

PM - SURYA GHAR : MUFT BIJLI YOJANA

Rooftop Solar PV (Installation & Maintenance)

SOP

Standard Operating Procedure



List of Abbreviations

AEBAS	Aadhaar Enabled Biometric Attendance System
CBT	Computer Based Test
CITS	Craft Instructor Training Scheme
CTS	Craftsmen Training Scheme
DGT	Directorate General of Training
FY	Financial Year
GW	Gigawatt
ID	Identification Document
IT	Information technology
ITIs	Industrial Training Institutes
IToT	Institutes of Training of Trainers
MNRE	Ministry of New and Renewable Energy
MSDE	Ministry of Skill Development and Entrepreneurship
NCVET	National Council for Vocational Education and Training
NDCs	Nationally Determined Contributions
NIMI	National Instructional Media Institute
NSDC	National Skill Development Corporation
NSQF	National Skills Qualification Framework
NSTIs	National Skill Training Institutes
OJT	On Job Training
PIA	Project Implementing Agency
PM	Pradhan Mantri
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PMSGMBY	PM-Surya Ghar: Muft Bijli Yojana
PV	Photovoltaic
RDSDEs	Regional Directorate of Skill Development & Entrepreneurship
REC	Rural Electrification Corporation
RTS	Rooftop solar system
SIDH	Skill India Digital Hub
SOP	Standard Operating Procedure
SPoC	Single Point of Contact
TC	Training Centre
ToT	Training of Trainers
TP	Training Partner
UNFCCC	United Nations Framework Convention on Climate Change

Standard Operating Procedure (SOP) Skilling Component for Implementation PM - Surya Ghar: Muft Bijli Yojana

1. Background:

1.1. Introduction

The Government of India approved the PM - Surya Ghar: Muft Bijli Yojana on 29th February 2024. The program aims to increase the share of solar rooftop capacity and empower residential households to generate their own electricity. With an outlay of Rs 75,021 crore and a timeline extending until FY 2026-27, the scheme has the following objectives:

Objective 1: Achieve 1 crore rooftop solar system (RTS) installations in the residential sector.

Objective 2: Provide free/low-cost electricity to 1 crore households, up to 300 units of electricity per month.

Objective 3: Produce renewable electricity amounting to 1,000 billion units, reducing CO2 emissions by 720 million tons over 25 years.

Objective 4: Develop the necessary ecosystem for rooftop solar projects, including regulatory support, manufacturing, supply chain, vendor network, and operation & maintenance facilities.

Objective 5: Boost the local economy and employment generation along with enhanced energy security.

Objective 6: Contribute to India's green climate commitments under its NDCs at UNFCCC by installing 30 GW of rooftop solar capacity by 2026-27.

1.2. Skilling Component

The successful implementation of the scheme relies heavily on extensive training of Solar Technicians across India. The skilling component aims to create a workforce capable of installing, maintaining, and supporting widespread solar technology usage. The scheme anticipates creating opportunities for approximately 1,00,000 Solar PV Technicians.

2. Strategy and Implementation:

2.1. Skilling Framework

2.1.1 Targeted Candidates: Individuals trained in Electrician, Wireman, Electrician Power Distribution, Electronic Mechanic trades under CTS/CITS who have passed out or are in their final year from ITIs/NSTIs will be targeted for 5 days of institutional training and minimum 2 days of on-the-job training (OJT). Training will be imparted in following trades-

SL. No.	Name of training Program	Entry Qualification	Duration	NSQF Level
1.	Rooftop Solar PV (Installation & Maintenance) Trainer	Rooftop Solar PV (Installation & Maintenance) Trainer Instructor of ITIs/NSTIs/ IToTs in Solar Technician and Electrician trades	15 hours (2 days)	4

2.	Rooftop Solar PV (Installation & Maintenance)	CTS/CITS candidates (pursuing Final year or pass-out) in Electrician, Wireman, Electrician Power Distribution, Electronics Mechanic trades	60 hours (7 days) including 15 hours of OJT	3
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2.1.2 Upskilling and Training: Training will be imparted through Industrial Training Institute (ITIs), /NSTIs focusing on solar power installation and maintenance. The curriculum will include both theoretical and practical components aligned with the scheme's needs.

2.2. Training of Trainers:

National Skill Training Institute (NSTI's) & ITIs will conduct training for trainers using their master trainers, who may have received training in solar-related areas .

2.3. Training Partner:

National Instructional Media Institute (NIMI) will act as the training partner for this project.

2.4. Training Centers:

ITIs and NSTIs will serve as training centers.

2.5. Stakeholders' Engagement:

MNRE will collaborate closely with MSDE to ensure that skilling initiatives align with the overall scheme goals.

2.6. On- the Job training:

Minimum Two days of OJT will be provided by vendors. Ministry of New and Renewable Energy (MNRE) and Rural Electrification Corporation (REC) will co-ordinate to connect the ITIs with vendors.

3. Stakeholders and Their Roles & Responsibilities:

3.1. Directorate General of Training (DGT), Ministry of Skill Development and Entrepreneurship (MSDE)

- i. Designated as the nodal agency for the skilling component.
- ii. Actings as the Project Implementing Agency (PIA) for upskilling and ToT across the country
- iii. Developing the framework for skill training of 1 lakh candidates in consultation with MNRE.
- iv. Providing overall guidance and supervision for curriculum development, content, and pedagogy.
- v. Responsible for assessment, certification, and monitoring of training programs.

