

# DEPLOYMENT TIMELINE - FROSTGUARD LOGISTICS

## CONFIDENTIAL AND PROPRIETARY

Document Version: 2.0

Effective Date: January 15, 2024

Reference: PDR-DT-2024-001

## 1. INTRODUCTION

1 This Deployment Timeline ("Timeline") is issued by Polar Dynamics Robotics, Inc., a Delaware corporation ("PDR" or the "Company"), to establish the implementation schedule and milestones for the FrostGuard Logistics autonomous mobile robot ("AMR") deployment program.

2 This Timeline shall be binding upon all parties referenced herein and shall serve as the master schedule for all FrostGuard system implementations through December 31, 2024.

## 2. DEFINITIONS

1 "Deployment Phase" means each distinct stage of AMR system implementation as defined in Section 4.

2 "IceNav Platform" means PDR's proprietary cold-environment navigation and control system.

3 "Site Qualification" means the formal assessment and approval process for facility readiness.

4 "System Acceptance" means the formal client sign-off on deployed AMR functionality.

## 3. PRELIMINARY REQUIREMENTS

### 1 Site Assessment and Documentation

- Facility blueprint verification
- Environmental condition mapping
- Network infrastructure evaluation
- Safety system compatibility check
- Charging station placement analysis

### 2 Technical Prerequisites

- IceNav Platform version 4.2 or higher

- Thermal management system calibration
- Cold-resistant actuator certification
- Emergency stop system validation
- Network latency verification (<100ms)

#### **4. DEPLOYMENT PHASES**

##### **1 Phase I: Site Preparation (Weeks 1-4)**

- Infrastructure modifications
- Network equipment installation
- Charging station installation
- Safety system integration
- Environmental control verification

##### **2 Phase II: Initial Deployment (Weeks 5-8)**

- AMR delivery and inspection
- Basic navigation mapping
- Preliminary route programming
- System integration testing
- Operator training initiation

##### **3 Phase III: Advanced Implementation (Weeks 9-12)**

- Complex route optimization
- Multi-unit coordination setup
- Exception handling protocols
- Performance baseline establishment
- Advanced operator certification

##### **4 Phase IV: Production Transition (Weeks 13-16)**

- Full-load testing
- System redundancy verification
- Emergency protocol validation
- Performance optimization

- Final acceptance testing

## **5. MILESTONE SCHEDULE**

### **1 Critical Milestones**

- Site Qualification Approval: Week 4
- Initial Navigation Mapping: Week 6
- Operator Certification: Week 10
- System Acceptance: Week 16

### **2 Dependencies**

- Client infrastructure modifications
- Environmental compliance verification
- Safety system certification
- Network stability confirmation

## **6. QUALITY ASSURANCE**

### **1 Performance Metrics**

- Navigation accuracy: 5cm
- Temperature tolerance: -30 C to +45 C
- System uptime: 99.5%
- Battery lifecycle: 2,000 cycles
- Collision avoidance: 100% effectiveness

### **2 Testing Requirements**

- Daily system diagnostics
- Weekly performance reviews
- Monthly maintenance inspections
- Quarterly compliance audits

## **7. RISK MANAGEMENT**

### **1 Contingency Planning**

- Backup navigation systems

- Emergency power provisions
- Manual override capabilities
- Technical support escalation
- Disaster recovery procedures

## 2 Issue Resolution

- 24/7 technical support
- 4-hour response time
- On-site engineering support
- Remote diagnostic capabilities

## 8. LEGAL COMPLIANCE

1 This Timeline shall be executed in accordance with all applicable federal, state, and local regulations governing autonomous systems deployment.

2 All intellectual property rights related to the IceNav Platform and associated technologies remain the exclusive property of PDR.

## 9. AMENDMENTS AND MODIFICATIONS

1 This Timeline may be modified only through written amendment executed by authorized representatives of PDR.

2 Material changes to deployment schedules require minimum 30-day advance notice.

## 10. EXECUTION

IN WITNESS WHEREOF, this Deployment Timeline is executed as of the Effective Date by the duly authorized representative of Polar Dynamics Robotics, Inc.

POLAR DYNAMICS ROBOTICS, INC.

**By:**

Name: Katherine Wells

Title: Chief Financial Officer

Date: January 15, 2024

APPROVED:

**By:**

Name: Dr. James Barrett

Title: Chief Robotics Officer

Date: January 15, 2024