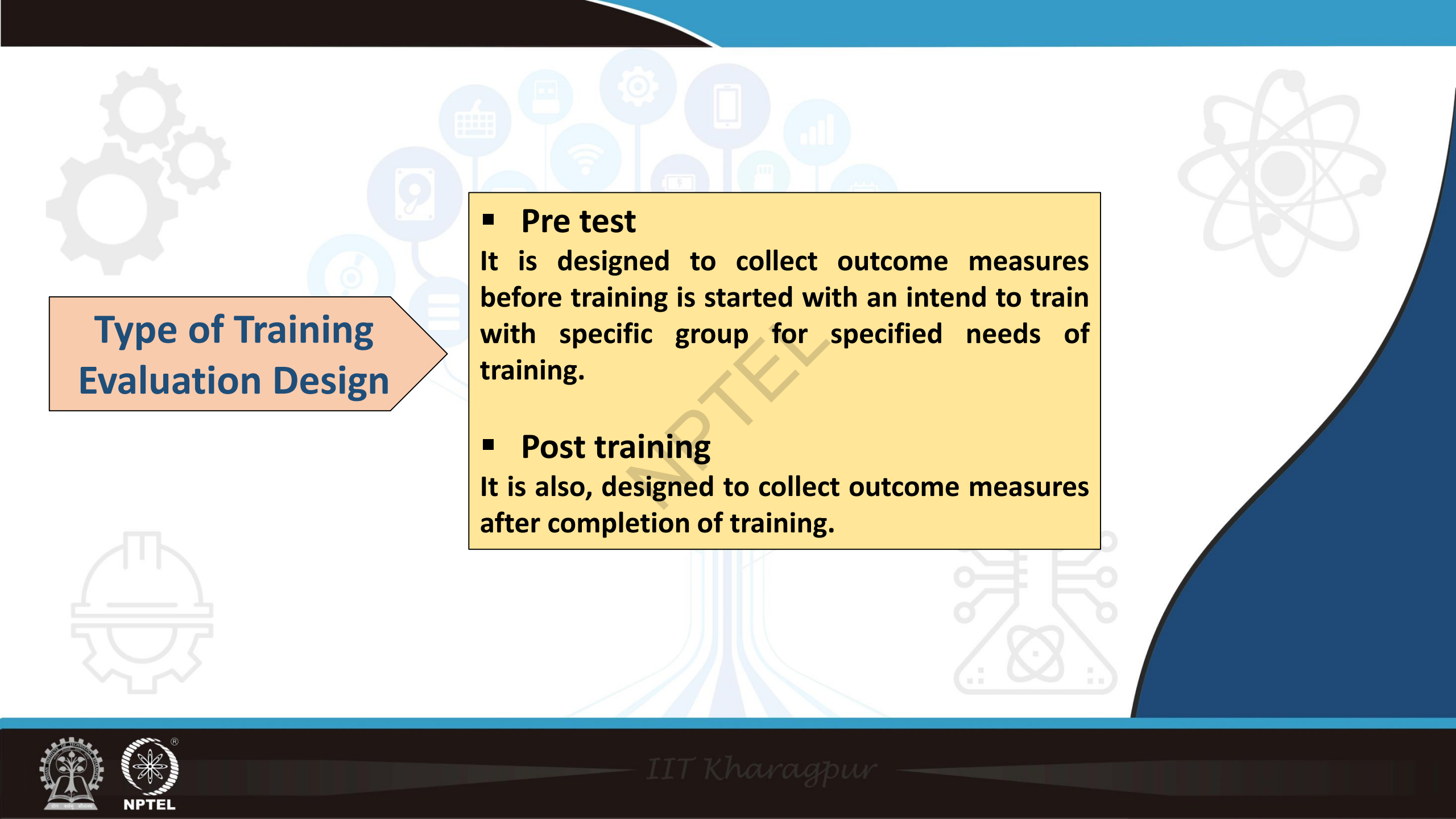
There are factors that will lead an evaluator to question either -

- The believability of the study results which refers to internal validity, or
- The extent to which the evaluation results are generalizable to other groups of trainees and situations i.e., they are interested in the external validity of the study

Type of Training Evaluation Design

Evaluation design is of following types:

- Pre test
- Post test
- Pre/post tests with comparison group
- Time series
- Time series with comparison group
- Solomon four group



