Hearthside Care Platform

Multi-tenant home-care platform for carer visit logging, family wellbeing dashboards, and agency scheduling with compliance reporting.

~23-min read · 30 pages

INDUSTRY	PREPARED FOR	VERSION
Healthcare — Domiciliary (Home) Care	Hearthside Care (fictional)	0.1

Status: for review · Sample — illustrative scope document (fictional scenario)

HOW WE START
Discovery
Fixed-price scoping — then build

MVP BUILD
~28 weeks
6 phases · delivered iteratively

FUNCTIONAL REQS
5
Core features in MVP scope

A SCOPING STARTING POINT — NOT A FIXED-PRICE QUOTE
Grounded in our delivery experience, this is a shared first read of the architecture, scope, and effort — a starting point to react to, not a fixed-price quote. The validated plan, wireframes, and a fixed-price Statement of Work come out of a paid Discovery phase. (See the closing section for how that works.)

Generated 2026-06-16 for Hearthside Care (fictional)

Sample document — generated by the DBBS scope pipeline

A NOTE FROM MINA

On AI, scope docs, and what comes next.

Our team produced this with our AI-accelerated scoping process — built on patterns from the products we have shipped over the years: hand-crafted exemplars from our own production scope documents, guardrails throughout, and a strict schema every section is checked against. It reflects how DBBS actually scopes and ships software.

What you are holding is the best read we can produce from a short chat — specific, grounded, and honest about what we would still pressure-test. Discovery is where we challenge these assumptions out loud with you and turn them into a plan you can build on.

Building something brand-new can feel like betting on a long blueprint. The structure we are handing you is the bet we would take on a from-zero engagement: aggressive on shipping, conservative on assumptions.

If this lines up with what you are building, **book a slot on my Calendly** — or just reply and our team reads every message. Want to explore another idea first? Try the assistant that produced this yourself at **dbbsoftware.com/chat**.

Mina Morkos
Business Development Manager, DBB Software

Contents

22 sections · click any entry to jump to that section, or use your PDF viewer's bookmark sidebar (left panel) to navigate.

TL;DR

- Building a multi-tenant SaaS platform for UK domiciliary care agencies, enabling mobile visit logging for carers, wellbeing dashboards for families, and compliance reporting for agency staff.
- Start with a ~16-week validation MVP focused on core visit logging and family transparency for one region, then scale to the full rollout over ~28 weeks.
- Automated medication administration records (eMAR) and visit invoicing/payroll are explicitly out of scope for the initial MVP.

PHASED DELIVERY — START LEAN, THEN SCALE

START LEAN

~16 weeks

Core carer mobile app for visit logging, rule-based wellbeing signal, and basic family dashboard/agency scheduling for a single region (CQC-compliant).

FULL ROLLOUT

~28 weeks

Full multi-tenant platform with comprehensive compliance reporting, scalability optimizations, and full NHS DSP Toolkit adherence for UK-wide rollout.

EXECUTIVE SUMMARY

Executive Summary

Hearthside Care aims to replace fragmented manual processes with a unified multi-tenant SaaS platform for UK domiciliary care. The platform will provide mobile tools for carers to log visits and observations, offer families transparent wellbeing dashboards, and automate scheduling and compliance reporting for agency staff. We recommend focusing the initial MVP on CQC compliance for England only, deferring RQIA expansion until the core platform is validated, to accelerate market entry and streamline regulatory overhead.

1. ABBREVIATIONS

Abbreviations

TERM	DEFINITION
ADR	Architectural Decision Record
CQC	Care Quality Commission (England)
DSPT	Data Security and Protection Toolkit (NHS)
eMAR	Electronic Medication Administration Records
GDPR	General Data Protection Regulation (UK)
GPS	Global Positioning System
LLM	Large Language Model
MVP	Minimum Viable Product
PHI	Protected Health Information
QA	Quality Assurance
RQIA	Regulation and Quality Improvement Authority (Northern Ireland)
SaaS	Software as a Service

2. PROJECT CONTEXT

Project Context

Background

Hearthside Care, a UK domiciliary care agency, currently manages approximately 40 carers visiting older clients using a combination of spreadsheets, paper visit logs, and WhatsApp groups. This fragmented approach leads to significant operational overhead, a lack of verifiable visit data, and challenges in providing timely transparency to families. The current setup also complicates compliance reporting and scalability, hindering the agency's ability to grow efficiently. Reference points in the market today include CarePlanner, Care Control, and Birdie; where this build differs is its explicit focus on family wellbeing dashboards with rule-based and future AI-assisted decline detection, offering a higher degree of transparency.