3.2. National Instructional Media Institute (NIMI)

- i. Training Partner for PMSGMBY Scheme in ITIs/NSTIs.
- ii. Conducting assessments.
- iii. Acting as agency with NSDC, RDSDEs, ITIs, and NSTIs
- iv. Processing bills and maintaining all records and trade-wise files.
- v. Managing grievance redressal mechanisms to resolve candidate queries.

- vi. Conducting outreach activities to attract potential candidates for skill development training.
- vii. Ensuring widespread awareness about the scheme through various promotional activities.
- viii. Maintaining the quality standards and guidelines as per PMKVY.
- ix. Collecting feedback from trainees and other stakeholders to improve training programs.
- x. Fulfilling the roles and responsibilities of training partners as per PMKVY.

3.3. National Council for Vocational Education and Training (NCVET)

- i. Provides guidance and approvals for curriculum.

3.4. Ministry of New and Renewable Energy (MNRE)

- i. Identifying industries/locations for skill training in terms of OJT.
- ii. Supports the identification of potential industries/clusters and candidates.
- iii. Encouraging private sector participation in upskilling.
- iv. Facilitating vendor placement of ITI trainees through vendors.
- v. Coordinates with vendors for the linkage with ITIs and vendors for OJT

3.5. National Skill Development Corporation (NSDC)

- i. Providing a list of candidates trained in relevant job roles under PMKVY.
- ii. Providing technical support and monitoring for the training lifecycle.
- iii. Providing the assistance for the operating on SIDH portal.

3.6 Training Center (NSTIs/ITIs)

- i. Mobilising and motivating the candidates and enrol them for the training on SIDH portal.
- ii. Conducting training sessions as per the curriculum provided by the training partner
- iii. Ensuring facilities and equipment are adequate as per curriculum for training delivery.
- iv. Maintaining records of attendance, performance, and feedback of candidates..
- v. Submitting regular report, progress and challenges to the training partner.

3.7 Trainer

- i. Delivering training sessions to candidates as per approved curriculum.
- ii. Evaluating candidates progress and providing feedback.
- iii. Participating in training workshops organized by the training partner.

4. Standard Operating Procedure (SOP):

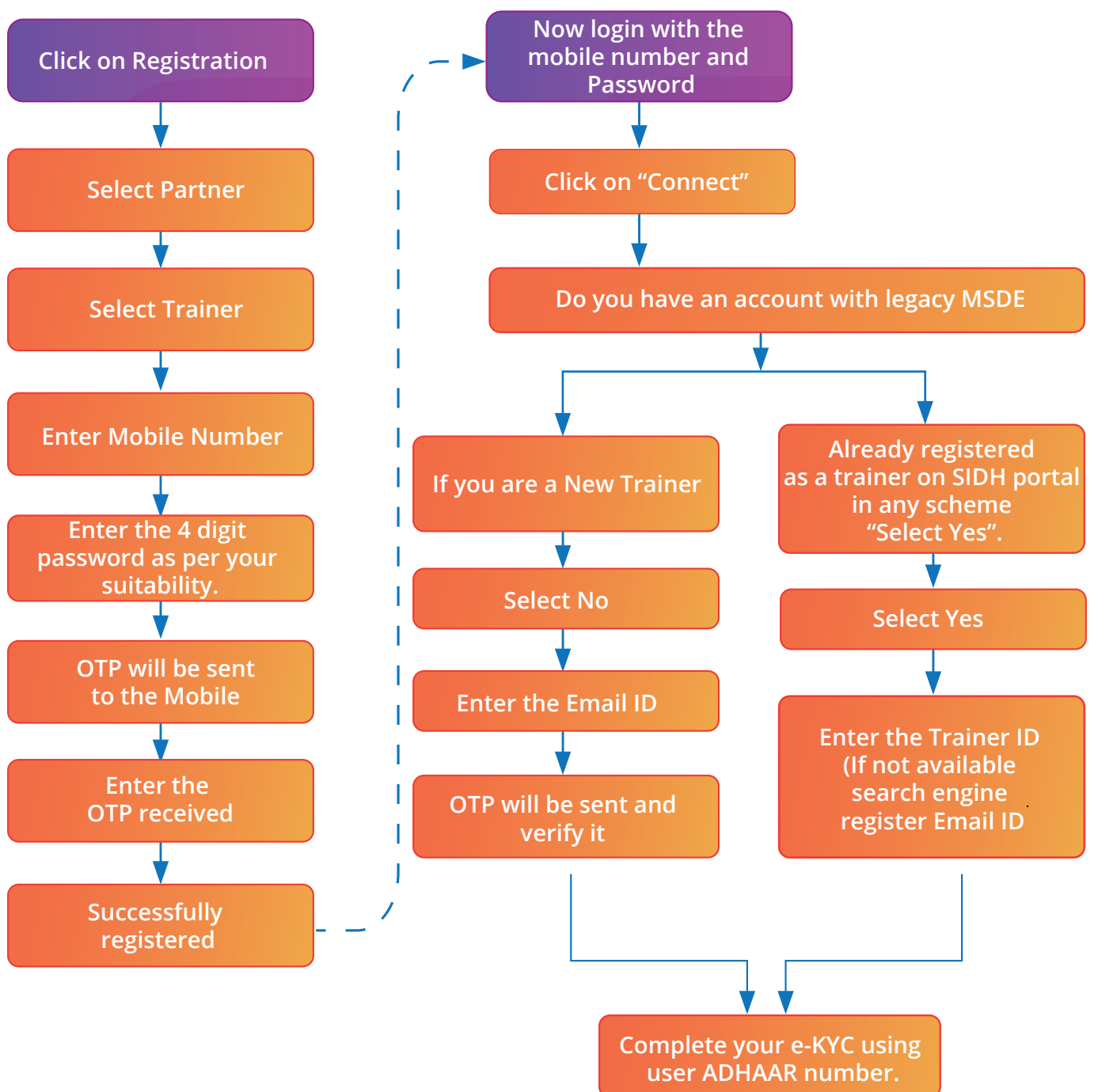
4.1 Objective: To effectively implement the skilling component of the scheme by training 100,000 candidates through a structured process managed via SIDH portal.

