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GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

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Telecom Sector Skill Council

Facilitator Guide

Sector
Telecom

Sub-Sector
Handset

Occupation
E-Waste Management

Reference ID: **TEL/Q2400,** Version **5.0**
NSQF Level **4**

Telecom E-Waste Handler

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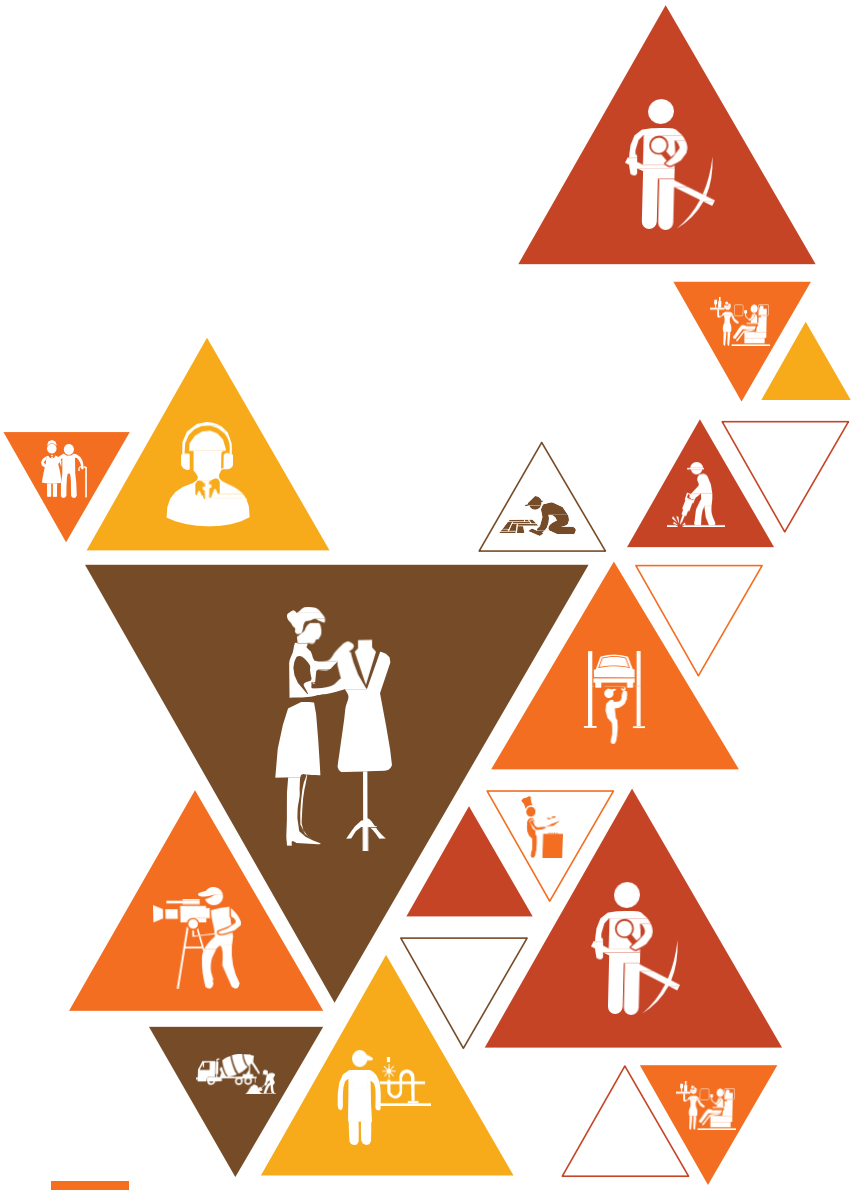
"Skilling is building a better India. If we have to move India towards development then Skill Development should be our mission."

Shri Narendra Modi
Prime Minister of India



Acknowledgements

Telecom Sector Skill Council (TSSC) would like to thank all the individuals and institutions who contributed in various ways towards the preparation of this facilitator guide. The facilitator guide could not have been completed without their active contribution. Special gratitude is extended to those who collaborated during the preparation of the different modules in the facilitator guide. Wholehearted appreciation is also extended to all who provided peer review for these modules.

The preparation of this guide would not have been possible without the Telecom Industry's support. Industry feedback has been extremely beneficial since inception to conclusion and it is with their guidance that we have tried to bridge the existing skill gaps in the industry. This facilitator guide is dedicated to the aspiring youth, who desire to achieve special skills which will be a lifelong asset for their future endeavours.

About this Guide

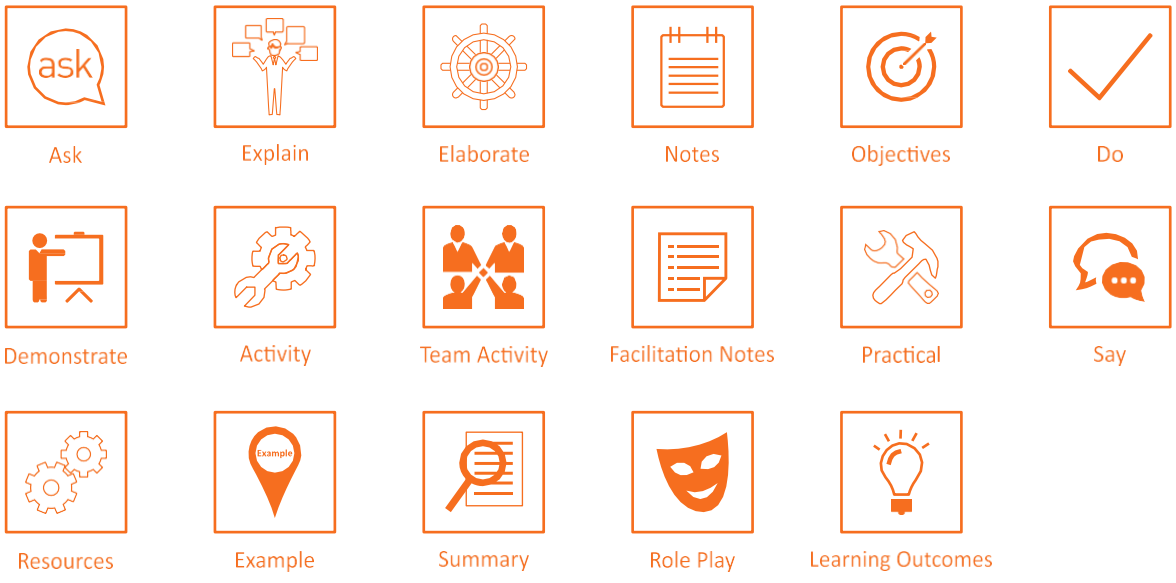
The facilitator guide (FG) for Telecom E-Waste Handler is primarily designed to facilitate skill development and training of people, who want to become professional ITelecom E-Waste Handlers in various stores. The facilitator guide is aligned to the Qualification Pack (QP) and the National Occupational Standards (NOS) as drafted by the Sector Skill Council (TSSC) and ratified by National Skill Development Corporation (NSDC).

It includes the following National Occupational Standards (NOSs)-

1. TEL/N2401: Undertake telecom e-waste collection, handling, and disposal operations
2. TEL/N9108: Follow sustainability practices in telecom operations
3. DGT/VSQ/N0101: Employability Skills (30 Hours)

Post this training, the participants will be able to perform tasks as professional Telecom E-Waste Handler. We hope that this Facilitator Guide provides a sound learning support to our young friends to build a lucrative career in the Telecom Skill Sector of our country.

Symbols Used



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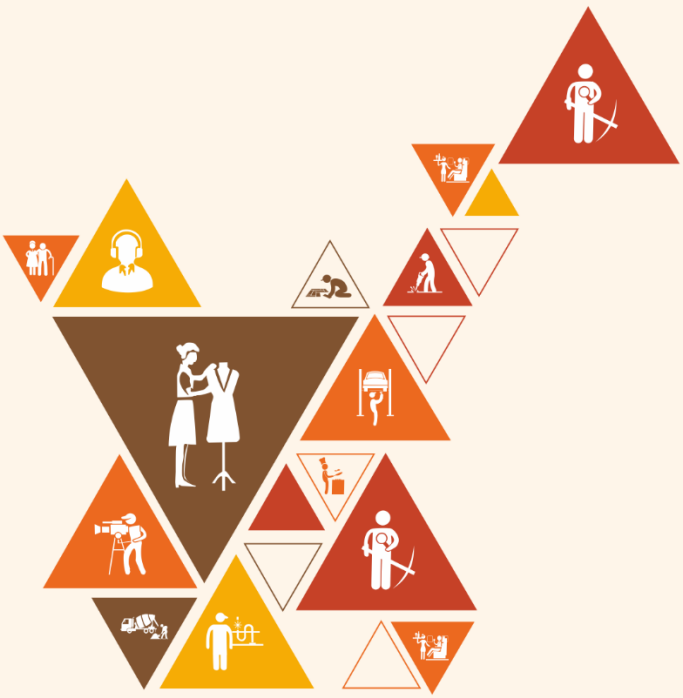


TEL/N2401

Key Learning Outcomes

After the completion of this module, the participant will be able to:

1. Explain the significance of managing and reducing electronic waste through proper collection, segregation, and recycling practices.
2. Elucidate the key skills and technical expertise required for a Telecom E-Waste Handler to identify, handle, and dispose of telecom e-waste safely and efficiently.
3. Describe the challenges faced in collecting, segregating, and managing telecom e-waste, including handling hazardous materials, and ensuring regulatory compliance.
4. Determine the impact of precision and quality control in telecom e-waste handling to ensure safe disposal, resource recovery, and environmental sustainability.
5. Discuss the role and responsibilities of a Telecom E-Waste Handler in maintaining high safety standards, ensuring proper waste management, and promoting sustainable practices.