Goal

Deliver a secure, compliant, multi-tenant platform that streamlines care operations, enhances family transparency, and supports agency growth across the UK, starting with a pilot in one region.

Target Users

Carers, Family Members of Clients, Agency Staff (Managers, Administrators)

Business Drivers

Operational Efficiency	Automate manual processes like visit logging, scheduling, and compliance reporting to reduce administrative burden on agency staff and carers.
Enhanced Transparency	Provide families with real-time updates on care visits and a clear view of their relatives' wellbeing trends, building trust and peace of mind.
Regulatory Compliance	Ensure adherence to CQC (and future RQIA) regulations, NHS DSP Toolkit standards, and UK GDPR for data security and reporting.
Scalability	Build a multi-tenant platform capable of supporting expansion from a single pilot region to UK-wide operations without requiring a costly rebuild.

Market Context & Comparable Platforms

The UK domiciliary care market is undergoing digital transformation, driven by increasing regulatory scrutiny and the need for greater efficiency and transparency. Many agencies still rely on a mix of manual processes and generic tools, leading to operational inefficiencies and challenges in demonstrating compliance. There is a growing demand for integrated platforms that can streamline operations while providing better communication with families.

CarePlanner	Offers comprehensive care management, scheduling, and invoicing, but its family communication features are less emphasized than Hearthside Care's proposed dashboard.
Care Control	Provides digital care planning, eMAR, and reporting, but may not offer the same depth of family-facing wellbeing insights or multi-tenant flexibility.
Birdie	Focuses on care management, a family app, and reporting, positioning itself similarly but without the explicit AI-driven decline detection roadmap.

How this build differs: Hearthside Care's platform differentiates itself through its explicit focus on family wellbeing dashboards, offering a high degree of transparency and proactive alerts based on carer observations. The roadmap for AI-assisted decline detection further enhances this unique value proposition, moving beyond basic visit confirmations to actionable insights for families.

Open Questions — to address BEFORE Discovery

The answers to these questions firm up the scope before a paid Discovery phase kicks off. Treat them as homework — not nice-to-haves. Each one unblocks a specific scoping decision.

OQ-1
Target Regions: Is the initial pilot exclusively CQC-regulated England, or does it include other UK nations with distinct regulatory bodies like RQIA from day one?

Impact: This impacts initial compliance scope, platform configuration for regional variations, and the complexity of the launch.

OQ-2
Wellbeing Metrics: What specific thresholds or indicators define a 'declining' wellbeing signal for families, beyond the initial rule-based system?

Impact: This informs the design of the alert system, the rule engine, and future AI model training data requirements.

OQ-3
Existing Data Migration: Is there a requirement to migrate historical client, carer, or visit data from existing spreadsheets into the new platform?

Impact: This affects data import tooling, migration strategy, and the overall timeline for data readiness.

OQ-4
Third-Party Integrations: Are there any existing HR, payroll, or accounting systems that the platform needs to integrate with in later phases for carer management or invoicing?

Impact: This influences API design, data model extensibility, and future roadmap priorities for integration work.

3. SCOPE & REQUIREMENTS

Scope & Requirements

In Scope (MVP)

- Carer mobile application for visit management (clock-in/out, activity logging, concern flagging)
- Family web dashboard for visit confirmation and wellbeing trends
- Agency web portal for carer scheduling, availability management, and compliance reporting
- Multi-tenant architecture supporting multiple care agencies
- Rule-based wellbeing signal generation from carer observations
- UK GDPR and NHS DSP Toolkit compliance, with CQC-specific reporting capabilities

Out of Scope (deferred)

- ~~Medication administration records (eMAR) are deferred to a later phase to focus the MVP on core visit management and family transparency.~~
- ~~Visit invoicing and payroll generation are deferred to a later phase, allowing the MVP to validate core operational workflows first.~~
- ~~Advanced AI-assisted decline detection using Large Language Models is a future roadmap item, building upon the initial rule-based system.~~
- ~~Integration with external HR, payroll, or accounting systems is deferred beyond the MVP to maintain a lean scope.~~

Success Metrics

CARER ADOPTION RATE

80% of active carers using the mobile app for visit logging within 4 weeks of pilot launch

Track unique carer logins and completed visit logs via platform analytics.