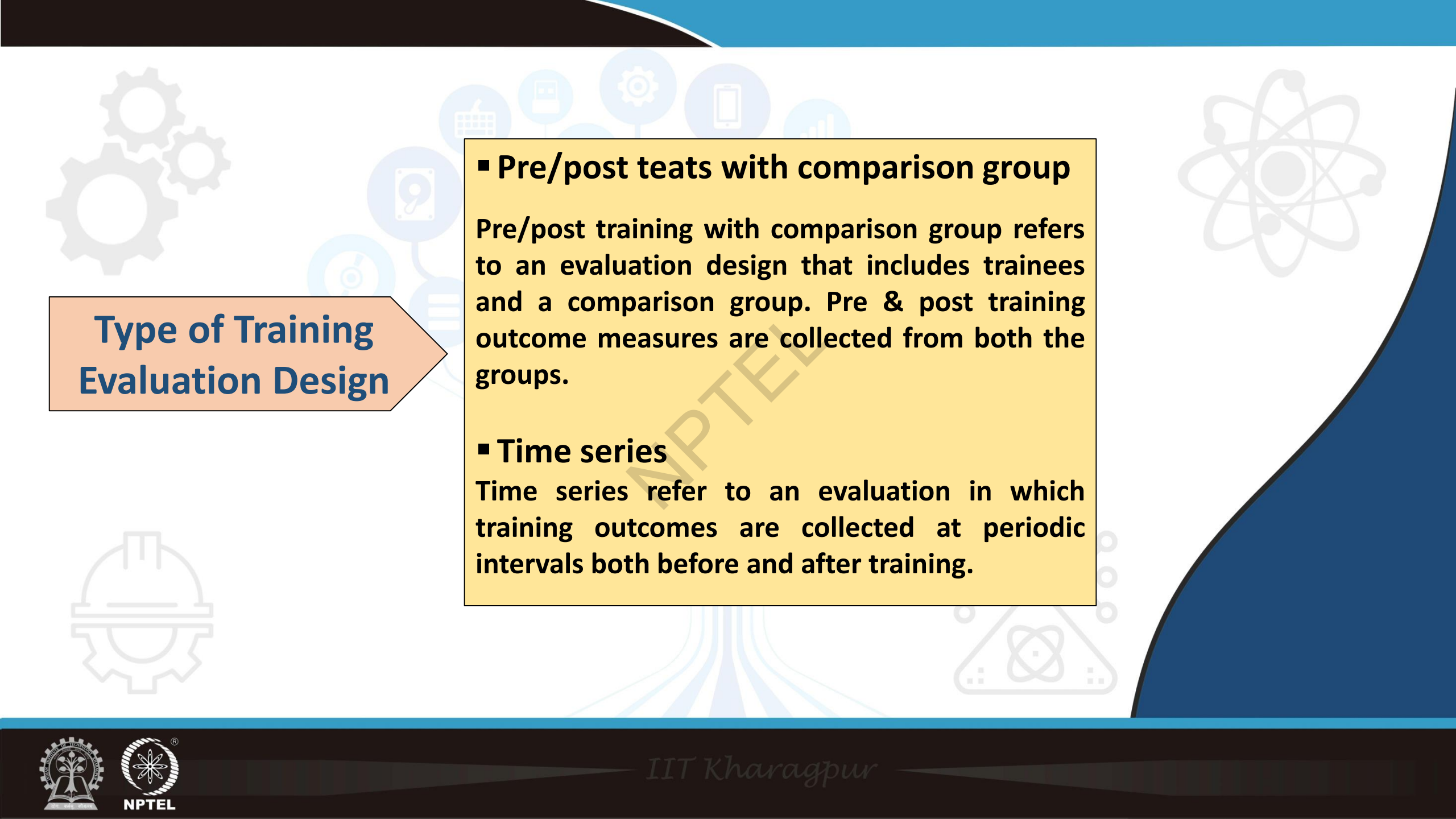
Type of Training Evaluation Design

- **Pre test**

It is designed to collect outcome measures before training is started with an intend to train with specific group for specified needs of training.

- **Post training**

It is also, designed to collect outcome measures after completion of training.