UNIT 1.1: Introduction to the Telecom Industry in India

Unit Objectives

After the completion of this unit, participants will be able to:

1. Discuss about the telecom industry and its various sub-sectors in India
2. Outline the growth of the mobile handset industry in India
3. List the top telecom product manufacturers in India
4. Identify the regularity authorities in the Telecom industry in India

Resources to be Used

Participant handbook, pen, notebook, whiteboard, flipchart, markers, laptop, overhead projector, laser pointer, etc.

Note

This is the first session of the program. Introduce yourself, the program and its purpose in detail. Welcome the trainees cordially to the session. Explain that you are going to put them at ease by playing a game. This game is meant to break the ice between everyone and get the trainees interested in the class.

The key learning outcomes and unit objectives were mentioned at the module's beginning. Make sure that these outcomes and objectives are shared with the participants at the beginning, and when the module gets over, do collective feedback to ensure all have been covered.

Say

Good morning, participants and a very warm welcome to this training program called "Telecom E-Waste Handler."

Do

- Start by welcoming all the participants to the training program and conveying a message of encouragement.
- Thank all the participants for joining and being a part of this training program
- Introduce yourself briefly to participants, your name and background, and your role in the training program
- Talk about your expectations from them about their conduct, laying ground rules
- Explain the rules of the game you are going to play as an "Ice Breaker".

Note

- Please ensure that while introducing yourself, you share at least one piece of personal information, such as your hobbies, likes, dislikes etc., with the participants. This will facilitate participation and exchange in many ways.
- Take a keen interest in understanding the needs and aspirations of the participants before actually conducting the training

Say

Before we start the training, let us spend some time introducing ourselves and knowing each other. We shall play a game.

Activity

- Arrange the class in a semi-circle/circle
- Each of us will tell the class their name, hometown, hobbies and special quality about themselves, start-ing with the 1st letter of their name. I will start with mine.
- Say your name aloud and start playing the game with your name.
- Say, “Now, each of one you shall continue with the game with your names till the last person in the circle/ semi-circle participates”.
- Listen to and watch the trainees while they play the game.
- Ask questions and clarify if you are unable to understand or hear a trainee.

Activity	Duration	Resources used
Ice Breaker	60 minutes	Pen, Notebook, Notebook, etc.

Remember to:

- Discourage any queries related to one’s financial status, gender orientation or religious bias during the game
- Try recognising each trainee by their name because it is not recommended for a trainer to ask the name of a trainee during every interaction

Say

Did you all enjoy this activity? I hope you all had a good time during this icebreaker session. Now we are all well acquainted with each other, and this will help us go ahead with our training session.

Note

In this unit, we will discuss about the Telecom Sector in India.

Say

Let us begin the session by discussing about the Telecom Sector in India.

Ask

Ask the participants the following questions:

- Which government organisation do you think regulates the telecom sector in India?

Write down the participants' answers on a whiteboard/flipchart. Take appropriate cues from the answers and start teaching the lesson.

Elaborate

In this session, we will discuss the following point:

- This program is aimed at training candidates for the job of a "Telecom E-Waste Handler", in the "Telecom" Sector/ Industry.
- A detailed overview about the telecom sector in India
- Various sub-sectors of the telecom industry
  - Telecom Infrastructure
  - Telecom Equipment
  - Telecom Services
  - Wireless Communication
  - Broadband
- Major segments within these sub-sectors
- Indian handset market
- Top handset manufacturers in India
- Regulatory authorities in the telecom industry in India
  - TRAI
  - TDSAT
  - DoT

Say

Let us participate in an activity to explore the unit a little more. We are now going to take part of an interesting session.

Activity

- This session will have a video activity.
- You will play a video using the below link, which shows the evolution of the telecom industry in India.
- The YouTube link for the video is: https://www.youtube.com/watch?v=T2SaEuF6i1M
- Ask the trainees to note down pointers from the video that they may find relevant.
- After the end of the video, the trainees can ask questions to you.
- The trainees will raise their hands, and you will pick up the trainees who will place their questions.
- The answering session will be in the form of a discussion where either you or any of the trainees knowing the answer, can give the answers.

Activity	Duration	Resources used
Video Activity	20 minutes	Participant handbook, pen, notebook, whiteboard, markers, laptop/computer with an internet connection, speakers, overhead projector, etc.

Say

Did you find this activity interesting? I hope you all enjoyed this session today. Now we are going to take part in another activity.

Activity

- In this activity, you will divide the class into two groups.
- Each group will have to provide a broad explanation of the following topics.
  - Handset market in India
  - Sub-sectors in the Telecom industry
- Ask the trainees to jot down the crucial points in the notebook
- The trainees must present their answers rich in information.
- You will take 15 minutes to evaluate the answers of the trainees.
- The group which can present their answers in the best way within 30 minutes will be awarded appreciation and accolades

Activity	Duration	Resources used
Writing Activity	45 minutes	Chair, Table, Notebook, Pen, Pencil, Eraser, Participant Handbook, Whiteboard, Marker, etc.

Say

Did you find the activity interesting? I hope you all enjoyed the session thoroughly.

Do

- Conduct a doubt clarification session if needed.
- Jot down the crucial points on the whiteboard as the trainees speak.

Notes for Facilitation

- Ask the participants if they have any questions.
- Encourage peer learning in the class.

UNIT 1.2: Introduction to E-Waste

Unit Objectives

After the completion of this unit, participants will be able to:

1. Discuss about various types of waste
2. Recognise e-waste
3. Analyse the condition of e-waste generated in India
4. Identify telecom e-waste
5. List the health issues arising from e-waste
6. Discuss the importance of proper e-waste disposal

Resources to be Used

Participant Handbook, pen, notebook, whiteboard, flipchart, markers, laptop, overhead projector, laser pointer

Note

In this unit, we will discuss about E-Waste.

Say

Good morning and welcome back to this training program on Telecom E-Waste Handler. In this session, we will discuss about E-Waste and the situation of E-Waste in India.

Ask

Ask the participants the following questions:

- What do you understand by E-Waste?
- Are discarded mobile phones also considered E-Waste?

Write down the participants' answers on a whiteboard/flipchart. Take appropriate cues from the answers and start teaching the lesson.

Elaborate

In this session, we will discuss the following point:

- What is Waste?
  - Category of Wastes
  - Degradable vs Non-Degradable Waste

- Electronic Waste (E-Waste)
  - E-waste generating sectors in India
- Break-up of e-waste generated in India
- E-Waste awareness
- E-Waste problems
- E-Waste Recycling in India
- Life cycle of E-waste
  - EEE & WEEE Life-Cycle
- General Guidelines for Collection and Storage of E-Waste

Say

Let us participate in a group activity to explore the unit a little more.

Activity

- This is a group chart paper activity
- Divide the class into four groups and provide chart paper and other required items to each group
- Now, ask each group to make a chart paper presentation on the Life Cycle of E-Waste
- Ask them to explain each phase in the cycle
- They can use hand-drawn diagrams or pasted pictures
- After the groups complete their work, collect all the charts and evaluate them

Activity	Duration	Resources used
Chart paper activity	60 minutes	Participant Handbook, Pen, Notebook, Chart paper, Sketch pens, pencils, eraser, ruler, laptop, etc.

Do

- Guide the trainees throughout the activity
- Ensure that all trainees participate in the activity

Notes for Facilitation

- Answer all the queries/doubts raised by the trainees in the class
- Encourage other trainees to answer problems and boost peer learning in the class

UNIT 1.3: Roles and Responsibilities of a Telecom E-Waste Handler

Unit Objectives

After the completion of this unit, participants will be able to:

1. Identify the role and responsibilities of a telecom e-waste handler
2. List the key competencies of a telecom e-waste handler
3. Illustrate the career progression of a Telecom E-waste handler
4. Discuss about the organisational policies on incentives, delivery standards, personnel management and public relations (PR) pertinent to the job role
5. Explain the importance of seeking help from experts to avoid any escalation

Resources to be Used

Participant handbook, pen, notebook, whiteboard, flipchart, markers, laptop, overhead projector, laser pointer, etc.

Note

In this unit, we will discuss about the roles and responsibilities of a Telecom E-Waste Handler.

Say

Good morning and welcome back to this training program on Telecom E-Waste Handler. In this session, we will learn about the roles and responsibilities of a Telecom E-Waste Handler.

Ask

Ask the participants the following questions:

- What does an e-waste handler do?

Write down the participants' answers on a whiteboard/flipchart. Take appropriate clues from the answers and start teaching the lesson.

