

TENDER NOTICE

PHANA – Biomedical Waste Barcoding Software

(As per Biomedical Waste Management Rules, 2016 & CPCB Guidelines 2018)

1. About PHANA

Private Hospitals and Nursing Homes Association (PHANA) is a registered association representing:

- 400+ member hospitals in Bangalore
- 1400+ associate members across Karnataka

PHANA invites sealed technical and financial proposals from eligible software service providers for implementation of a **Biomedical Waste Barcoding System** for its member hospitals in Bangalore.

2. Background & Regulatory Framework

The tender is issued in compliance with:

- Biomedical Waste Management Rules, 2016 (as amended)
- CPCB Guidelines for Effective Barcoding of Biomedical Waste (2018)
- CPCB Central Barcoding Software for Tracking (CBST-BMW) standards

As per regulations:

- Hospitals with **30 or more beds must implement an internal barcoding system**
- System must include:
 - Barcode label generation (as per CPCB standardized format)
 - Scanner integration (handheld and fixed)
 - Weight capture mechanism with automated logging
 - Real-time data sharing with authorities
 - Audit trail maintenance for regulatory compliance

- Multiple waste category tracking as per BMW Rules Schedule I
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3. Scope of Work

The selected vendor shall provide:

A. Software Features

- Web-based & cloud-enabled platform with multi-user access
- Barcode generation compliant with CPCB standardized format (alphanumeric code)
- QR Code/Barcode printing compatibility with standard label formats
- Weight capture integration with automated calculation
- Real-time tracking and monitoring dashboard
- User login hierarchy with role-based access control:
 - Administrator (Full system access & configuration)
 - Operator (Data entry and scanning)
 - Hospital Manager (Reporting and analytics)
 - CPCB/SPCB Authority (View-only monitoring)
- Daily, Monthly, and Annual compliance reports with exportable formats
- Automatic data sharing with:
 - KSPCB / CPCB central portal (mandatory for regulated facilities)
 - CBST-BMW integration capability
- Interactive dashboard analytics with trend visualization
- Complete audit trail & compliance reporting with timestamps
- Waste category segregation as per Schedule I of BMW Rules
- Batch-wise tracking from generation to final disposal
- Integration with CPCB centralized tracking system

B. Hardware Integration

- Compatibility with industry-standard equipment:
 - Thermal barcode printers (58mm and 80mm)
 - 2D/1D handheld scanners (wireless and wired)
 - Digital weighing machines (load cell integrated)
 - RFID readers (optional but recommended)
- API integration capability for third-party hardware and systems
- Support for cloud-based data synchronization

- Offline mode capability with auto-sync when connectivity restored

C. Compliance & Security

- **Data Security Standards:**
 - ISO 27001 compliance or equivalent
 - End-to-end encryption for data transmission (HTTPS/TLS 1.2+)
 - Role-based access control (RBAC) with granular permissions
 - Password policy enforcement (minimum 8 characters, alphanumeric + special)
- **Server Location Details:**
 - Servers to be hosted within Indian territory (preferably on NIC/MEITY approved data centers)
 - Disaster recovery site location to be specified
 - Data residency compliance with Indian regulations
- **Backup & Disaster Recovery Mechanism:**
 - Real-time backup (minimum 99.5% uptime guarantee)
 - Redundant systems and failover capability
 - Recovery Point Objective (RPO): Maximum 1 hour
 - Recovery Time Objective (RTO): Maximum 4 hours
- **Data Ownership & Portability:**
 - Data ownership remains with hospital/PHANA members
 - Provision for data export in standard formats (CSV, PDF, Excel)
 - No vendor lock-in clause
 - Data portability at contract termination

D. Training & Support

- **On-site / Virtual Training:**
 - Initial setup and configuration training
 - End-user training for hospital staff
 - Administrator training for technical personnel
 - Minimum 2-3 training sessions during implementation
- **Helpdesk Support:**
 - 24/7 phone and email support during implementation phase
 - Business hours support post-implementation (Monday-Friday, 09:00-18:00 IST)