4.2 Process Flowchart:

Step 1: TP Registration- Already created

Step 2: Trainers Registration- To be done by respective Trainers of NSTIs/ITIs.

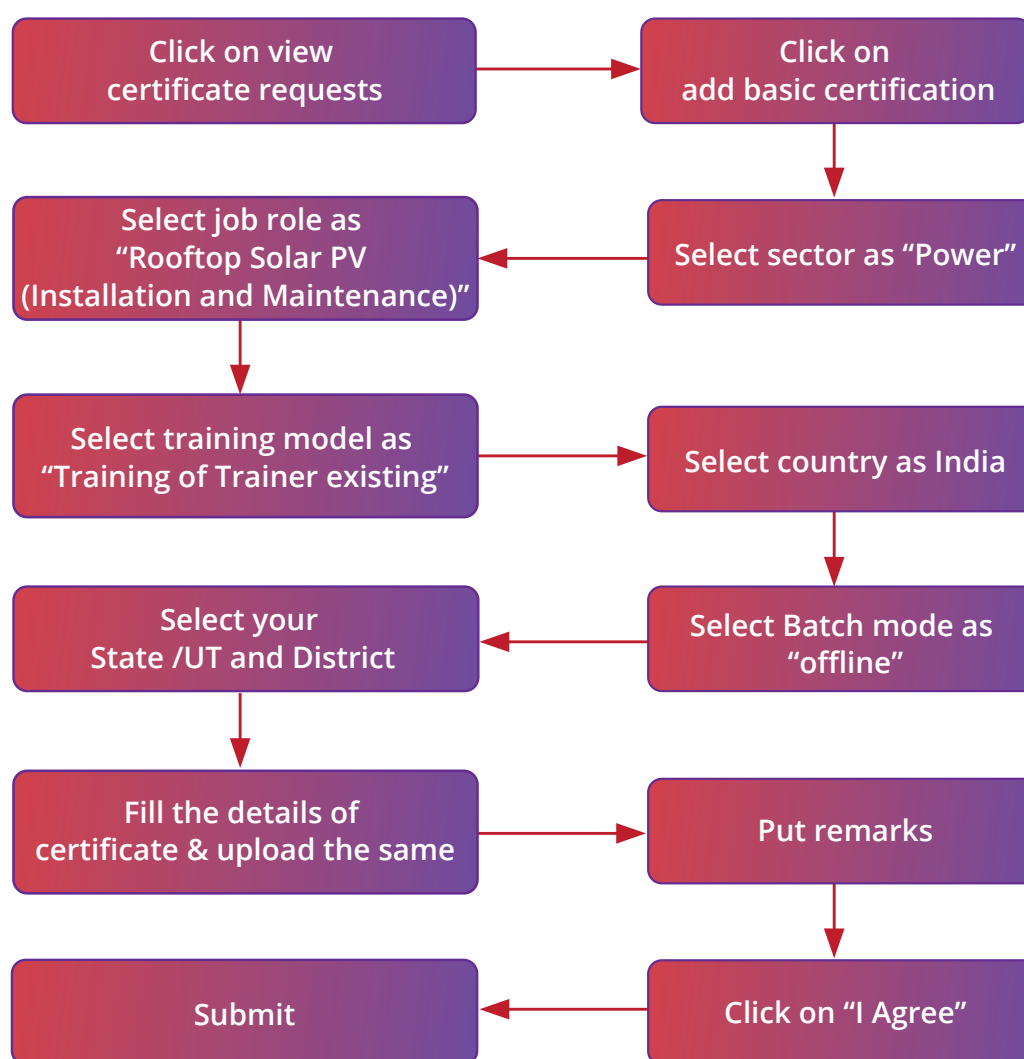
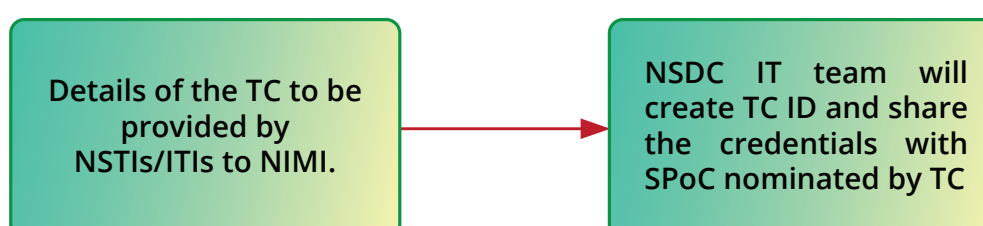
Step 2.1: Flow chart of Trainer registration on SIDH portal.