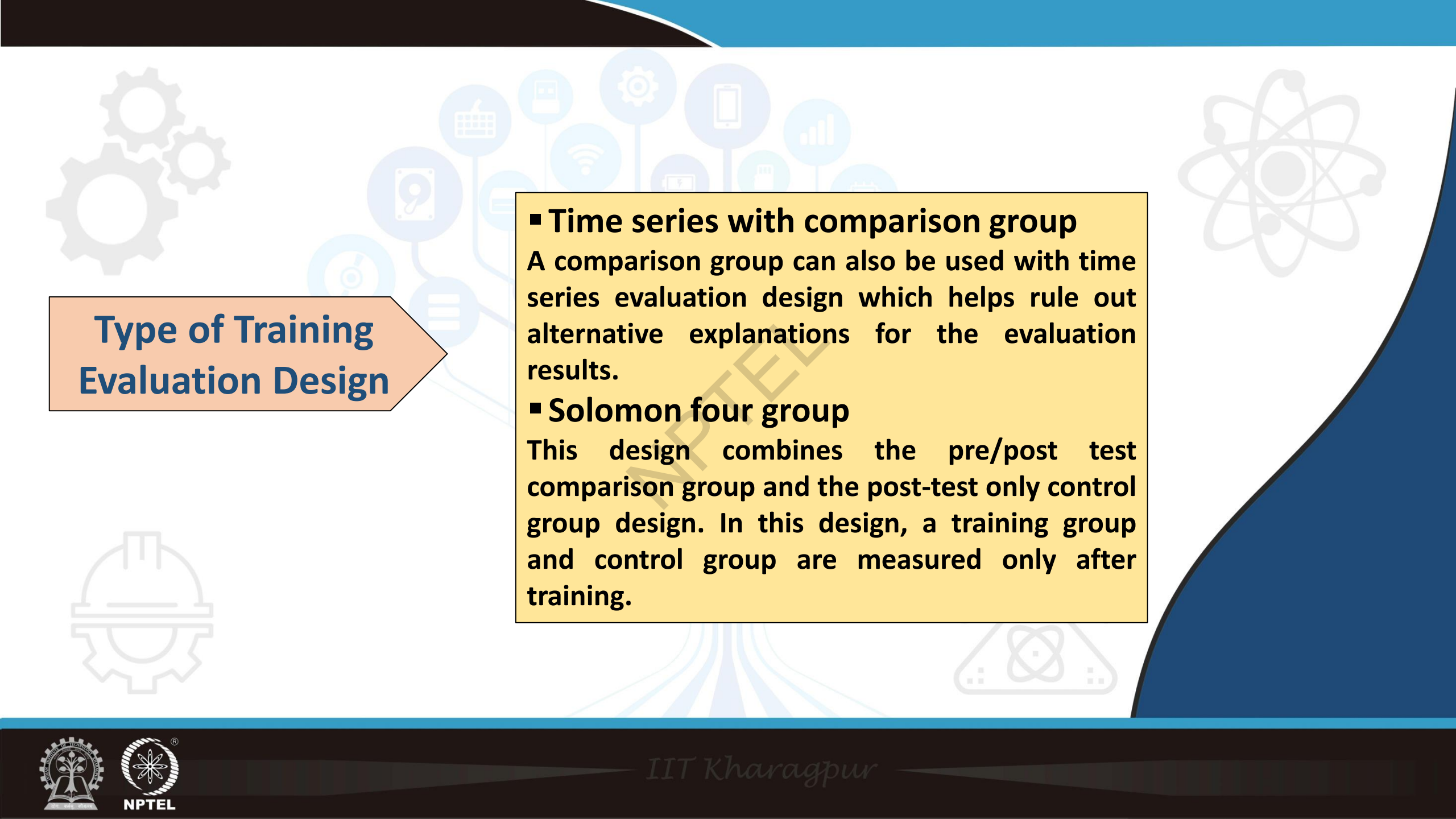
Type of Training Evaluation Design

- **Pre/post tests with comparison group**

Pre/post training with comparison group refers to an evaluation design that includes trainees and a comparison group. Pre & post training outcome measures are collected from both the groups.

- **Time series**

Time series refer to an evaluation in which training outcomes are collected at periodic intervals both before and after training.



Type of Training Evaluation Design

- **Time series with comparison group**

A comparison group can also be used with time series evaluation design which helps rule out alternative explanations for the evaluation results.