- Support in English and regional languages
 - **Turn-Around Time (TAT) for Issue Resolution:**
 - Critical issues: Maximum 2 hours
 - High priority: Maximum 8 hours
 - Medium priority: Maximum 24 hours
 - Low priority: Maximum 48 hours
 - **Software Updates & Regulatory Compliance:**
 - Quarterly updates as per regulatory changes
 - Proactive updates for CPCB/KSPCB guideline amendments
 - No additional charges for compliance-related updates
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4. Eligibility Criteria

The bidder must:

1. Be a **registered company in India** (Private/Limited Company, LLP, or Government undertaking)
 2. Have minimum **3 years of experience** in biomedical waste management software development
 3. Have **implemented solutions in at least 20 healthcare facilities** (hospitals, nursing homes, or diagnostic centers)
 4. Have **implemented solutions in at least 5 different CBWTFs companies**
 5. The Success rate of data acceptance with the CPCB software should be minimum 99%, provide CPCB acknowledgement report from the CBWTF panel.
 6. Submit valid **GST Registration Certificate, PAN Card, and statutory compliance documents**
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5. Proposal Submission

Vendors must submit two separate sealed envelopes:

A. Technical Proposal

Envelope 1: "PHANA BMW Barcoding – Technical Proposal"

- Company profile with organizational structure
- Certificate of incorporation and registration documents
- Experience & previous installations (list with details):
 - Healthcare facility name, type, and bed capacity

- Implementation date and current status
 - Contact person and reference details
 - Problems solved and customizations provided
- Product demonstration details (video link, live demo availability)
- Technical architecture document:
 - System architecture diagram
 - Database design and scalability approach
 - API specifications for CPCB integration
 - Technology stack and third-party tools used
- Compliance mapping document showing how each BMW Rules requirement is addressed
- Security and data protection measures (detailed documentation)
- Disaster recovery and business continuity plan
- Current clients using the solution (reference list)

B. Financial Proposal

Envelope 2: "PHANA BMW Barcoding – Financial Proposal"

- **Per Hospital Licensing:**
 - One-time implementation and setup cost
 - Annual recurring charges (clearly separated by year)
 - Price valid for minimum 3 years
- **Hardware Cost** (if applicable):
 - Barcode printer cost and specifications
 - Scanner cost and specifications
 - Weighing machine integration cost
 - Installation and commissioning cost
- **Annual Maintenance Contract (AMC) Charges:**
 - Software support and maintenance
 - Hardware support (if applicable)
 - Cloud hosting and storage costs
 - Annual regulatory update charges
- **Bulk Pricing Model for PHANA Members:**
 - Tiered pricing for 400+ hospitals
 - Volume discounts (clearly mentioned)
 - Scalability cost structure for additional users

- **Taxes Clearly Mentioned:**
 - GST breakdown (as applicable)
 - All taxes and levies included
 - Price validity period stated
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6. Evaluation Criteria

Evaluation will be conducted in two stages with the following weightage:

STAGE 1: TECHNICAL EVALUATION – 80% Weightage

Technical proposals will be evaluated on:

1. **Compliance with BMW Rules** (20 points)
 - Adherence to Biomedical Waste Management Rules, 2016
 - Compliance with CPCB 2018 barcoding guidelines
 - Mapping of all Schedule I waste categories
 - Evidence of regulatory compliance certifications
2. **Technical Capability & Architecture** (20 points)
 - System design and scalability
 - Cloud infrastructure and uptime guarantee
 - API integration capability with CPCB/KSPCB portals
 - Database design for handling large datasets
 - Real-time data processing capability
3. **Product Features & Functionality** (15 points)
 - Completeness of required features as per Scope of Work
 - User interface usability and navigation
 - Report generation capabilities
 - Customization and flexibility
 - Mobile application availability (if applicable)
4. **Data Security & Privacy** (15 points)
 - Data encryption and transmission security
 - Access control mechanisms and audit trails
 - ISO 27001 certification status
 - Incident response and data breach protocols