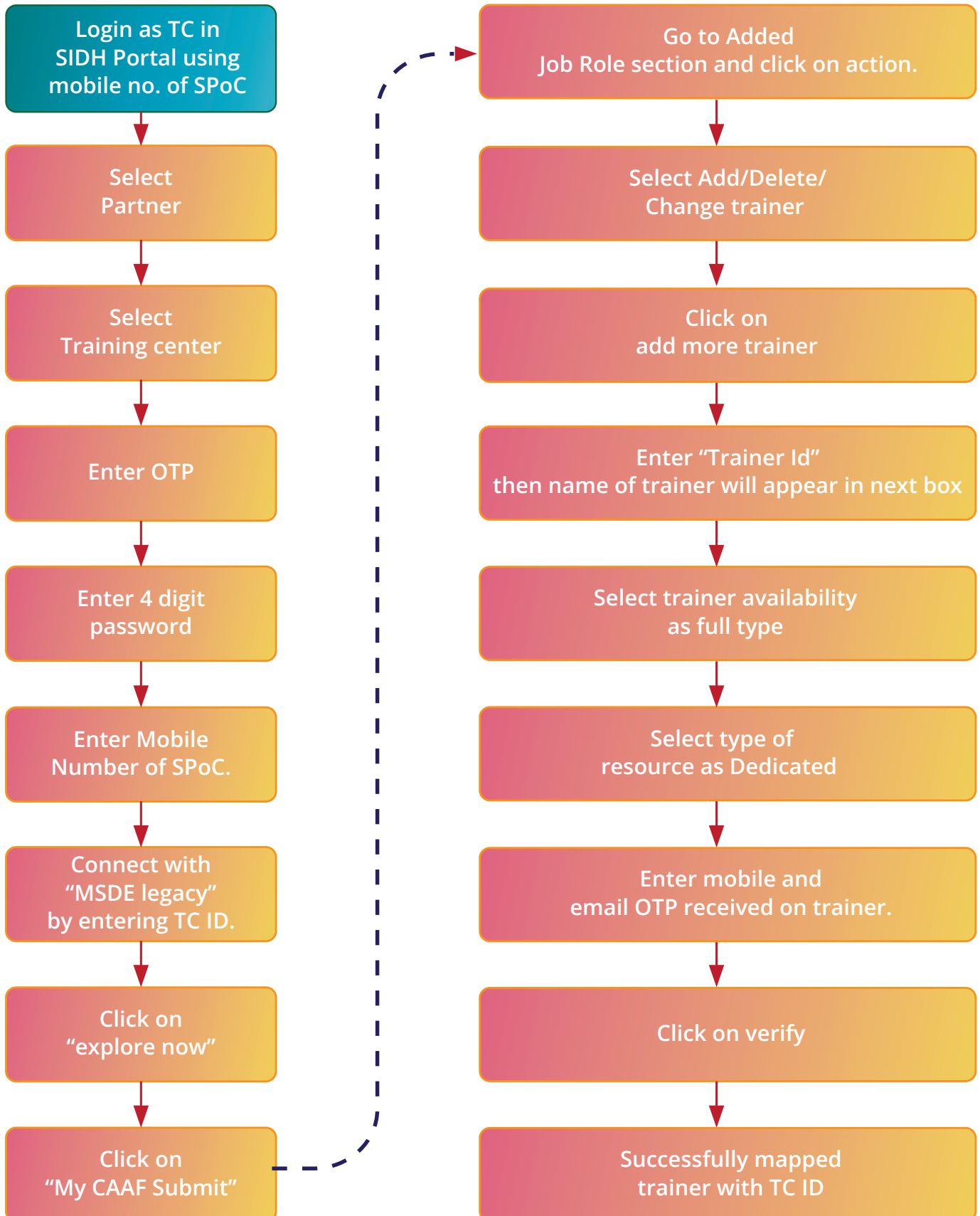


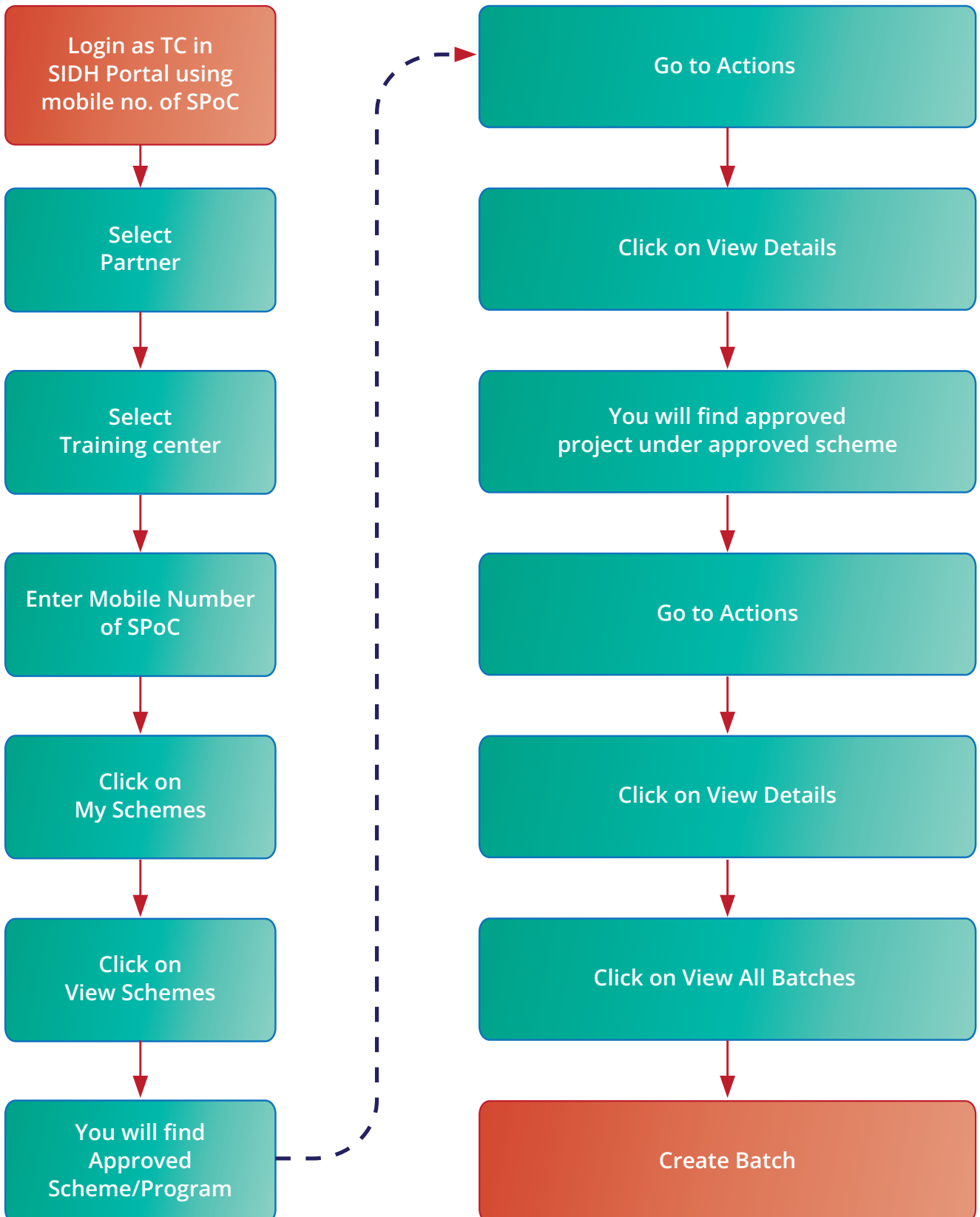
Step 2.2: Flow chart of Certificate generation:

