

Request for Proposal (RFP)

Autonomous Warehouse Robot System

Issued By: ABC Manufacturing Ltd.

Purpose: Procurement of an autonomous warehouse robot solution.

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1. Project Overview

ABC Manufacturing seeks an AI-enabled autonomous warehouse robot system capable of automating material movement, inventory handling, and warehouse operations.

2. Functional Requirements

REQ-001: System shall support autonomous navigation.

REQ-002: System shall detect and avoid obstacles.

REQ-003: Robot shall transport payloads up to 500 kg.

REQ-004: System shall provide live fleet monitoring.

REQ-005: System shall expose REST APIs.

REQ-006: System shall support role-based access control.

REQ-007: System shall generate operational reports.

REQ-008: System shall support barcode and QR scanning.

REQ-009: System shall integrate with SAP ERP.

REQ-010: System shall support multilingual UI.

3. Technical Requirements

REQ-011: Response time shall be below 200 ms.

REQ-012: Availability shall be at least 99.9%.

REQ-013: Battery life shall exceed 10 hours.

REQ-014: Robot shall operate from -10°C to 45°C.

REQ-015: Solution shall support Kubernetes deployment.

REQ-016: System shall support PostgreSQL.

REQ-017: All APIs shall be versioned.

REQ-018: Logs shall be centrally collected.

REQ-019: Software shall support horizontal scaling.

REQ-020: Backups shall run daily.

4. Security Requirements

REQ-021: OAuth 2.0 authentication shall be supported.

REQ-022: All communication shall use TLS 1.3.

REQ-023: Passwords shall be salted and hashed.

REQ-024: Audit logs shall be retained for one year.

REQ-025: MFA shall be supported.

REQ-026: Security patches shall be released monthly.

REQ-027: Sensitive data shall be encrypted at rest.

REQ-028: Least-privilege access shall be enforced.

REQ-029: API rate limiting shall be configurable.

REQ-030: Vulnerability scans shall be performed quarterly.

5. Compliance Requirements

REQ-031: Supplier shall comply with ISO 27001.

REQ-032: Solution shall comply with GDPR where applicable.

REQ-033: Software licenses shall be documented.

REQ-034: Open-source dependencies shall be disclosed.

REQ-035: Supplier shall provide compliance evidence.

REQ-036: Risk register shall be maintained.

REQ-037: System shall support audit exports.

REQ-038: Changes shall be fully traceable.

REQ-039: Requirements shall be uniquely identifiable.

REQ-040: Configuration changes shall be version controlled.

6. Acceptance Criteria

REQ-041: Factory Acceptance Test shall pass.

REQ-042: Site Acceptance Test shall pass.

REQ-043: Critical defects shall equal zero.

REQ-044: User training shall be completed.

REQ-045: Documentation shall be delivered.

REQ-046: Performance benchmarks shall be met.

REQ-047: API documentation shall be provided.

REQ-048: Installation guide shall be included.

REQ-049: Source configuration shall be documented.

REQ-050: Customer sign-off shall be obtained.

7. Delivery & Support

REQ-051: Delivery within 16 weeks.

REQ-052: Three-year warranty required.

REQ-053: 24x7 production support required.

REQ-054: SLA response time under 2 hours.

REQ-055: Quarterly health checks required.

REQ-056: Knowledge transfer sessions required.

REQ-057: Deployment assistance required.

REQ-058: Disaster recovery documentation required.

REQ-059: Annual security assessment required.

REQ-060: Dedicated technical account manager required.

Appendix A - Sample Compliance Matrix

REQ-001 - Compliant
REQ-002 - Partially Compliant
REQ-003 - Compliant
REQ-004 - Gap Identified
REQ-005 - Compliant