Elaborate

In this session, we will discuss the following point:

- Job role of a telecom e-waste handler
- Key competencies of e-waste handler
  - Personality Traits
  - Working hours
- Career Opportunities
- Organisational policies on incentives and delivery standards
  - Incentive Policy
  - Delivery Standards
- Personnel management and public relations
- Seeking help from experts

Say

Let us participate in a group discussion to explore the unit a little more.

Activity

- Conduct a group discussion on the work responsibilities of a telecom e-waste handler
- Ask the participants what they have learnt from this exercise
- Encourage the trainees to note down important points cited during the group discussion
- Close the discussion by summarising key takeaways

Activity	Duration	Resources used
Group discussion	30 minutes	Participant Handbook, Pen, Notebook, laptop, overhead projector, microphone, etc.

Do

- Maintain a cordial and positive environment in the classroom
- Discuss proper communication techniques in group discussion

Notes for Facilitation

- Ensure that all the trainees participate in the activity
- Encourage participants to ask relevant questions
- Ensure that all the trainees answer every question listed in the participant handbook

Exercise

Answers to exercises for PHB

Multiple-choice Question:

1. d) All of the above
2. a) Second
3. b) Printed Circuit Board
4. a) Mumbai
5. c) Waste Electrical and Electronic Equipment

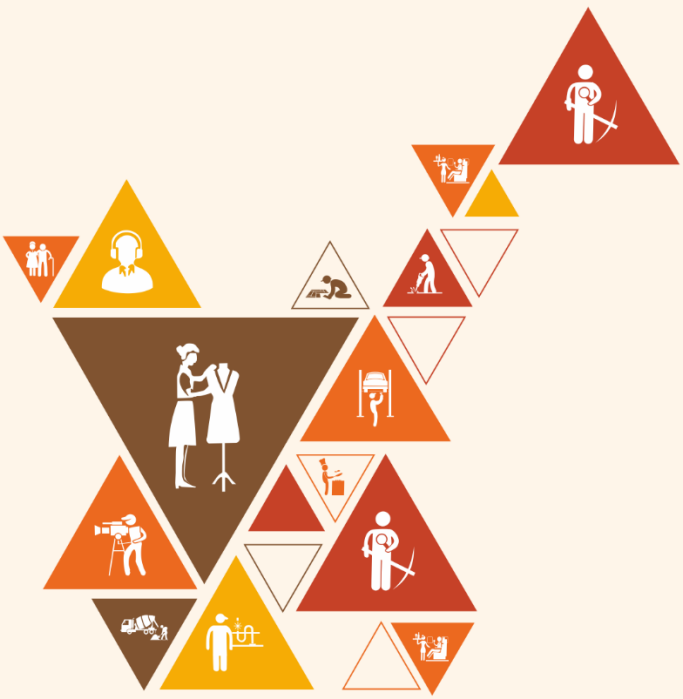
Descriptive:

1. Refer UNIT 1.3: Roles and Responsibilities of a Telecom E-Waste Handler
   Topic - 1.3.4 Organisational Policies on Incentives and Delivery Standards
2. Refer UNIT 1.2: Introduction to E-Waste
   Topic - 1.2.4 E-Waste Awareness
3. Refer UNIT 1.2: Introduction to E-Waste
   Topic - 1.2.1 What is Waste?
4. Refer UNIT 1.1: Introduction to the Telecom Industry in India
   Topic - 1.1.5 Regulatory Authorities in the Telecom Industry in India
5. Refer UNIT 1.1: Introduction to the Telecom Industry in India
   Topic - 1.1.2 Various Sub-Sectors of the Telecom Industry

Notes

2. Collection, Handling, and Segregation of Telecom E-Waste

Unit 2.1 - Collection, Handling, and Segregation of Telecom E-Waste



TEL/N2401

Key Learning Outcomes

After the completion of this module, the participant will be able to:

1. Explain the value chain of telecom and non-telecom electronics from source to disposal.
2. Describe the principles of the circular economy and 3Rs in e-waste management.
3. Discuss the material composition of telecom e-waste including valuable and hazardous parts.
4. Explain the environmental and health impacts of improper e-waste handling.
5. Discuss pricing and economic considerations in telecom e-waste management.
6. Describe emergency protocols including fire safety and spill control.
7. Discuss how to maintain proper documentation for collected e-waste.
8. Explain the significance of PPE, hazard communication, and workplace safety.
9. Show how to classify telecom and non-telecom e-waste based on material composition and reuse potential.
10. Demonstrate how to identify valuable and hazardous components in telecom e-waste.
11. Show how to apply circular economy practices such as segregation for reuse and recycling.
12. Demonstrate how to communicate the benefits of responsible e-waste management using outreach tools.
13. Show how to follow safety guidelines and legal protocols while handling and storing telecom e-waste.
14. Demonstrate how to identify key sources of telecom e-waste.
15. Show how to select safe transport options in compliance with regulations.
16. Demonstrate how to use PPE when handling or transporting telecom e-waste.
17. Demonstrate how to use tools and equipment to dismantle and segregate e-waste.
18. Show how to categorize e-waste based on type and value.
19. Demonstrate how to follow procedures for systematic segregation.
20. Show how to adhere to safety protocols including proper PPE usage.
21. Demonstrate how to label and package segregated e-waste.

UNIT 2.1: Collection, Handling, and Segregation of Telecom E-Waste

Unit Objectives

After the completion of this unit, participants will be able to:

1. Explain the value chain of telecom and non-telecom electronics from source to disposal.
2. Describe the principles of the circular economy and 3Rs in e-waste management.
3. Discuss the material composition of telecom e-waste including valuable and hazardous parts.
4. Explain the environmental and health impacts of improper e-waste handling.
5. Discuss pricing and economic considerations in telecom e-waste management.
6. Describe emergency protocols including fire safety and spill control.
7. Discuss how to maintain proper documentation for collected e-waste.
8. Explain the significance of PPE, hazard communication, and workplace safety.
9. Show how to classify telecom and non-telecom e-waste based on material composition and reuse potential.
10. Demonstrate how to identify valuable and hazardous components in telecom e-waste.
11. Show how to apply circular economy practices such as segregation for reuse and recycling.
12. Demonstrate how to communicate the benefits of responsible e-waste management using outreach tools.
13. Show how to follow safety guidelines and legal protocols while handling and storing telecom e-waste.
14. Demonstrate how to identify key sources of telecom e-waste.
15. Show how to select safe transport options in compliance with regulations.
16. Demonstrate how to use PPE when handling or transporting telecom e-waste.
17. Demonstrate how to use tools and equipment to dismantle and segregate e-waste.
18. Show how to categorize e-waste based on type and value.
19. Demonstrate how to follow procedures for systematic segregation.
20. Show how to adhere to safety protocols including proper PPE usage.
21. Demonstrate how to label and package segregated e-waste.

Resources to be Used

Participant handbook, pen, notebook, whiteboard, flipchart, markers, laptop, overhead projector, laser pointer, etc.

Note

In this unit, we will discuss about the need for proper e-waste disposal.

Say

Good morning and welcome back to this training program on Telecom E-Waste Handler. In this session, we will discuss the need for proper e-waste disposal.

Ask

Ask the trainees the following questions:

- What do you understand by e-waste disposal?
- Is there any impact on the soil if e-waste is not disposed of correctly?

Write down the trainees' answers on the whiteboard/flipchart. Draw appropriate cues from the answers and start teaching the lesson.

Elaborate

In this session, we will discuss the following points:

- Effects of improper disposal of telecom e-waste
  - Impact on the soil
  - Ground water contamination
  - Air pollution
  - Marine pollution
- E-Waste Recycling
  - Importance of e-waste recycling
  - Electronics recycling conserves natural resources
  - Electronics recycling supports the community
  - Electronics recycling creates employment locally
  - Electronics recycling helps protect public health and the environment
  - Solid waste management
- Stakeholders in e-waste collection
  - First level: Preliminary E-waste generators
  - Second level: Secondary E-waste generators
  - Third level: Tertiary E-waste generators
- Various stakeholders involved in e-waste generation
  - Manufacturers and Retailers
  - Imports
  - IT Industries
  - Public and private sector, government departments, corporate and business establishments
  - Educational Institutes
  - Individual households
  - Traders/scrap dealers/dissemblers/dismantlers
  - Recyclers/smelters
- Responsibilities of the producer

Responsibilities assigned to various stakeholders for disposal of telecom e-waste

- Manufacturer responsibility
- Producers' responsibility
- Extended producer responsibility
- Consumer support with regards to EPR
- Promotion of E-Waste recycling
- Awareness to stakeholders
- Promotion of best practices for e-waste disposal
- Why is awareness required?
- Do's & Don'ts for E-Waste

Say

Let us participate in an extempore activity to understand this unit better.

Activity

- This activity will be based on individual performance.
- In this activity, you will give multiple topics to the trainees regarding e-waste recycling
- Write the topics in paper chits and fold them
- Now ask the trainees to randomly pick up a chit
- Allot the trainees two minutes to prepare the topic and then ask them to speak about the topic for one minute in front of the class
- Allow the audience to ask clarifying questions if any
- The trainee with a simple explanation but rich in content will be appreciated with accolades

Activity	Duration	Resources used
Extempore	40 minutes	Participant handbook, whiteboard, notebook, pen, pencil, marker, microphone, etc.