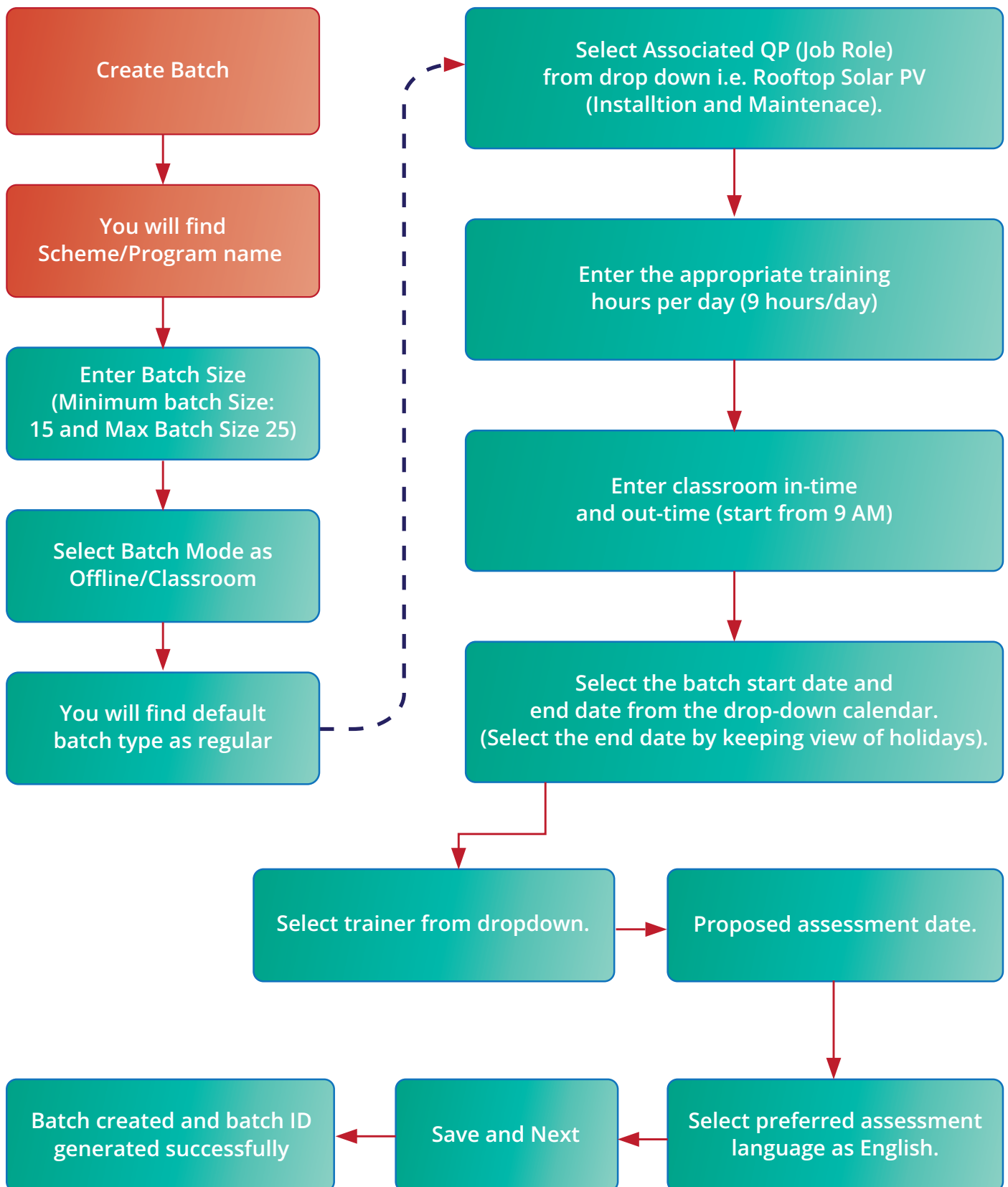
1. Trainers of Solar Technician (Electrical) and Electrician trades are eligible to impart the training to the trainees for this program.
2. Trainers of Electrician trade has to complete 2 days ToT program in NSTIs/ITIs. After completion of ToT, they will be awarded with certificate. This Certificate will enable them to impart training without generating the certificate on SIDH portal, hence these category of trainers need not to complete the step 2.2.
3. Whereas trainers of Solar Technician (Electrical) trade are eligible to impart the training without completing ToT program, hence these trainers have to complete the step 2.2.