FAMILY ENGAGEMENT

60% of active family members logging into the dashboard at least once per week within 8 weeks of pilot launch

Monitor unique family member logins and dashboard view events.

COMPLIANCE REPORT GENERATION TIME

Automated CQC-ready reports generated in under 5 minutes

Measure report generation time from the agency portal.

REDUCTION IN MANUAL ADMIN TIME

25% reduction in time spent by agency staff on scheduling and visit verification

Baseline current manual process time and compare with post-launch operational metrics.

Functional Requirements

FR-01 Carer Mobile Application

P0 L

A native mobile application for carers to manage their daily visits, including clocking in and out with GPS and timestamp verification, recording care activities (personal care, meals, medication prompts, mood), and flagging any immediate concerns.

- Carers can log in securely using agency-provided credentials.
- Carers can view their assigned daily schedule and client details.
- Carers can clock in and out of visits, capturing GPS coordinates and timestamp.
- Carers can select and record completed care activities from a predefined list.
- Carers can add free-text notes for observations and flag concerns with severity levels.

FR-02 Family Wellbeing Dashboard

P0 M

A secure web portal for family members to view confirmation of completed visits, track a wellbeing trend over time based on carer observations, and receive alerts if their relative shows signs of decline.

- Family members can securely log in to view their relative's care information.
- The dashboard displays a confirmation for each completed visit with date and time.
- A visual trend graph shows the client's wellbeing status over a selected period.
- Alerts are triggered and displayed on the dashboard when predefined decline criteria are met.
- Family members can view a summary of recorded care activities for each visit.

FR-03 Agency Management Portal

P0 L

A web-based portal for agency staff to manage carer rosters, schedule visits, track carer availability, and generate automated compliance reports for regulatory bodies like CQC.

- Agency staff can create, edit, and assign carer rosters and schedules.
- The portal displays real-time carer availability and conflicts.
- Agency staff can view detailed visit logs and carer observations.
- The portal generates CQC-compliant reports based on collected visit data.
- User roles and permissions are enforced for different levels of agency staff.

FR-04 Multi-Tenant Agency Onboarding

P0 M

Functionality to onboard new care agencies onto the platform, providing them with isolated data environments and administrative controls.

- A super-admin can create new agency tenants with unique identifiers.
- Each agency tenant has its own isolated data storage for clients, carers, and visits.
- Agency administrators can manage their own staff and client accounts within their tenant.
- Access control ensures data separation between different agencies.

FR-05 Wellbeing Signal Generation

P0 M

A backend service that processes daily carer observations (mood, activity levels, flagged concerns) and applies a set of predefined rules to generate a composite wellbeing signal for each client, used by the Family Dashboard.

- The system ingests carer observation data from the mobile app.
- Predefined rules (e.g., '3 consecutive days of low mood' or 'multiple flagged concerns') are applied to observations.
- A daily wellbeing score or status is generated for each client.
- The wellbeing signal is stored and made available for the Family Dashboard.

Integrations

- Google Maps API (for GPS location services in carer app)
- SMS Gateway (for potential future alerts or notifications)
- Email Service (for account management and notifications)

4. NON-FUNCTIONAL REQUIREMENTS

Non-Functional Requirements

Performance
Carer app clock-in/out and activity logging should complete within 2 seconds. Family dashboard load times should be under 3 seconds for key wellbeing views. Compliance reports should generate in under 5 minutes.

Reliability
The system should be resilient to individual component failures, with automated recovery mechanisms and robust error handling to prevent data loss or service disruption.

Availability
The platform should target 99.9% uptime for core services, ensuring carers can always log visits and agency staff can access critical scheduling information.

Scalability
The multi-tenant architecture must support onboarding hundreds of agencies and thousands of carers and clients, handling concurrent visit logging and dashboard access without performance degradation.