- GDPR/India Data Protection compliance
5. **Hardware Integration Capability** (10 points)

- Compatibility with standard barcode printers and scanners
- RFID integration capability
- Plug-and-play connectivity features
- Multiple device support
- Real-time synchronization capability

Technical Score = Sum of all technical criteria points

STAGE 2: FINANCIAL EVALUATION – 20% Weightage

Financial proposals of technically qualified bidders will be evaluated on:

1. **Cost-Effectiveness** (12 points)
 - Per hospital one-time cost vs. industry benchmark
 - Annual AMC charges reasonableness
 - Hardware cost competitiveness
 - Total cost of ownership (3-year comparison)
2. **Value for Money** (5 points)
 - Bulk pricing discounts offered
 - Warranty and extended support terms
 - Training and implementation support included
 - Free trial or pilot project offer
3. **Price Stability** (3 points)
 - Price escalation clause (preferably capped at 15% annually)
 - Lock-in period for rates
 - Transparency in cost breakdown

Financial Score = (Lowest Bid / Bidder's Bid) × Maximum points

FINAL SELECTION

Final Score = (Technical Score × 0.80) + (Financial Score × 0.20)

- Bidders with technical scores below 50% of maximum will be rejected (non-qualifying bids)

- Top-ranked bidders (based on Final Score) will be invited for presentation before PHANA Committee
 - Presentation before PHANA committee will be informational (not re-evaluated; technical & financial scores remain as evaluated)
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7. Tender Timeline

| Activity | Date |
|--|------------|
| Issuance of Tender Notice | 10/02/2026 |
| Last Date for Submission | 28/02/2026 |
| Technical Presentation & Clarification | 01/03/2026 |
| Final Selection & Award Notification | 02/03/2026 |

8. Mode of Submission

Sealed envelopes clearly marked:

"Tender for Biomedical Waste Barcoding Software – PHANA"

Submit to:

PHANA Office, Bangalore

Vidya Bhavan, Miller Rank Bund Road, Vasanth Nagar, Bangalore - 560058

Email (soft copy): president@phana.org

Important: Physical submission must be accompanied by soft copy via email. Late submissions will not be accepted.

9. Important Conditions

- PHANA acts as a facilitator for its member hospitals; final agreement will be between individual hospital and selected vendor
- Rates finalized through PHANA negotiation shall be applicable to all members for minimum 3 years
- Vendor must comply with amendments to BMW Rules and CPCB guidelines issued during contract period
- Performance security/bid security may be required (to be specified by PHANA)
- Vendor shall ensure data backup and business continuity during implementation

- Disputes shall be resolved through arbitration as per Indian Arbitration & Conciliation Act, 1996
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10. Additional CPCB Barcoding Requirements

In alignment with CPCB's Centralized Barcoding System for Tracking (CBST-BMW) and 2023 guidelines, vendors must ensure:

1. Unique Identification Code (UIC) Generation:

- Each waste batch shall be assigned a unique alphanumeric code
- Format compliance with CPCB standardized format
- Ability to track waste from source to final disposal

2. Waste Category Segregation:

- Support for all waste categories as per Schedule I of BMW Rules:
 - Yellow (infectious waste)
 - Red (soaked waste)
 - Black (General waste)
 - White (metallic waste)
 - Cyan/Blue (waste containing heavy metals)
- Automated category assignment based on waste type input

3. Real-Time Data Upload to CPCB Portal:

- Integration with CBST-BMW centralized system
- Automatic data synchronization at defined intervals (minimum hourly)
- Error handling and data validation before upload
- Compliance report generation for CPCB/SPCB submission

4. Traceability & Chain of Custody:

- Complete tracking from waste generation to incineration/treatment
- Timestamp capture at each handling point
- Vehicle GPS tracking integration (if applicable)
- Staff identification through unique login credentials

5. Reporting Formats:

- Compliance reports matching CPCB prescribed formats
- Quarterly submissions capability
- Exception reports for non-compliances

- Data export in standardized formats for audits