**Step 3: Training Centre (TC) Registration- To be done by concerned NSTIs/ITIs.****Step 3.1: Flow chart for TC ID creation**

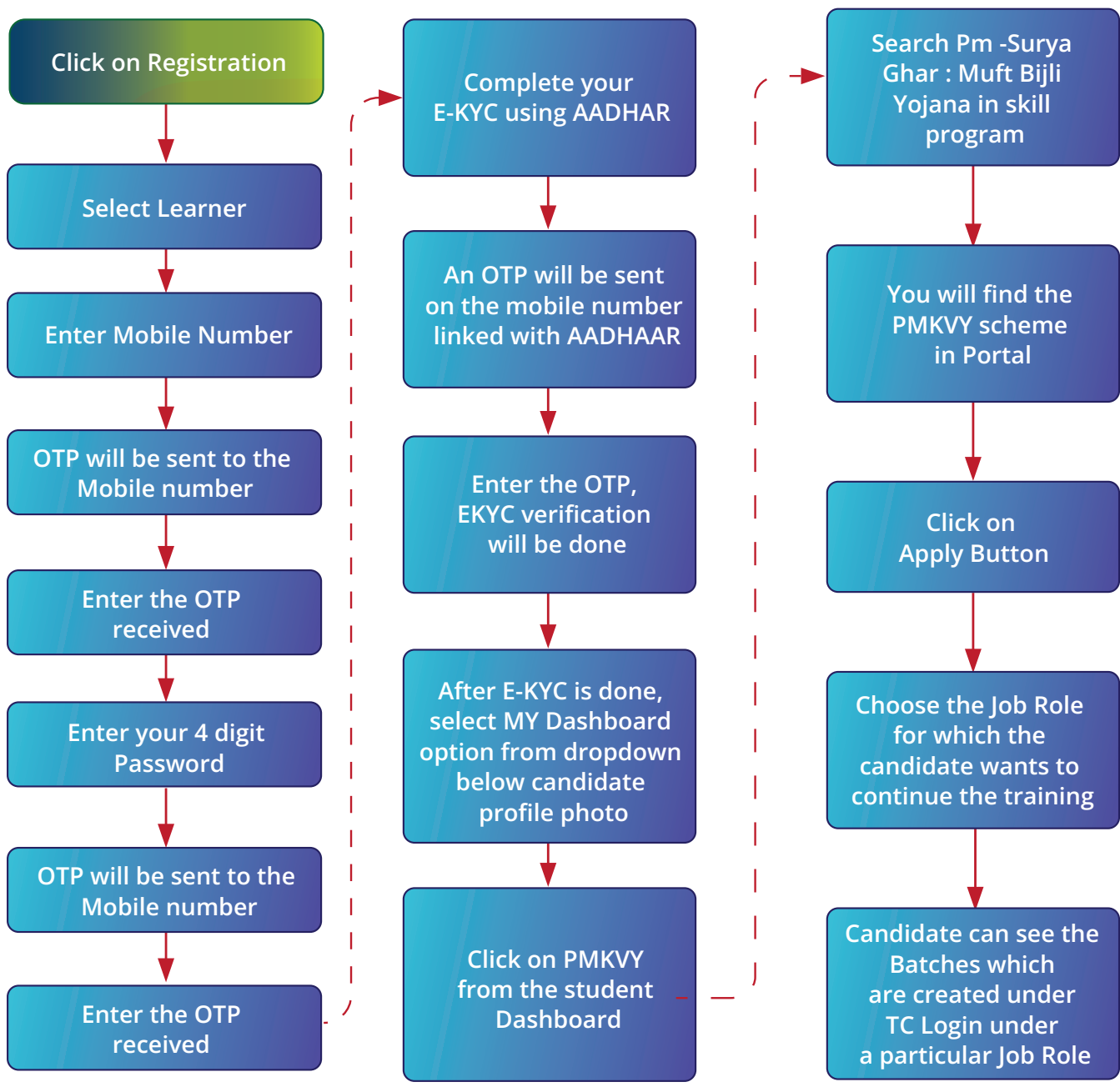
Step 3.2: Flow chart for mapping of trainer with TC in TC ID