Do

- Conduct a doubt clarification session if needed.
- Encourage the non-participating trainees to open up and speak
- Share your inputs and insight to encourage the trainees and add to what they talk about.

Notes for Facilitation

- Encourage other participants to answer it and encourage peer learning in the class
- Ensure the trainees answer the questions from the participant handbook

Activity 2

- This is an individual activity
- Display pictures of different types of e-waste
- Ask each trainee to identify the e-waste and note it down in the notebook
- After completing, ask random students to describe the disposal techniques of each of the types

Activity	Duration	Resources used
Identifying various types of e-waste	45 minutes	Participant Handbook, Pen, Notebook, lap-top/computer, overhead projector, etc.

Do

- Show the following pictures of different mobile phone accessories









Activity

- This is an individual activity
- Display pictures of different types of pallet box
- Ask each trainee to identify the type of pallet box and note it down in the notebook
- After completing, ask random students to describe the use of each type of pallet box, its durability and cost

Activity	Duration	Resources used
Identifying various types of pallet box	45 minutes	Participant handbook, pen, notebook, lap-top/computer, overhead projector, etc.

Do

- Show the following pictures of different mobile phone accessories

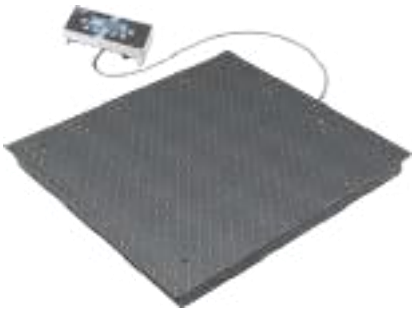
Activity

- This is an individual activity
- Display pictures of different types of metal scales used for weighing e-waste
- Ask each trainee to identify the type of scale and note it down in the notebook
- After completing, ask random students to describe the use of each type of the scale they have identified, its specification and utility

Activity	Duration	Resources used
Identifying various types of metal scales	45 minutes	Participant handbook, pen, notebook, lap-top/computer, overhead projector, etc.

Do

- Show the following pictures of different mobile phone accessories



Notes for Facilitation

- Encourage other participants to answer it and encourage peer learning in the class
- Answer all the doubts in case any to the participants

Exercise

Answers to exercises for PHB

Short Questions

1. Explain how to use tools and equipment safely while dismantling telecom e-waste.
   Use insulated tools, follow proper lock-out procedures, wear PPE such as gloves, goggles, and masks, and ensure the power supply is disconnected. Handle sharp edges carefully and dismantle components step-by-step in a controlled workspace to avoid injury or damage.
2. Describe the process of segregating telecom e-waste for recycling and reuse.
   E-waste is first sorted into categories such as metals, plastics, circuit boards, batteries, and cables. Reusable components are separated, hazardous parts are isolated, and materials are grouped according to recycling requirements—like ferrous, non-ferrous, and high-value electronic parts.
3. What are the benefits of responsible e-waste management for the environment and economy?
   It reduces pollution, prevents soil and water contamination, conserves natural resources, supports recycling industries, creates jobs, and recovers valuable metals like copper and gold, contributing to economic growth.

True/False

1. PPE is optional while handling e-waste if the worker is experienced.
   False
2. Circuit boards in telecom devices may contain hazardous substances like lead and cadmium.
   True
3. Segregating e-waste into telecom and non-telecom categories is not necessary for recycling.
   False
4. Outreach and awareness programs help in increasing the collection of e-waste responsibly.
   True

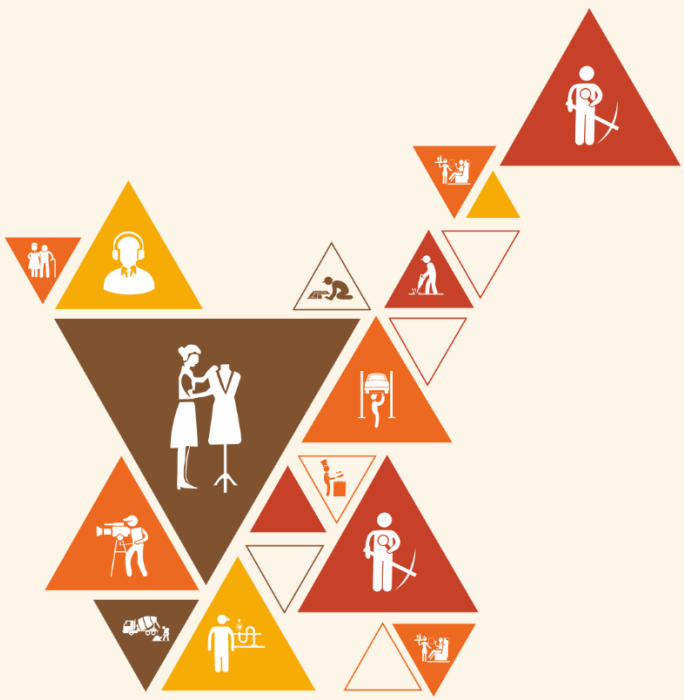
Multiple Choice Questions (MCQs)

1. Which of the following is considered hazardous in telecom e-waste?
b) Circuit boards with heavy metals
2. What is the primary purpose of PPE while handling telecom e-waste?
b) To protect workers from chemical, electrical, and physical hazards
3. Which of the following is not a part of circular economy practices in e-waste management?
c) Dumping e-waste in open land
4. The most valuable part of telecom e-waste for resale is usually:
b) Circuit boards and metal components
5. Telecom e-waste should be classified based on:
b) Material composition, reuse potential, and hazard level

Notes

3. Establishment and Management of Telecom E-Waste Collection Centre

Unit 3.1 - Establishment and Management of Telecom E-Waste Collection Centre



TEL/N2401

Key Learning Outcomes 

After the completion of this module, the participant will be able to:

1. Show how to identify compliance requirements for setting up a telecom e-waste collection centre.
2. Explain various transport and logistics solutions for compliant e-waste movement.
3. Demonstrate how to arrange the infrastructure for safe e-waste handling and storage.
4. Show how to implement hygiene and sanitation measures at the facility.
5. Discuss basic financial and entrepreneurial concepts for managing an e-waste centre.
6. Demonstrate how to monitor finances and identify revenue opportunities.
7. Elucidate marketing and outreach strategies to build a steady network of e-waste generators.
8. Show how to recruit and train staff in safety, operations, and communication.
9. Describe how to identify and reach under-served areas for collection expansion.
10. Demonstrate how to develop and manage an inventory system for tracking e-waste.
11. Show how to organize secure storage for collected e-waste.
12. Determine the key national and international telecom e-waste regulations.
13. Show how to identify compliance requirements for setting up a telecom e-waste collection centre.

UNIT 3.1: Establishment and Management of Telecom E-Waste Collection Centre

Unit Objectives

After the completion of this unit, participants will be able to:

1. Show how to identify compliance requirements for setting up a telecom e-waste collection centre.
2. Explain various transport and logistics solutions for compliant e-waste movement.
3. Demonstrate how to arrange the infrastructure for safe e-waste handling and storage.
4. Show how to implement hygiene and sanitation measures at the facility.
5. Discuss basic financial and entrepreneurial concepts for managing an e-waste centre.
6. Demonstrate how to monitor finances and identify revenue opportunities.
7. Elucidate marketing and outreach strategies to build a steady network of e-waste generators.
8. Show how to recruit and train staff in safety, operations, and communication.
9. Describe how to identify and reach under-served areas for collection expansion.
10. Demonstrate how to develop and manage an inventory system for tracking e-waste.
11. Show how to organize secure storage for collected e-waste.
12. Determine the key national and international telecom e-waste regulations.
13. Show how to identify compliance requirements for setting up a telecom e-waste collection centre.

Resources to be Used

Participant handbook, pen, notebook, whiteboard, flipchart, markers, laptop, overhead projector, laser pointer, etc.

Note

In this unit, we will discuss about setting up a telecom e-waste collection centre.

Say

Good morning and welcome back to this training program on “Distributor Sales Representative”. In this session, we will discuss about setting up a telecom e-waste collection centre.

Ask

Ask the participants the following questions:

- What do you understand by setting up a telecom e-waste collection centre?

Write down the trainees’ answers on the whiteboard/flipchart. Draw appropriate cues from the answers and start teaching the lesson.

Elaborate

In this session, we will discuss the following points:

- setting up a telecom e-waste collection centre.

Say

Let us participate in an extempore activity to understand this unit better.

Activity

- This activity will be based on individual performance.
- Provide each trainee with a printout/Xerox copy of the checklist for the telecom e-waste collection centre.
- Now ask each of them to fill up the checklist individually
- After completing, collect all the forms and evaluate them
- End the session by providing constructive feedback

Activity	Duration	Resources used
E-Waste Handling Checklist Fill-and-Review Activity	40 minutes	Participant handbook, whiteboard, notebook, laptop, pen, pencil, marker, printout/Xerox copy of checklist, etc.