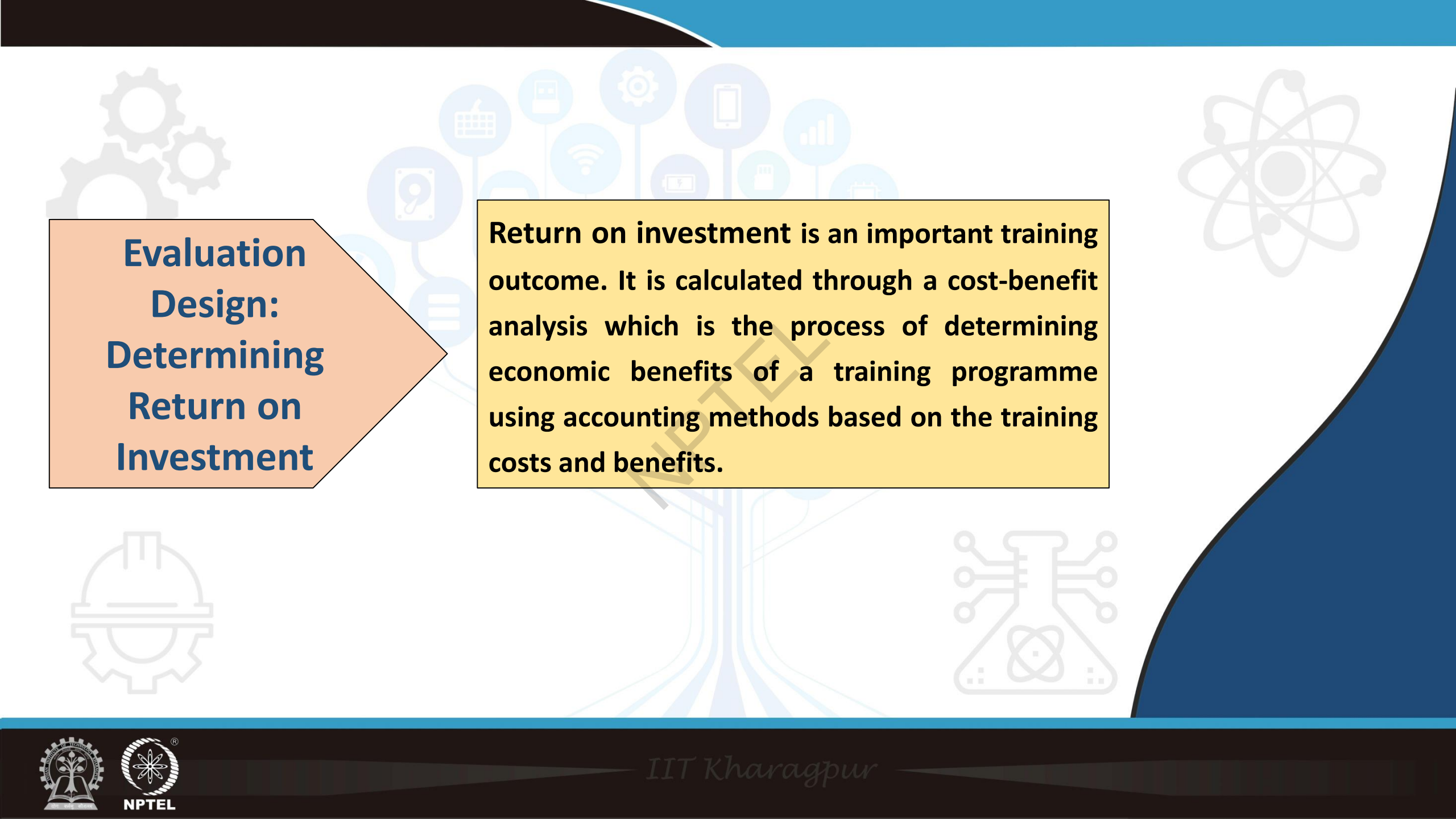
- **Solomon four group**

This design combines the pre/post test comparison group and the post-test only control group design. In this design, a training group and control group are measured only after training.

Factors Influencing Types of Evaluation Design

Factors influencing types of evaluation design are as follows:

- Change potential importance
- Scale
- Purpose of training
- Organization culture
- Enterprise
- Cost
- Time frame.



Evaluation Design: Determining Return on Investment

Return on investment is an important training outcome. It is calculated through a cost-benefit analysis which is the process of determining economic benefits of a training programme using accounting methods based on the training costs and benefits.

Evaluation Design:

Steps in Determining Return on Investment

Return on investment is calculated as per following step by step:

- Identify outcomes
- Place a value to outcomes
- Determine the changes in performance after eliminating other potential influences on training results.
- Obtain an annual amount of benefits from training by comparing results after training to results before training

(Continued)...

Evaluation Design:

Steps in Determining Return on Investment

Return on investment is calculated as per following step by step (continued):

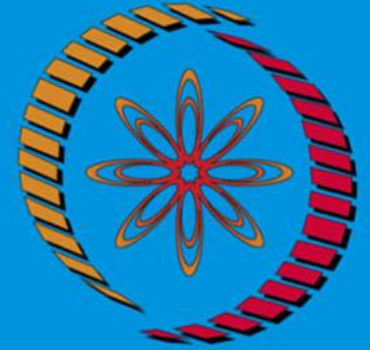
- Determine the training cost (direct cost + indirect cost + development cost + overhead cost + compensation for trainees)
- Calculate the total benefits subtracting the training cost from benefits
- Calculate the Return on investment by dividing the operational results by cost.
- The ROI gives an estimate of the price return expected from each price invested in training

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CONCLUSION

This part of lecture session has given clear picture training evaluation design with an aim to make all learners aware about it and enhance their level of thinking and perception on all these aspects of training evaluation design.



**THANK
YOU !**