

CIRCADACARE

Service Definition Document

Circadian Lighting Solutions with Integrated AI Monitoring

Version 1.0

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Document Control

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1. Executive Summary

Circadacare provides innovative circadian lighting solutions with integrated AI monitoring specifically designed for vulnerable older adults living with Dementia. Our evidence-based technology improves patient outcomes, and increases independence in the community, reduces heightened behaviours in any care facility and delivers measurable financial benefits to healthcare providers.

This Service Definition outlines the comprehensive service offering available to NHS trusts, local authorities, and care home providers, including product specifications, implementation methodology, support services, and performance commitments.

2. Service Overview

2.1 Service Description

Circadacare delivers a complete circadian lighting and monitoring solution that combines:

- Dynamic circadian lighting systems that align with natural biological rhythms
- AI-powered monitoring technology for early intervention and care optimization
- Cloud-based analytics platform for outcome tracking and reporting
- Comprehensive implementation, training, and support services
- Evidence-based carer breakdown interventions and package de-escalations

2.2 Evidence Base

Circadacare solutions are deployed with various LAs and demonstrated:

- Significant reduction in falls rates
- Evidenced sleep re-calibration
- Reduced patient agitation scores
- Increased independence in the community
- Measurable reduction in heightened sundowning behaviours

2.3 Target Settings

Circadacare services are designed for:

- Community care
- Care homes, nursing homes & NHS facilities
- Supported living facilities
- L&D residential facilities

3. Service Components

3.1 Hardware Components

3.1.1 Circadian Lighting Fixtures

LED lighting systems designed to deliver optimal circadian stimulation throughout the day:

- Automated tuneable white spectrum (1800K - 10000K)
- High melanopic output for effective circadian entrainment
- CRI >90 for accurate colour rendering
- Multiple form factors: ceiling panels, downlights, wall-mounted fixtures
- IP-rated options for bathroom and wet areas
- 5-year warranty on all lighting hardware

3.1.2 AI Monitoring Sensors

Privacy-preserving monitoring technology that enables early intervention:

- PIR-based movement detection
- Acoustic monitoring with AI sound classification
- Room temperature
- Room lux (light) level
- Room humidity

3.1.3 Control Infrastructure

- Wireless wall-mounted kinetic switch

3.2 Software Platform

3.2.1 Carer Application (Circadacare)

- Real-time monitoring of environment and health indicators
- Alert management and prioritization
- Alert threshold configuration
- Individual end user profiles
- Mobile and desktop app
- API Integration available

3.2.3 Configuration Management (Heleos)

- Installation and set up
- User role and permission management
- Maintenance

4. Implementation Process

4.1 Phase 1: Discovery & Planning (Weeks 1-2)

- Site survey and connectivity assessment
- Pathway mapping and stakeholder workshops
- Information governance and data protection impact assessment
- Project plan development with defined milestones

4.2 Phase 2: Installation (Weeks 3-5)

- Self-install for Heles E27/B22/GU10 bulbs
- Electrical installation by certified contractors for hard wired units
- On site configuration and alert setting provided by Circadacare
- Control system commissioning
- Multi-tier training program (care staff, facilities, IT)
- Train-the-trainer sessions for sustainability
- User guides and reference materials
- Phased go-live with on-site support
- User account provisioning
- Alert workflow configuration
- System acceptance testing
- Testing and Go Live

4.5 Phase 5: Stabilization & Optimization (Weeks 6-12)

- Intensive support period with rapid response
- Fine-tuning of alert threshold based on observed patterns
- Early outcomes review
- Transition to standard support model

5. Service Levels & Performance Metrics

5.1 System Availability

Metric	Target
Hardware uptime	99.5% (excluding planned maintenance)
Software platform availability	99.9% (24/7 cloud hosting)
Planned maintenance windows	Notified 7 days in advance

5.2 Support Response Times (Typical Examples)

Contract Value: £0 - £25,000

Priority	Description	Response	Remote Resolution / Workaround	Full Resolution
P1 - Critical	Total system failure	4 hours (during business hours)	2 business days	10 business days
P2 - High	Partial failure or significant degradation	1 business day	3 business days	15 business days
P3 - Medium	Individual device failures, minor degradation	2 business days	5 business days	25 business days
P4 - Low	Feature requests, cosmetic issues, queries	3 business days	By agreement	By agreement

Contract Value: £25,000 - £100,000

Priority	Description	Response	Remote Resolution / Workaround	Full Resolution
P1 - Critical	Total system failure	2 hours (during business hours)	1 business day	5 business days
P2 - High	Partial failure or significant degradation	4 hours	1 business day	10 business days
P3 - Medium	Individual device failures, minor degradation	1 business day	2 business days	15 business days
P4 - Low	Feature requests, cosmetic issues, queries	2 business days	By agreement	By agreement

Contract Value: £100,000+

Priority	Description	Response	Remote Resolution / Workaround	Full Resolution
P1 - Critical	Total system failure affecting patient care areas	3 hours (24/7)	4 hours	2 business day
P2 - High	Partial failure or significant degradation	1 hour	4 hours	5 business days
P3 - Medium	Individual device failures, minor degradation	4 hours	1 business day	10 business days
P4 - Low	Feature requests, cosmetic issues, queries	1 business day	By agreement	By agreement

Response Time: Acknowledgement and commencement of investigation.