Do

- Ensure that the checklist contains all possible requirement for setting up a telecom e-waste collection centre.
- Guide the trainees throughout the activity

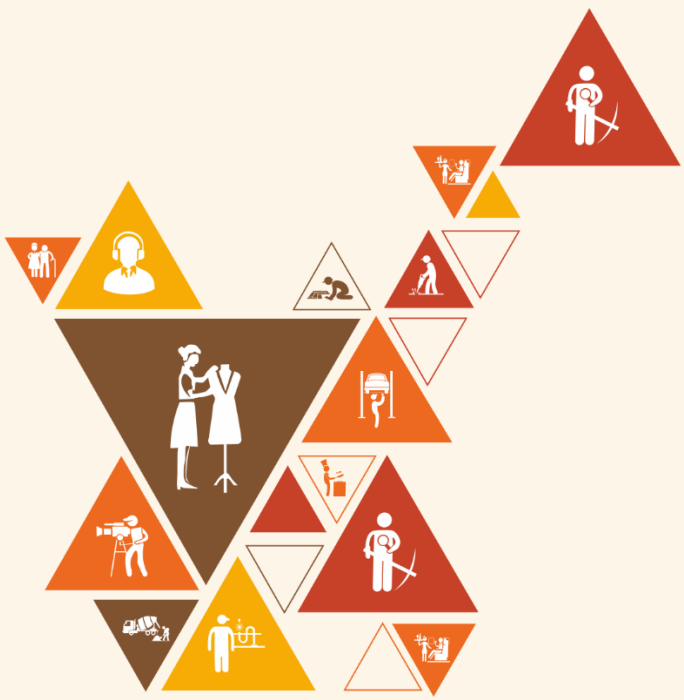
Notes for Facilitation

- Ask the trainees if they have any questions
- Encourage other trainees in the class to answer it and encourage peer learning in the class
- Explain the consequences of not following the setting up a telecom e-waste collection centre

Notes

4. Sustainability Practices in Telecom Operations

Unit 4.1 - Identification and Categorization of Recyclable, Reusable, and Disposable Components
Unit 4.2 - Adherence to Environmental Standards
Unit 4.3 - Sustainable Repair Practices
Unit 4.4 - Adherence to Organizational Protocols



TEL/N9108

Key Learning Outcomes

After the completion of this module, the participant will be able to:

1. Explain the relevant environmental laws and regulations for the telecom sector.
2. Describe the different recyclable and hazardous components in telecom equipment.
3. Demonstrate how to identify telecom components that can be recycled, refurbished, or reused during repair and maintenance.
4. Discuss the relevant tools and techniques that support sustainable repair practices.
5. Elucidate the safe handling, storage, and disposal of hazardous materials.
6. Demonstrate how to follow guidelines for the safe handling, storage, and disposal of hazardous and non-hazardous materials.
7. Show how to sort and evaluate dismantled parts into recyclable, reusable, and hazardous waste categories for proper disposal.
8. Explain the process of e-waste recycling through certified vendors.
9. Describe the documentation required for sustainability and waste disposal.
10. Show how to maintain compliance with environmental regulations and record all e-waste disposal and recycling activities as per company policies.
11. Determine the proper waste segregation and sorting guidelines in the telecom industry.
12. Discuss the industry's best practices for reducing environmental impact.
13. Show how to label and segregate hazardous materials for specialized disposal, ensuring compliance with safety regulations.
14. Demonstrate the correct use of protective equipment when handling hazardous waste to prevent environmental contamination.
15. Show how to conduct regular audits of waste management processes to ensure alignment with sustainability standards.

UNIT 4.1: Identification and Categorization of Recyclable, Reusable, and Disposable Components

Unit Objectives

After the completion of this unit, participants will be able to:

1. Explain the difference between recyclable, reusable, and disposable components.
2. Identify common materials and components that can be recycled, reused, or need disposal.
3. Categorize waste materials appropriately during and after repair activities.
4. Demonstrate proper segregation techniques as per material type and disposal category.

Resources to be Used

Participant handbook, pen, notebook, whiteboard, flipchart, markers, laptop, overhead projector, laser pointer, equipment and tools.

Note

In this unit, we will discuss Identification and Categorization of Recyclable, Reusable, and Disposable Components.

Say

Good morning and welcome back to this training program on Identification and Categorization of Recyclable, Reusable, and Disposable Components

Ask

Ask the participants the following questions:

- What are recyclable, reusable, and disposable components?
- What are the common material and component that can be recycled, reused or need disposal?
- How to segregate the waste based on type and disposal category?

Write down the trainees' answers on the whiteboard/flipchart. Draw appropriate cues from the answers and start teaching the lesson.

Elaborate

In this session, we will discuss the following points:

- **Identification of Telecom Components**
  - Reusable Components: Motherboards, displays, cameras/speakers/mics, chassis/housings, connectors/flex cables.
  - Refurbishable Components: Motherboards with minor faults, repairable connectors, software faults (flashing).
  - Recyclable Components: Scrapped motherboards, old batteries, broken plastic/metal parts, damaged displays.
  - Identification Methods: Visual inspection, functional test, multimeter/diagnostic tools.
- **Sorting Materials into Reusable, Recyclable & Hazardous**
  - Categories:
  - bins for reusable; e-waste bin for recyclables; fire-proof containers for batteries.
  - DeReusable/Refurbishable, Recyclable, Hazardous Protocols:Clear labels (Reusable, Recyclable, Hazardous – Batteries/LCDs).
  - Clean dicated sorting area.
  - Hazardous Examples: Batteries, circuit boards (heavy metals), older LCDs (mercury), chemical waste.
- **Labelling & Segregation of Hazardous Materials**
  - **Label Requirements:** Material type, hazard warning, date.
  - **Storage:**
    - Dedicated containers for each type.
    - Batteries in fire-resistant boxes with taped terminals.
    - Separate bins for boards and chemicals.
- **Disposal:** Only through certified e-waste recyclers; never in general trash.

Say

Let us participate in an activity to understand this unit better.

Activity

Waste Bin Match"Instructions (3–4 minutes):

1. Place three labeled bins/cards: Recyclable, Reusable, Disposable.
2. Call out items one by one (e.g., metal screws, working adapter, broken PCB, damaged cable, battery, packaging foam).
3. Learners point to or place the item in the correct bin.
4. Trainer quickly confirms the correct category and explains why.

Activity	Duration	Resources used
Role Play activity	60 minutes	Participant handbook, whiteboard, laptop, notebook, pen, pencil, marker, etc.

Notes for Facilitation

- Ask them to answer the questions given in the participant manual.
- Ensure that all the participants answer every question.
- Answer all the doubts raised by the trainees in the class
- Discuss the proper communication technique in group discussion

UNIT 4.2: Adherence to Environmental Standards

Unit Objectives

After the completion of this unit, participants will be able to:

1. Identify different waste types and follow appropriate handling and storage practices, including segregation of materials, and placement in secure, ventilated areas.
2. Differentiate between hazardous and non-hazardous waste, and ensure safe, certified disposal through authorized recycling partners.
3. Maintain accurate records of e-waste disposal and recycling.
4. Select and use safety gear correctly to prevent injury and contamination while handling batteries, circuit boards, and chemicals.
5. Prevent environmental contamination through containment measures.
6. Participate in regular waste management audits and improvements

Resources to be Used

Participant handbook, whiteboard, flipchart, markers, laptop, notebook, pen, PPE samples, dummy e-waste items (battery, PCB, cable, plastic housing).

Note

In this unit, we will discuss safe handling, segregation, storage, documentation and disposal of telecom e-waste.

Say

Good morning and welcome back to this training program on Safe Handling, Segregation, PPE Use, Disposal and Compliance in E-Waste Management.

Ask

Ask the participants the following questions:

- What types of waste do you commonly see in telecom repair or dismantling work?
- Which wastes are hazardous and which are non-hazardous?
- Why is segregation important for safe handling and disposal?
- What PPE do you use while handling batteries, chemicals, or damaged components?
- How do we maintain waste disposal records?

Write down the trainees' responses on the whiteboard/flipchart. Draw cues from their answers and begin teaching the unit.

Elaborate

In this session, we will discuss the following points:

- **Types of Waste** – Hazardous (batteries, PCBs, chemicals) and non-hazardous (plastic housings, cables, metal parts).
- **Segregation & Storage** – Separate hazardous and non-hazardous waste; use labeled bins; store batteries in fire-resistant containers; keep waste in ventilated, secured areas.
- **Safe Disposal** – Dispose of waste only through certified recyclers; maintain receipts and compliance records.
- **Use of PPE** – Gloves, masks, goggles, and antistatic straps while handling batteries, circuit boards, and chemicals.
- **Containment Measures** – Use trays for spills, keep bins covered, isolate damaged batteries.
- **Record-Keeping & Audits** – Maintain logs of waste movement, disposal documents, and support audit activities.

Say

Let us participate in an activity to understand this unit better.

Activity

Waste Sorting Drill (3–4 minutes):

Instructions

1. Place three labeled bins/cards: Hazardous Waste, Non-Hazardous Waste, Requires PPE.
2. Show items (damaged battery, PCB, cracked display, cable, plastic housing).
3. Learners point to or place items into the correct category.
4. Trainer confirms the correct handling method and safety precautions.

Activity	Duration	Resources used
Role Play activity	60 minutes	Participant handbook, whiteboard, laptop, notebook, pen, pencil, marker, etc.

Do

- Ensure that all trainees participate in the class.
- Encourage the non-participating trainees to open up and speak.