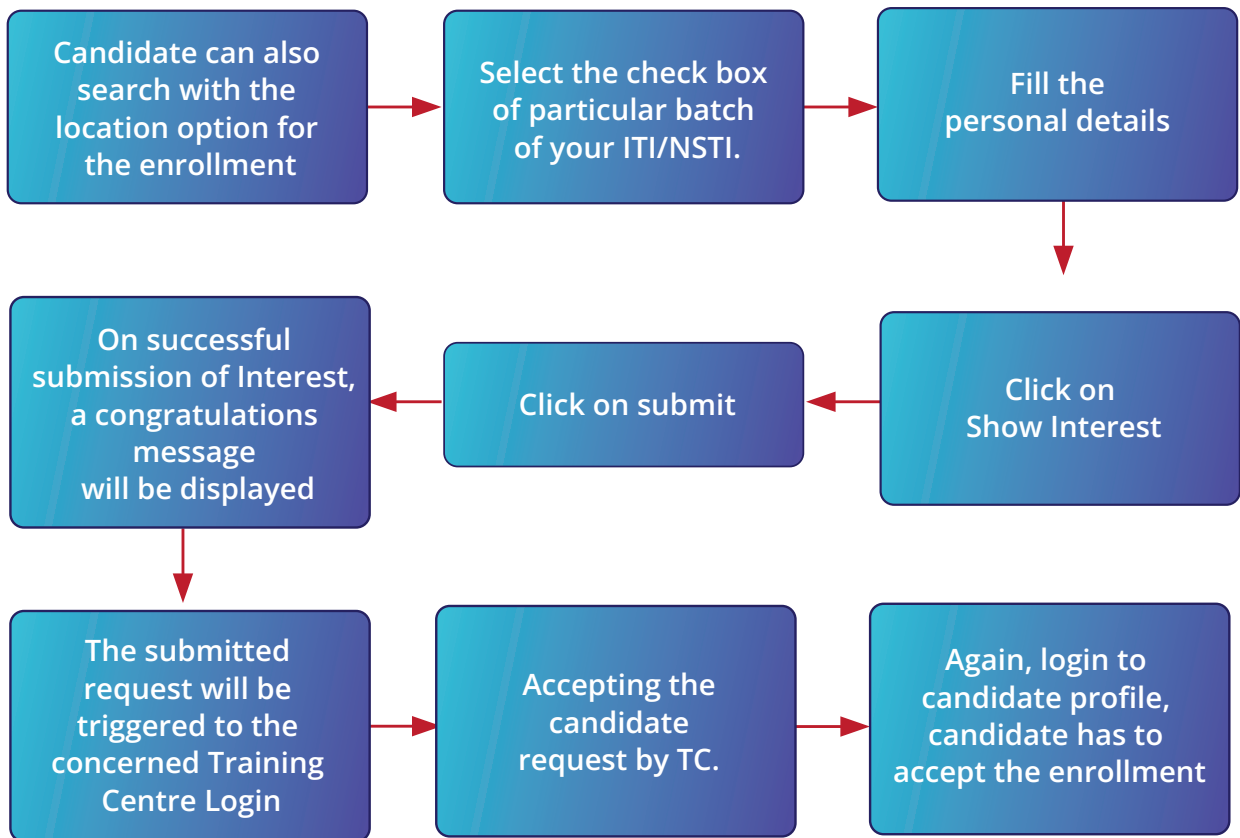


Step 3.2: Flow chart for Batch creation by TC

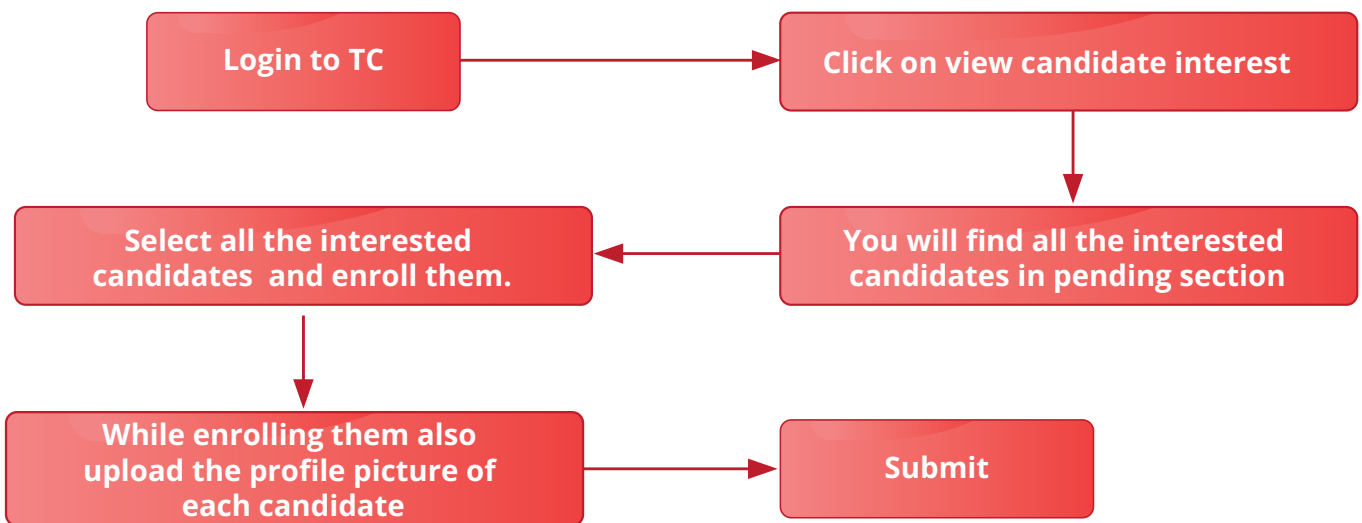


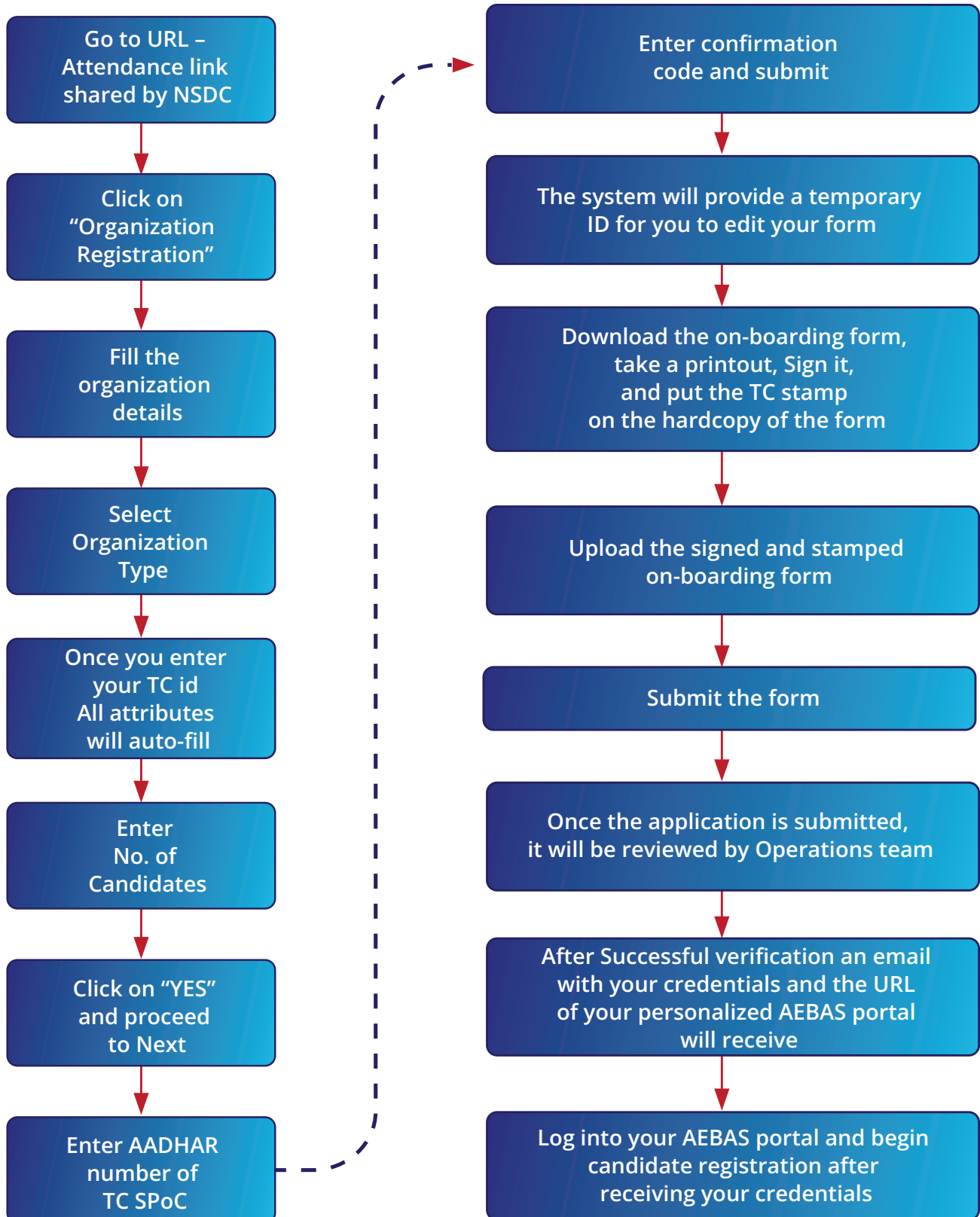
Step 4: Candidate Registration- To be done by concern NSTIs/ ITI
Step 4.1: Flow chart of Candidate registration process on SIDH portal.





Step 5: Flowchart of batch submission by TC.



Step 6: Candidate Attendance- To be recorded by concern NSTIs/ ITIs.**Step 6.1: Flow chart of Training centre (TC) registration on AEBAS portal.**

Step 6.2: Candidates and Trainers register on AEBAS portal on the same way as TC register.**Step 7: Training Delivery**

- i. Training centers will conduct training sessions according to the curriculum provided by the training partner.
- ii. The training duration will be 60 hrs. Out of which 45 hrs. (5 days) of institutional training will be imparted by ITI/NSTI while 15 hrs. (2 days) of OJT will be imparted by vendor at their respective site location.
- iii. The OJT training will be conducted by vendors empanelled by MNRE, which will be shared with respective training centers by DGT by MNR.

Step 8: Monitoring and Reporting

- i. Training centers report attendance, progress, and issues to the training partner regularly.
- ii. The training partner monitors the overall progress and quality of training.

Step 9: Assessment and Certification

- i. Candidates undergo assessments upon successful completion of training.
- ii. NIMI will conduct CBT of 30 minutes duration.
- iii. All questions will be of objective type with multiple-choice options.
- iv. There will be a total of 15 questions, and the passing percentage is 33%.
- v. Certification will be issued to successful candidates through the SIDH portal

Step 10: Closure and Documentation

- i. The Project Implementation Agency (PIA) team consolidates final reports and documentation.

4.3 Portal Management:

- i. The SIDH portal, maintained by the NSDC IT team, serves as a central hub for all stakeholders.
- ii. The entire process of training management will be executed through the SIDH portal.

4.4 Quality Assurance:

- i. Regular audits will be conducted by the Project Implementation Agency (PIA) or nominated members of the PIA to ensure compliance with standards.
- ii. Feedback loops are established to incorporate improvements based on stakeholder inputs.

4.5 Communication Plan:

- i. Clear communication channels are established between PIA, training partner, centers, trainers, and candidates.
- ii. Each stakeholder will receive detailed information through a Single Point of Contact (SPoC).
- iii. Timely updates and notifications are sent via the portal, email, and other designated communication tools.
- iv. A dedicated email address (suryamitranimi@gmail.com) is created for all communications from NIMI.

This SOP ensures a structured approach to implementing the skilling component of the scheme, focusing on efficiency, transparency, and quality throughout the training cycle. Continuous monitoring, feedback, and improvement mechanisms are integral to achieving successful outcomes for all stakeholders involved

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For more Information



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