Remote Resolution / Workaround: Service restored to operational status via remote intervention, which may include temporary measures or workarounds.

Full Resolution: Root cause addressed permanently, including any required hardware replacement, firmware updates, or configuration changes.

On-Site Attendance: Where physical access is required, remote resolution times extend by the time needed to dispatch an engineer (typically next business day within mainland UK).

5.3 Spare Parts & Customer Responsibilities

To achieve the resolution times specified above, the following customer provisions are assumed:

Requirement	Recommendation
Spare components	Minimum 10% of installed devices held on-site, or as agreed during deployment
Trained personnel	At least one customer staff member trained in basic component swap procedures
Remote access	Network access available for remote diagnostics and firmware updates

For high-dependency areas (e.g. ICU, HDU, neonatal), Circadacare strongly recommends increased spare holdings and dedicated trained staff to enable rapid restoration.

Note: Where on-site spares are not available, resolution times may be extended pending delivery of replacement components.

6. Support & Maintenance

6.1 Technical Support

- Dedicated support helpdesk (email)
- Support hours: 9am-5.30pm Monday-Friday
- Emergency out-of-hours support available by negotiation based on contract value
- Named account manager for strategic customers
- Remote diagnostics and troubleshooting
- On-site visits when required (within SLA timeframes)

7. Customer Responsibilities

To ensure successful implementation and operation, customers are responsible for:

7.1 Pre-Implementation

- Coordination of site access for survey and installation
- Network connectivity meeting minimum specifications
- Identification of project stakeholders and governance structure
- Information governance approvals (Data Processing Agreement, SaaS Agreement and Privacy Policy)

7.2 During Implementation

- Designation of super-users for training
- Staff attendance at training sessions
- Timely review and approval of configuration settings
- Communication to end users and families about new technology

7.3 Ongoing Operations

- Maintenance of network infrastructure and power supply
- First-line troubleshooting before escalating to Circadacare support
- Regular review of system alerts and reports
- Participation in quarterly business reviews
- Maintenance of an appropriate stock of spare components (recommended minimum: 10% of installed device count or 2 units, whichever is greater) to enable prompt replacement during fault resolution
- All physical maintenance of installed hardware and associated infrastructure (electrical, network, mounting) remains the responsibility of the customer and their appointed contractors

8. Technical Specifications

8.1 System Requirements

Requirement	Specification
Network connectivity	WiFi (802.11n or later), Internet access with 1Mbps minimum bandwidth per gateway
Power supply	230V AC, 50Hz (standard UK mains)
Environmental	Operating temperature: 10-45°C, Humidity: 10-95% non-condensing
Client devices	Modern web browser (Chrome, Edge, Safari, Firefox - latest 2 versions), Mobile app: iOS 18+ or Android 12+

8.2 Data Security & Privacy

- Data encrypted in transit and at rest using industry-standard protocols
- UK-based data hosting (Google Cloud Platform, London region)
- GDPR and UK Data Protection Act compliant
- Role-based access controls with audit logging
- Annual penetration testing and vulnerability assessments
- Data Processing Agreement available

8.3 Regulatory Compliance

- All mains powered lighting hardware CE marked (LVD, EMC)

9. Service Packages & Pricing

9.1 Pricing Models

Circadacare offers multiple pricing models to accommodate different procurement preferences and financial constraints.

9.2 Return on Investment

Circadacare can work with you to jointly produce detailed ROI analysis based on:

- Reduced falls and associated costs (unplanned A&E visits, reduced re-admissions, increased independence, increased length of stay)
- Improved care capacity and care package provision
- Staff efficiency improvements and reduced agency usage
- Bed day efficiencies through improved discharge rates

Typical payback period: 6-12 months based on existing customer data.

10. Terms & Conditions

10.1 Service Commencement

- Services commence upon execution of a mutually agreed Statement of Work
- Implementation timeline subject to site readiness and customer cooperation
- Payment terms as specified in contract (typically 30 days net)

10.2 Warranties

- **Hardware:** 5-year warranty against manufacturing defects under normal use conditions
- **Software:** Warranted to perform substantially in accordance with published specifications
- **Professional services:** Delivered with reasonable skill and care in accordance with industry standards
- **Exclusions:** Warranties do not cover damage resulting from misuse, unauthorised modification, third-party interference, or force majeure events

10.3 Liability

- Public Liability insurance: £5 million
- Product liability insurance: £5 million
- Employer's liability insurance: £10 million

10.4 Intellectual Property

- Circadacare retains all IP rights in software, hardware designs, and methodologies
- Customer retains rights to their customer and operational data
- Non-exclusive license granted for use during contract term
- Anonymized/aggregated data may be used for research and benchmarking with customer consent

10.6 Changes & Variations

- Price reviews annually with CPI adjustment
- Specification changes communicated 30 days in advance

11. Appendices

11.1 Glossary

Term	Definition
Circadian rhythm	The natural 24-hour cycle of biological processes influenced by light exposure
Melanopic lux	Measurement of light weighted for its effect on the circadian system

11.2 Reference Documents

- Product specifications (separate document)
- Case Study evidence portfolio (separate document)
- Installation guide (separate document)
- User manuals (separate document)
- Data Processing Agreement template (separate document)
- Privacy Policy (separate document)

11.3 Contact Information

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