Notes for Facilitation

- Ask them to answer the questions given in the participant manual.
- Ensure that all the participants answer every question.
- Answer all the doubts raised by the trainees in the class
- Discuss the proper communication technique in group discussion

UNIT 4.3: Sustainable Repair Practices

Unit Objectives

After the completion of this unit, participants will be able to:

1. Appropriate repair techniques to reduce waste and energy consumption.
2. Select and use energy-efficient and eco-friendly spare parts.
3. Assess, test, and catalog reusable parts for future use, reducing procurement and material waste.
4. Minimize the use of single-use materials in repairs.
5. Follow a systematic diagnosis process using appropriate tools and documentation to prevent the wastage of functional components.

Resources to be Used

Participant handbook, whiteboard, flipchart, markers, laptop, pen, notebook, multimeter, testing jig, sample spare parts, packaging materials, toolkits.

Note

In this unit, we will discuss sustainable repair practices that reduce waste, conserve energy, and promote reuse in telecom equipment handling.

Say

Good morning and welcome back to this training program on Sustainable and Environment-Friendly Repair Practices in Telecom Equipment Handling.

Ask

Ask the participants the following questions:

- How can repair techniques help reduce e-waste?
- What spare parts are considered eco-friendly or energy-efficient?
- How do you identify parts that can be reused?
- What single-use materials do you frequently see during repair work?
- Why is systematic diagnosis important before replacing any component?

Write down the trainees' answers on the whiteboard/flipchart. Draw appropriate cues from the answers and start teaching the lesson.

Elaborate

In this session, we will discuss the following points:

- Sustainable Repair Techniques – Repair instead of replace whenever feasible; use proper tools to avoid damage; follow energy-efficient work practices.
- Eco-Friendly Spare Parts – Choose durable, energy-efficient, and recyclable parts to reduce long-term waste.
- Reusable Parts Management – Test, clean, and catalog components such as housings, ports, cables, and minor-fault PCBs for future reuse.
- Reducing Single-Use Materials – Avoid excessive use of tapes, sleeves, packing foam, and disposable consumables.
- Systematic Diagnosis – Use proper testing tools, follow checklists, and document findings to avoid unnecessary replacement of functional parts.

Say

Let us participate in an activity to understand this unit better.

Activity

Waste Bin Match"Instructions (3–4 minutes):

1. Display different items: slightly damaged housing, working charger, scratched display, loose connector, torn packaging, burnt IC.
2. Ask learners to classify each item as: Repairable, Reusable, or Needs Replacement.
3. Encourage them to justify their choice based on sustainability principles.
4. Trainer confirms correct decisions and highlights repair techniques or reuse possibilities.

Activity	Duration	Resources used
Repair/Replace – Decision Activity	60 minutes	Participant handbook, whiteboard, laptop, notebook, pen, pencil, marker, etc.

Notes for Facilitation

- Ask them to answer the questions given in the participant manual.
- Ensure that all the participants answer every question.
- Answer all the doubts raised by the trainees in the class
- Discuss the proper communication technique in group discussion

UNIT 4.4: Sustainable Repair Practices

Unit Objectives

After the completion of this unit, participants will be able to:

1. Follow organizational sustainability policies in repair operations.
2. Coordinate with certified recyclers for safe e-waste disposal.
3. Document waste transfers for compliance and traceability.
4. Participate in sustainability and environmental training programs.
5. Promote sustainability awareness among colleagues and customers.

Resources to be Used

Participant handbook, whiteboard, flipchart, markers, laptop, notebook, pen, sample forms, compliance logs, recycler certificates.

Note

In this unit, we will discuss organizational sustainability procedures, documentation practices, and internal coordination for responsible e-waste management.

Say

Good morning and welcome back to this training session on Organizational Sustainability Protocols and Compliance in E-Waste Handling.

Ask

Ask the participants the following questions:

- What sustainability policies does your organization follow during repair activities?
- How do you coordinate with authorized recyclers for e-waste collection?
- What records or documents are maintained during waste transfer?
- Have you attended any environmental or sustainability training programs?
- How can you promote sustainability practices among team members or customers?

Write down the trainees' answers on the whiteboard/flipchart. Draw appropriate cues from the answers and start teaching the lesson.

Elaborate

In this session, we will discuss the following points:

- Organizational Sustainability Policies – Follow internal guidelines on waste reduction, repair efficiency, reuse, and safe disposal.
- Coordination with Certified Recyclers – Handover waste only to approved recyclers; verify certification and maintain receipts.
- Documentation & Traceability – Record waste type, transfer date, recycler details, and maintain compliance logs.
- Training Participation – Attend periodic sustainability workshops and updates on environmental standards.
- Promoting Awareness – Encourage colleagues and customers to follow eco-friendly repair and disposal practices.

Say

Let us participate in an activity to understand this unit better.

Activity

Compliance Checkpoint

Instructions (3–4 minutes):

1. Provide sample documents (waste transfer forms, recycler receipts, sustainability guidelines).
2. Ask learners to identify:

- Which documents are needed for compliance
- Which reflect recycler authorization
- Which records ensure traceability

3. Learners briefly explain why each document is important.
4. Trainer validates answers and highlights key compliance steps.

Activity	Duration	Resources used
Repair/Replace – Decision Activity	60 minutes	Participant handbook, whiteboard, laptop, notebook, pen, pencil, marker, etc.

Notes for Facilitation

- Ask them to answer the questions given in the participant manual.
- Ensure that all the participants answer every question.
- Answer all the doubts raised by the trainees in the class
- Discuss the proper communication technique in group discussion

Exercise

Answers to exercises for PHB

Multiple Choice Questions

1. b. To turn a piece of waste into a reusable asset
2. c. Lithium-ion batteries
3. b. To track hazardous waste from its point of generation to its final disposal
4. c. It reduces lead contamination and is required by many regulations.
5. a. To check for compliance with regulations and identify areas for improvement

Fill in the Blanks

1. refurbishable component.
2. recyclable
3. functional test
4. waste manifest
5. hazardous and non-hazardous waste

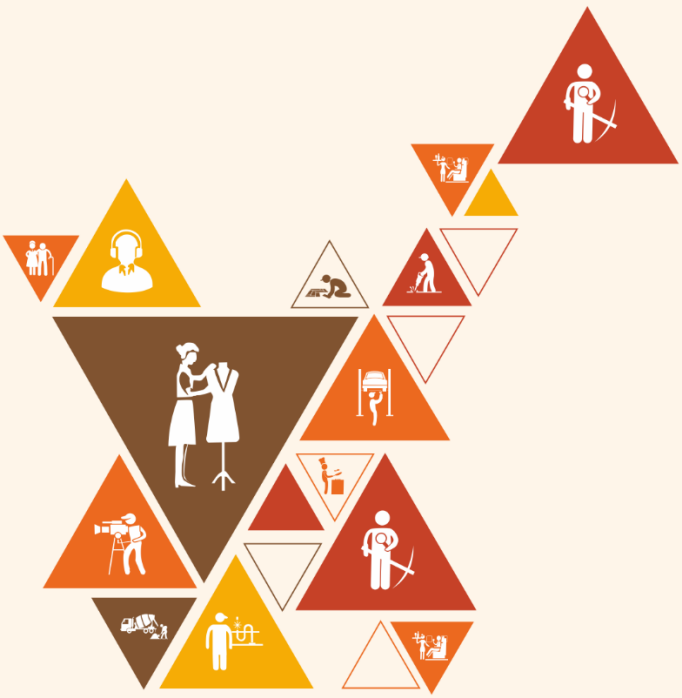
Short Questions (Answers)

1. Reusable, Refurbishable, and Recyclable components.
2. Lithium, lead, or other heavy metals (any one is correct).
3. To remove harmful fumes and prevent inhalation of toxic soldering smoke.
4. By using efficient tools, avoiding unnecessary rework, and following proper diagnosis before replacing parts.
5. They reduce costs, minimize waste, support sustainability, and extend component life.
6. To ensure compliance, maintain traceability, and verify proper disposal through authorized recyclers.

