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**NHS MENTAL HEALTH TRUST – Brief and Technical Summary**

**Project Title:**  
Integrated Nurse Call, Panic Alarm, Staff Attack, and Anti-Ligature Door Monitoring System

**Contractor:** Edison Telecom

**1. Executive Summary**

This proposal outlines the delivery and implementation of a robust, integrated communications and safety system across multiple wards in a mental health care facility. The system will unify service user calls, staff personal alarms, anti-ligature door monitoring, and emergency medical alerts into a single platform designed to enhance response speed, situational awareness, and patient/staff safety.

**2. Project Objectives**

* Enable rapid and accurate communication of service user needs.
* Provide a tiered, location-based staff safety system.
* Monitor and alert on anti-ligature door activations in real time.
* Ensure visibility of all events at local and central locations.
* Log all interactions for compliance, auditing, and safety analysis.

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**3. System Overview**

**3.1 Core Components:**

* **L7721 Dual Call/Control Units (x2 per room):**
  + One controls service user call points (L7011C), the other monitors anti-ligature doors.
  + Integrated I-button technology for tracked resets and isolates.
* **L7011C Call Buttons:**
  + Bedroom and ensuite call points with tamper detection springs.
* **L746 Over-Door and Follow-Me Lights:**
  + Multi-pattern visual alerts indicating different call types.
* **948 Touch Display Panels:**
  + Installed at every ward base to display calls, locations, event type, and system faults.
* **Medical Emergency Button (L7322):**
  + Dedicated ward-based button generating high-priority alerts.
* **Staff Triggers (STC9):**
  + Dual function with assistance (button press) and respond (pin pull) alerts.
  + Tracked via ceiling detectors (AIRX7/AIRX8) or radio detection (AIRFXIP).
* **Reset Triggers:**
  + Simple one-button reset device (red lanyard) used to clear staff assistance/respond events.

**4. Technical Architecture**

**4.1 Control & Distribution:**

* **L7700 Power Supply Unit:**
  + Central control unit per ward, managing all device logic and power.
* **FJB2 Fused Junction Boxes:**
  + 4-way fused outputs; allows segment isolation during faults.
* **POE Network Switches:**
  + Located in two primary IT hubs; interconnect all networked devices.
  + Includes Edison-supplied battery backup to support power loss events.

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**4.2 Communications & Data Logging:**

* I-button fobs, and staff attack triggers are individually programmed.
* All call activations, resets, and isolate actions are logged with time, date, location, and staff ID.
* Remote retrieval of logs for compliance/audit purposes.

**5. Functionality Breakdown**

**5.1 Event Types and Responses:**

| **Event Type** | **Trigger** | **Display** | **Lighting** | **Sound** | **Reset Method** |
| --- | --- | --- | --- | --- | --- |
| Service User Call | L7011C | Local ward 948 | Standard flash | Low/Medium | I-button at L7721 |
| Tamper | Tamper spring triggered | Local ward 948 | Unique flash | Medium | I-button at L7721 |
| Anti-Ligature | Door release | "EMERGENCY" alert on ward 948 | Emergency flash | High | I-button at L7721 |
| Medical Emergency | L7322 | Ward, doctor’s display, pager | Emergency flash | High | Key reset |
| Assistance Call | STC9 (button) | Local area 948 | Assistance flash | Medium/High | Reset trigger |
| Respond Call | STC9 (pin) | Global 948 displays, IP480 | Highest flash | Highest | Reset trigger |
| Outdoor Respond | STC9 (radio) | Main reception | Respond flash | Highest | RFID at reception 948 |

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**6. Implementation Strategy**

**6.1 Installation Phases:**

* **Phase 1:** Site survey, PSU and core hardware deployment.
* **Phase 2:** Device-by-device installation across all rooms, corridors, and communal spaces.
* **Phase 3:** Network linking, display configuration, and central integration.
* **Phase 4:** Staff training, commissioning, and handover.

**6.2 Training & Handover:**

* Comprehensive training sessions delivered to all ward staff.
* Individual instruction on use of I-button fobs, triggers, and resets.
* Documentation packs including SOPs, event flowcharts, and escalation maps.

**7. Risk & Mitigation**

| **Risk** | **Mitigation** |
| --- | --- |
| Staff unfamiliarity | Mandatory training + ongoing support |
| Device tampering | Anti-tamper design + isolate function |
| False alarms | Isolate and fault display functions |
| Power failure | Battery-backed POE switches |
| Data loss | Secure cloud/off-site log backup optional |

**8. Deliverables**

* Full system hardware installed and tested.
* All call/display types configured to specification.
* Staff trained and system documentation delivered.
* Handover of system logs, access credentials, and technical support plan.

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**9. Conclusion**

This integrated safety and nurse call solution is a highly adaptable, resilient, and user-focused platform that addresses the critical needs of both service users and staff in challenging environments. With modular expandability, real-time alerts, and full event logging, it establishes a new benchmark for patient and staff protection.

**Prepared For:** NHS