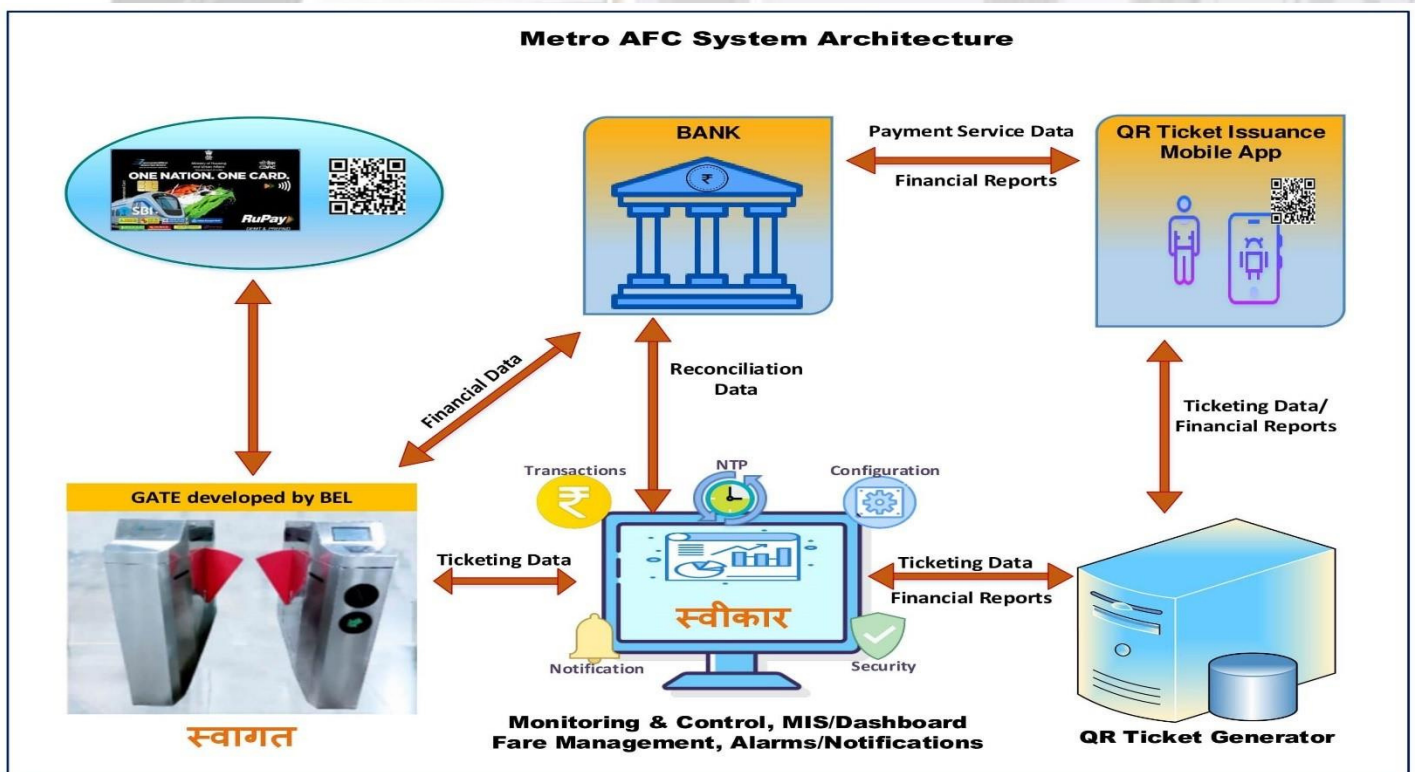# स्वीकार- NCMC AND QR COMPLIANT AUTOMATIC FARE COLLECTION SYSTEM

- NCMC is an initiative of the Ministry of Housing and Urban Affairs (MoHUA) to achieve the objective of "One Nation, One Card" to cater uniform standard interfaces for various sub systems in transit systems such as Metro.
- CDAC designed NCMC interface specifications (Part IV-VII) and QR specifications which were released and recommended by MoHUA for Nationwide adoption on 11th May, 2020 and 19th April, 2021 respectively.
- CDAC has inhouse designed and developed its own NCMC and QR compliant Automatic Fare Collection System (AFCS) for metro operators.
- Designed specifically for Indian conditions where heavy footfall are the norms.
- Leveraging Emerging Technologies: QR, NCMC, Contactless, EMV Open Loop, Wallet Support.
- State of the Art, Scalable, Modular, Highly secure NCMC and QR Compliant AFCS.
- Customizable as per customer requirements with deployment at customer premises.
- CDAC offers complete solution and lifecycle support to Metro Operators from Roll out to Operation and Maintenance, thus, complete peace of mind to metro operators.
- AFCS offers near real time monitoring, customized reports and strategic business analytics.
- AFCS supports multiple payment modes: NCMC card and QR coded tickets.
- Supports Debit/Credit/Prepaid NCMC cards issued by compliant banks.
- "Travel Mozo" mobile app facilitates single or multiple journey QR coded tickets for an individual or a group.

Metro AFC System Architecture

Salient Features of AFC

- Compliant with NCMC Interface Specifications and QR Specifications for transit
- Secure and Fast transactions
- Efficient fare collection systems with near real time revenue information
- Reduced Operation and maintenance cost due to Vendor and Bank Agnostic
- solutions
- Strategic Analytics and Reports as per Requirements
- Configurable Alarms and Centralized Fault Monitoring
  Bidirectional Configurable Gates to handle traffic and special situations.

CDAC Advantages:

• Well Known Brand in Innovation and Technology, Premier R&D Wing of MeitY

• Reliable and Long-Term Support

• Pioneer in Standardization: NCMC Ecosystem, QR Ticketing and CBTC*

• Aligned with Govt. of India Initiatives – Make in India and AatmNirbhar Bharat

• Capable in development of EMV kernels- Certified EMV L2 qSPARC 2.0(Offline & Online)

• Successful pilot implementation at Delhi Metro Rail Corporation (DMRC) & Namma Metro, Bengaluru

*MoHUA has entrusted CDAC with the task of standardization of CBTC (Communication Based Train Control System) with support of DMRC, RDSO and BEL