Notes

5. Employability Skills (60 Hours)

It is recommended that all training include the appropriate. Employability Skills Module. Content for the same can be accessed https://www.skillindiadigital.gov.in/content/list



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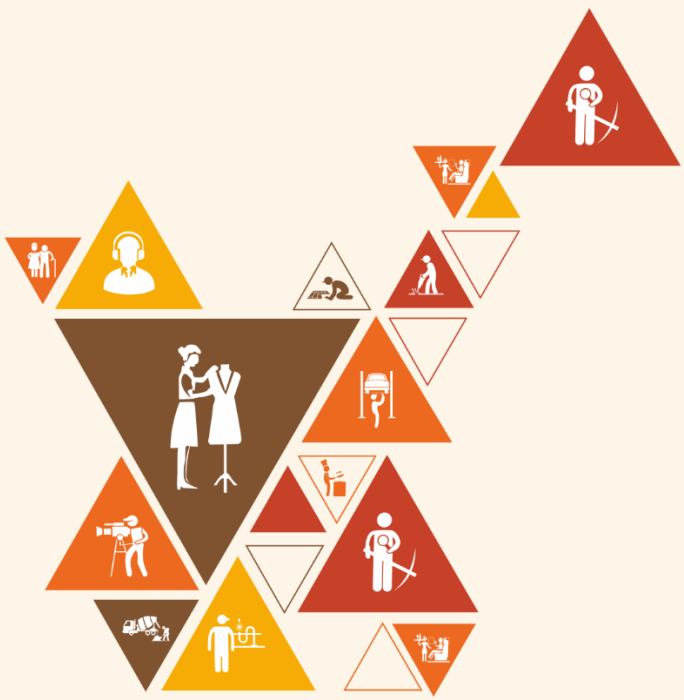
6. Annexure

Annexure I: Training Delivery Plan

Annexure II: Assessment Criteria

Annexure III: List of QR Codes used in PHB



Annexure I
Training Delivery Plan

Training Delivery Plan			
Program Name:	Telecom E-Waste Handler		
Qualification Pack Name & Ref. ID	TEL/Q2400		
Version No.	5.0	**Version Update Date**	30/12/2021
Pre-requisites to Training (if any)	Not Applicable		
Training Outcomes	**By the end of this program, the participants will be able to:** 1. Identify a Telecom E-Waste Handler's role, responsibilities and scope of work. 2. Implement various techniques to promote appropriate e-waste handling and disposal. Discuss how to plan work effectively, implement safety practices and optimise the use of resources. 3. Demonstrate how to communicate, develop interpersonal skills and become gender and Person with Disability (PwD) sensitive.		

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
1	Role and Responsi-bilities of a Telecom E-Waste8 Theory (5:00) Practical (3:00)	Introduc-tion to mining	• Describe the size and scope of the Telecom industry and its various sub-sectors	Bridge module	Classroom lecture / PowerPoint Presentation / Question & Answer / Group Discus-Sion	Laptop with soft-ware like MS Office and inter-net, White-board, Marker, Projector	7 Theory (5:00) Practical (2:00)
		Introduc-tion to the job role	• Discuss the various opportunities for Telecom E-waste Handler in the Telecom industry. • List the role and responsibilities of a Telecom E-waste Handler				7 Theory (5:00) Practical (2:00)

		Organi-sational practices	• Analyse the organisational policies on incentives, delivery standards, personnel management and public relations (PR) pertinent to the job role. • Discuss the importance of seeking help from experts during any stage of main activity in order to avoid any escalation				8 Theory (5:00) Practical (3:00)
		Scope of work	• Maintaining records of e-waste handled or generated • Promoting the importance of e-waste management and the risks associated with improper handling • Maintaining log records and packaging collected e-waste for transportation to the central warehouse				8 Theory (5:00) Practical (3:00)
2	Handling E-Waste Properly	Promote impor-tance of telecom e-waste disposal	• Explain the hazardous effects of improper disposal of telecom e-waste to retailers/ refurbisher/recyclers of Telecom waste.	TEL/N2401 PC1	Classroom lecture / PowerPoint Presentation / Question & Answer / Group Discus-sion	Laptop with soft-ware like MS Office and Inter-net, White-board, Marker, Projector, Personal Protection Equipment: Safety glasses, Head protection, Rubber gloves, Safety footwear, Warning signs and tapes, Fire extinguish-er and First aid kit	8 Theory (4:00) Practical (4:00)
			• Elaborate the principle od reduce, recycle, reuse (3 R's) for managing telecom e-waste	TEL/N2401 KU13			7 Theory (3:00) Practical (4:00)
			• Discuss the best practices to be followed for proper disposal of telecom e-waste with the stakeholders	TEL/N2401 PC2			8 Theory (4:00) Practical (4:00)
			• Employ various methods for conducting a survey within concerned people and stakeholders to check their understanding of telecom e-waste disposal	TEL/N2401 PC3, KU4			8 Theory (4:00) Practical (4:00)

			• Demonstrate how to document the result of surveys in proper format and as per prescribed recording norms.	TEL/N2401 PC4			8 Theory (4:00) Practical (4:00)
		Manage telecom e-waste	• Perform steps for identifying telecom e- waste sources and then planning and visiting the telecom site for collecting e-waste	TEL/N2401 PC5			8 Theory (4:00) Practical (4:00)
			• Illustrate the process of e-waste collection from telecom sites as per the pre-appointed schedule	TEL/N2401 PC6			8 Theory (4:00) Practical (4:00)
			• Demonstrate the process of separation/ segregation of e-waste components	TEL/N2401 PC7			8 Theory (4:00) Practical (4:00)
			• Use proper containers/bags to collect telecom e-waste, • Demonstrate the use of appropriate PPE kits for e-waste collection	TEL/N2401 PC8			8 Theory (4:00) Practical (4:00)
			• Discuss about ESD and precautions to be taken while handling telecom e-waste	TEL/N2401 KU11			7 Theory (3:00) Practical (4:00)
			• Demonstrate how to issue e-waste collection receipt/ certificate to stakeholders after collecting e-waste from them.	TEL/N2401 PC9			8 Theory (4:00) Practical (4:00)
			• Emphasize on the significance of timely arranging for transport to move the e- waste from collection centre to e-waste handling centre/warehouse	TEL/N2401 PC10			8 Theory (4:00) Practical (4:00)

			• Explain the procedure for initiating the process for safe transportation of the e- waste components, avoiding leaks/ spillages	TEL/N2401 PC11, KU5			8 Theory (4:00) Practical (4:00)
			• Implement different methods for basic separation/ segregation of the components after collecting the telecom e-waste in proper containers/bags, using proper PPE	TEL/N2401 PC12, KU7			8 Theory (3:00) Practical (5:00)
			• Carry out proper stacking, packaging / containerization while ensuring physical integrity	TEL/N2401 PC13			8 Theory (3:00) Practical (5:00)
			• Perform steps for weighing and labelling the e-waste as per standard operating procedure	TEL/N2401 PC14			8 Theory (3:00) Practical (5:00)
			• Perform required steps to ensure that proper records are maintained for key parameters such as the source, nature of e-waste collected, date, weight, etc.	TEL/N2401 PC15			8 Theory (3:00) Practical (5:00)
			• Discuss the need for following warehouse etiquette while operating/working in the warehouse	TEL/N2401 PC16, KU8			8 Theory (3:00) Practical (5:00)
			• Implement appropriate firefighting techniques in case of an emergency in the warehouse while managing or handling e- waste.	TEL/N2401 PC17, KU10			8 Theory (3:00) Practical (5:00)

		Handle e-waste with safety and standardized precautions	• Elucidate the significance of adhering to organisational norms for personal hygiene, workplace hygiene and sanitation practices	TEL/N2401 PC18			8 Theory (3:00) Practical (5:00)
			• Apply suitable techniques to cleaning and disinfecting material, tools and supplies before and after use/ handling	TEL/N2401 PC19			8 Theory (3:00) Practical (5:00)
			• Describe how to report signs/ symptoms of illness of self and/or colleagues to concerned authorities as soon as possible	TEL/N2401 PC20			7 Theory (3:00) Practical (4:00)
			• Demonstrate how to dispose-off hazardous e-waste as per standard processes specified	TEL/N2401 PC21, KU16			7 Theory (3:00) Practical (4:00)
3	Plan Work Effectively, Optimise Resources and Implement Safety Practices	Perform work as per quality standards	• Employ appropriate ways to keep the workspace clean and tidy • Discuss how to perform individual roles and responsibilities as per the job role while taking accountability for the work • Show how to record/ document tasks completed as per the requirements within specific timelines • Perform the steps to implement schedules to ensure the timely completion of tasks • Identify the cause of a problem related to your work and validate it	TEL/N9101 PC1, PC2, PC3, PC4, PC5, PC6	Classroom lecture / PowerPoint Presentation / Question & Answer / Group Discussion / Quiz	White-board/ blackboard marker / chalk, Duster, Computer or Laptop attached to LCD projector, Personal Protection Equipment: Safety glasses, Head protection, Rubber gloves, Safety footwear, Warning signs and tapes, Fire extinguisher and First aid kit	8 Theory (4:00) Practical (4:00)

			• Apply appropriate techniques to analyse problems accurately and communicate different possible solutions to the problem				
		Maintain a safe, healthy and secure working	• Discuss how to comply with the organisation's current health, safety, security policies and procedures • Demonstrate the steps to check for water spills in and around the workspace and escalate these to the appropriate authority • Practice reporting any identified breaches in health, safety, and security policies and procedures to the designated person • Use safety materials such as goggles, gloves, earplugs, caps, ESD pins, covers, shoes, etc. • Apply required precautions to avoid damage of components due to negligence in ESD procedures or any other loss due to safety negligence • Explain the importance of regularly participating in fire drills or other safety-related workshops organised by the company	TEL/N9101 PC7, PC8, PC9, PC10, PC11, PC12, PC13, PC14			7 Theory (2:00) Practical (5:00)

