1. INTRODUCTION & SYSTEM PHILOSOPHY

Background and Operational Framework of MERC and Benazir Ambulance Referral Service (BARS)

The Medical Emergency Response Centers (MERC) have been established by the Government of Balochistan to provide organized, timely, and professional pre-hospital emergency medical response services across the province. MERC currently operates a network of thirty-one (31) Emergency Response Centers, strategically located to ensure rapid response to medical emergencies, trauma incidents, and patient referral needs. This network is planned to expand to approximately forty-five (45) centers in the near future to enhance geographic coverage and reduce emergency response times.

Each MERC center is equipped with ambulances, essential medical equipment, medicines, and trained emergency personnel, including Emergency Medical Technicians (EMTs), Medical Officers, and Ambulance Drivers. MERC currently operates with an operational workforce of approximately one thousand (1,000) field staff, forming the core emergency response infrastructure of the province.

To further strengthen emergency medical transport and referral services, the Government of Balochistan has initiated the Benazir Ambulance Referral Service (BARS) as a pilot project in ten (10) major cities. The BARS project provides ambulance services for general medical emergencies, trauma response, and Maternal, Neonatal, and Child Health (MNCH) referral cases. While BARS operates with its own dedicated ambulances and project-specific staff, it functions within the overall MERC emergency response framework.

MERC operates a centralized Emergency Control Room at its Head Office, which serves as the Provincial Emergency Coordination Center and manages the unified emergency helpline (1122). All emergency calls from the public, healthcare facilities, MNCH staff, and partner programs are received through the same 1122 helpline. Upon receiving an emergency call, Control Room operators assess the nature, severity, and location of the emergency and dispatch the nearest and most appropriate ambulance and response team. Depending on operational availability and suitability, the Control Room may dispatch resources from either MERC centers or BARS dispatch locations.

MERC emergency centers serve as operational bases for ambulances and field teams, enabling rapid dispatch, on-site emergency care, patient stabilization, and safe transfer to appropriate healthcare facilities. Patients may receive initial treatment and stabilization either at the incident site or at the nearest MERC center before being transferred to the nearest suitable healthcare facility.

The MERC and BARS initiatives represent key components of the Government of Balochistan's long-term vision to establish a centralized, integrated, and province-wide ambulance and emergency medical response system. With the planned expansion of MERC centers and scaling of BARS operations, MERC will serve as the central authority responsible for coordinated emergency response, centralized dispatch through the 1122 helpline, and efficient utilization of emergency medical resources across all projects and operational areas.

The system shall be **project/assignment-aware by design**, as MERC may operate **multiple projects simultaneously**, each with separate budgets, procurements, and reporting needs, while sharing common operational resources.

2. CONTROL ROOM STRUCTURE, USERS & SCALABILITY

2.1 Emergency Flow

1. In case of emergency citizen calls 1122 and the call is transferred to the helpline operator in the control room and an emergency notification popup will appear on the operator's dashboard. If the call is initiated through citizen app, then citizen location will also be fetched and shared with control room accordingly.
2. Helpline

Operator Picks the call and immediately a new emergency/incident form will appear in front of theoper ator. The emergency form is to be filled in by the operator based on the information provided by the caller.

3. Parallel to the emergency form a map will appear on which all the emergency vehicles near the incident location will be shown.
4. The operator will assign the emergency to nearest center/vehicle based on type of emergency/response required. Emergency route will appear on the dashboard as well.
5. The operator can call the respondent with just one click (through calling software provided). Operator can also transfer the call from a simple call to conference call between all the stakeholders.

6. Once the operator confirms all the details and dispatches the vehicle the notification is sent to the concerned respondent center/vehicle on the respondent app as well.
7. Once the respondent accepts the emergency on his app the respondent is guided towards the incident location.
8. Here the operator can switch to the emergency monitor tab where he has complete visibility over theemergency that whether respondent has reached the location or not and how the emergency is being handled.
9. Once the emergency is resolved the post incident form will pop up on the respondent app.
10. Respondent will fill post emergency/incident information and close the incident.

2.2 Control Room Structure

· Current: Head Office Control Room
· Scalable to:
§ North Regional Control Room
§ South Regional Control Room
§ Head Office acting as Central & Provincial Emergency Control Room

2.3 Users, Roles & Project Linkage

· All system users shall be assigned **roles**.
· **Each role shall be linked to one or more projects/assignments** (e.g., MERC core, BARS, Trauma, MNCH, future donor projects).
· Role–project linkage shall determine:
o Incident visibility
o Inventory access
o Reporting scope

Note:
Warehouse staff, control room staff, and monitoring teams may be **common across all projects**, but **all actions performed by them must be project-tagged at transaction level**.
The number of users, roles, projects, and control rooms may increase over time and shall be supported without architectural redesign.