			• Identify hazards such as illness, accidents, fires or any other natural calamity safely, as per the organisation's emergency procedures, within the limits of the individual's authority • Discuss the significance of reporting any hazard outside the individual's authority to the relevant person in line with organisational procedures and warn others who may be affected others who may be affected				
			• Explain how to maintain appropriate posture while sitting/ standing for long hours • Employ appropriate techniques to handle heavy and hazardous materials with care while maintaining an appropriate posture • Discuss the importance of sanitising workstations and equipment regularly • Show how to clean hands with soap and alcohol-based sanitiser regularly • Discuss how to avoid contact with anyone suffering from communicable diseases and take necessary precautions	TEL/N9101 PC15, PC16, PC17, PC18, PC19, PC20, PC21, PC22			7 Theory (2:00) Practical (5:00)

			• List the safety precautions to be taken while travelling, e.g., maintain a 1m distance from others, sanitise hands regularly, wear masks, etc. • Role-play a situation to report hygiene and sanitation issues to the appropriate authority • Discuss how to follow recommended personal hygiene and sanitation practices, for example, washing/ sanitising hands, covering the face with a bent elbow while coughing/sneezing, using PPE, etc.				
		Energy conserva-tion and waste manage-ment	• Apply appropriate ways to optimise the usage of material, including water, in various tasks/ activities/processes • Use resources such as water, electricity and others responsibly • Demonstrate the steps to carry out routine cleaning of tools, machines and equipment • Apply appropriate ways to optimise the use of electricity/ energy in various tasks/activities/ processes • Perform periodic checks of the functioning of the equipment/machine and rectify wherever required	TEL/N9101 PC23, PC24, PC25, PC26, PC27, PC28, PC29, PC30, PC31, PC32, KU19,KU20, KU21, KU22			8 Theory (2:00) Practical (6:00)

			• Explain the significance of reporting malfunctioning and lapses in the maintenance of equipment • Use electrical equipment and appliances properly • Identify recyclable, non-recyclable and hazardous waste • Apply appropriate ways to deposit recyclable and reusable material at the identified location • Explain the process to dispose of non-recyclable and hazardous waste as per recommended processes				
4	Interact Effectively with Team Members and Customers	Interact effectively with superiors	• Explain how to receive work requirements from superiors and customers and interpret them correctly • Role-play a situation to inform the supervisor and/or concerned person about any unforeseen disruptions or delays • Practice participating in decision-making by providing facts and figures, giving/ accepting constructive suggestions • Practice rectifying errors as per feedback and ensure the errors are not repeated	TEL/N9102 PC1, PC2, PC3, PC4	Classroom lecture / PowerPoint Presentation / Question & Answer / Group Discussion / Quiz	White-board and Markers, Chart paper and sketch pens, LCD Projector and Laptop for presentations, Sample of escalation matrix, organisation structure	8 Theory (3:00) Practical (5:00)

		Interact effectively with colleagues and customers	• Discuss how to comply with the organisation's policies and procedures for working with team members • Apply appropriate modes of communication, such as face-to-face, telephonic and written, to communicate professionally • Show how to respond to queries and seek/ provide clarifications if required	TEL/N9102 PC5, PC6, PC7			8 Theory (3:00) Practical (5:00)
			• Illustrate the process to coordinate with the team to integrate work as per requirements • Discuss how to resolve conflicts within the team/with customers to achieve a smooth workflow • Discuss how to recognise emotions accurately in self and others to build good relationships • prioritise team and organisation goals above personal goals	TEL/N9102 PC8, PC9, PC10, PC11			8 Theory (3:00) Practical (5:00)
		Respect differences of gender and ability	• Use inclusive language irrespective of the gender/ disability of the person • Demonstrate appropriate behaviour towards all genders and differently abled people • Scrutinise about the different types of disabilities with their respective issues. • State the work ethics, workplace etiquettes as well as standards and guidelines for all genders and PwD.	TEL/N9102 PC12, PC13, PC16, PC14, PC15			8 Theory (3:00) Practical (5:00)

			• List health and safety requirements for persons with disability. • Describe the rights, duties and benefits available at workplace for person with disability. • Explore the process of recruiting people with disability for a specific job. • Discuss the specific ways to help people with disability to overcome the challenges. • Prepare a list of institutes and government schemes that help PwD in overcoming challenges • Demonstrate the ideal behaviour with a PwD in an organization				

Annexure II
Assessment Criteria

CRITERIA FOR ASSESSMENT OF TRAINEES

Assessment Criteria for Telecom E-Waste Handler	
Job Role	Telecom E-Waste Handler
Qualification Pack	TEL/Q2400, V5.0
Sector Skill Council	Telecom Sector Skill Council

S. No.	Guidelines for Assessment
1	Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.
2	The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3	Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/ option NOS/set of NOS.
4	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6	To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.
7	In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
TEL/N2401. Undertake telecom e-waste collection, handling, and disposal operations	30	50	–	20	100	75
TEL/N9108. Follow sustainability practices in telecom operations	30	50	–	20	100	15
DGT/VSQ/N0101. Employability Skills (30 Hours)	20	30	–	50	100	10
Total	80	130	–	40	250	100

Annexure - III

QR Codes –Video Links

Module No.	Unit No.	Topic Name	Link for QR Code (s)	QR code (s)
1.Introduction to FMCG	UNIT 1.1: Introduction to the Telecom Industry in India	1.1.1 Introduction to the Telecom Sector in India	youtu.be/Cag-bcbivtM	Introduction to the Telecom Sector in India
		1.1.3 Indian Handset Market	youtu.be/mcHW-EBh4Iw	Indian Handset Market
		1.1.4 Top Handset Manufacturers in India	youtu.be/0O8UoLcYYbI	Top Handset Manufacturers in India
		1.1.5 Regulatory Authorities in the Telecom Industry in India	youtu.be/VeoHhkjV6qo	Regulatory Authorities in the Telecom Industry in India
	UNIT 1.2: Introduction to E-Waste	1.2.1 What is Waste?	youtu.be/pb0O_gR7fQo	What is Waste?

Module No.	Unit No.	Topic Name	Link for QR Code (s)	QR code (s)
		1.2.2 Electronic Waste	youtu.be/dq7bBZUFR14	Electronic Waste
		1.2.3 Break-up of e-waste Generated in India	youtu.be/dI-DEBygfRg	Break-up of e-waste Generated in India
		1.2.4 E-Waste Awareness	youtu.be/aHaySL8EL6g	E-Waste Awareness
		1.2.5 E-Waste Problems	youtu.be/bEw34DyFBS4	E-Waste Problems
		1.2.6 E-Waste Recycling in India	youtu.be/blUf9WRHt7w	E-Waste Recycling in India

Module No.	Unit No.	Topic Name	Link for QR Code (s)	QR code (s)
		1.2.8 Gener- al Guidelines for Collection and Storage of E-Waste	youtu.be/E-JixTdyCoQ	General Guide- lines for Collec- tion and Storage of E-Waste
Module 2: Handling E- Waste Properly	UNIT 2.1: Need for Proper E-Waste Dis- posal	2.1.1 Effects of Improper Dis- posal of Telecom E-Waste	www.youtube.com/ watch?v=zB1nML5GMxw	Effects of Im- proper Disposal of Telecom E-Waste
		2.1.2 E-Waste Recycling	youtu.be/blUf9WRHt7w	E-Waste Recy- cling
		2.1.5 Responsi- bilities Assigned to Various Stakeholders for Disposal of Tele- com E-Waste	youtu.be/6i96r8LGUXU	Responsibilities Assigned to Var- ious Stakehold- ers for Disposal of Telecom E-Waste

Module No.	Unit No.	Topic Name	Link for QR Code (s)	QR code (s)
	UNIT 2.2: E-waste Collection and Treatment from Telecom Sites	2.2.1 Collection and Processing of E-waste from Telecom Site	www.youtube.com/watch?v=aUwFXDLOFO0	Collection and Processing of E-waste from Telecom Site
		2.2.3 Providing Certificates to Stakeholders after Collecting E-waste	www.youtube.com/watch?v=a1Co8a8GuT4	Providing Certificates to Stakeholders after Collecting E-waste
	UNIT 2.3 Collection, Transportation & Storage of E-waste	2.3.1 Safe Transportation of the E-Waste	www.youtube.com/watch?v=nWd-H7XqmsM	How should e-waste be processed?
	UNIT 2.4 Warehouse Etiquettes	2.3.4 Disposal of Hazardous E-Waste	www.youtube.com/watch?v=vb9QFjkEmAU	Health and Safety Measures
	UNIT 2.5 Organisational Safety and Hygiene Practices	2.5.2 Maintain Personal Hygiene	www.youtube.com/watch?v=l-jzAe-SQtzk	Maintain Personal Hygiene

Module No.	Unit No.	Topic Name	Link for QR Code (s)	QR code (s)
		2.5.2 Maintain Personal Hygiene	www.youtube.com/watch?v=QEB7wE-YFXg	Personal Protective Equipment (PPE) while Telecom Handling E-waste
		2.5.4 Causes of accidents while Handling E-Waste	www.youtube.com/watch?v=ntEVHTqsq6A	Causes of accidents while Handling E-Waste
		2.5.6 Safety Guidelines for Collecting E-Waste	www.youtube.com/watch?v=1k19eXJ3dH4	Safety Guidelines for Collecting E-Waste
		2.5.7 Fire Safety	www.youtube.com/watch?v=UlKS_A7Xg1E	Fire Safety

NCVET
कौशल गुणवत्ता प्रगति

Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
RE IMAGINE FUTURE

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