Maintainability
The codebase will follow clean architecture principles, be well-documented, and utilize automated testing to ensure ease of maintenance and future feature development.

Data Integrity
All data transactions must be atomic and consistent, ensuring that visit logs and wellbeing signals are accurately recorded and retrieved. Data validation will be implemented at the point of entry and API layer.

Observability
Comprehensive logging, monitoring, and alerting will be implemented across all services to provide visibility into system health, performance, and potential issues.

Security
Implement AES-256 encryption for data at rest and TLS 1.3 for data in transit. Multi-Factor Authentication (MFA) is required for all users accessing PHI. Robust Role-Based Access Control (RBAC) must be in place to ensure users only access data relevant to their role and agency. No PHI will be stored in application logs.

Usability
The carer mobile app must be intuitive and easy to use with minimal training, designed for quick data entry. The family and agency web portals should offer clear navigation and accessible information presentation.

Compliance
The platform must adhere to UK GDPR for personal data protection, including explicit consent for special category data (health observations). It must also meet NHS DSP Toolkit standards for data security and be designed for CQC regulatory reporting requirements in England. All data processing involving PHI will be subject to strict access controls and audit logging.

Quality Attributes

The quality attributes that matter most for this product, ranked by priority and tied to a measurable criterion where one applies.

RANK	ATTRIBUTE	TARGET	WHY

P1	**Security**	Zero critical security vulnerabilities identified in annual penetration tests; 100% compliance with NHS DSP Toolkit standards.	Handling Protected Health Information (PHI) and operating in a regulated environment (CQC, NHS DSP Toolkit) makes security paramount to protect client data and maintain trust.
P1	**Usability**	Carer task completion time for visit logging under 60 seconds; System Usability Scale (SUS) score of 80+ for all user interfaces.	Carers need an intuitive mobile app for efficient visit logging, and families require a clear, accessible dashboard for wellbeing insights, minimizing training and support needs.
P1	**Compliance**	Successful completion of CQC audit requirements for digital record-keeping; full adherence to UK GDPR principles for data processing.	Adherence to UK GDPR, NHS DSP Toolkit, and CQC regulations is a fundamental requirement for legal operation and client confidence.
P2	**Performance**	Carer app clock-in/out and activity logging within 2 seconds; Family dashboard key views load under 3 seconds; compliance reports generate under 5 minutes.	Efficient operation is critical for carers on the go and for agency staff generating reports, directly impacting user satisfaction and operational throughput.
P2	**Scalability**	Support 5x current user load with less than 10% degradation in response times; onboard new agencies within 1 business day.	The platform must support growth from a pilot to hundreds of agencies and thousands of users across the UK without requiring architectural changes.

Monitoring & Analytics

OpenTelemetry-first instrumentation, shipped to Sentry (errors) + Vercel Analytics / CloudWatch (infra) + Langfuse (for future LLM traces).

- API latency and error rates (per endpoint)
- Carer app clock-in/out success rate
- Family dashboard load times
- Database query performance
- Wellbeing signal processing duration
- User login success/failure rates
- System uptime

Product analytics: Product analytics will track user engagement with key features (e.g., number of visits logged, family dashboard logins, report generations) to inform product iteration and identify areas for improvement.

Data Handling & Privacy

The personal-data classes this product handles, with the lawful basis, retention, and residency for each — the table a data-protection officer checks first.

DATA CLASS	LAWFUL BASIS	RETENTION	RESIDENCY
Client Personal Identifiable Information (PII)	Legitimate Interest (for care provision) and Explicit Consent (for sharing with family)	7 years post-service termination (NHS record keeping guidelines)	United Kingdom
Client Special Category Data (Health/Wellbeing Observations)	Explicit Consent and Substantial Public Interest (provision of health/social care)	7 years post-service termination (NHS record keeping guidelines)	United Kingdom
Carer PII (Contact, Employment Details)	Contractual Necessity (employment contract)	6 years post-employment termination	United Kingdom
Visit Logs (GPS, Timestamps)	Legitimate Interest (service verification, compliance)	7 years post-service termination	United Kingdom

5. CONSTRAINTS & ASSUMPTIONS

Constraints & Assumptions

Constraints

- UK data residency is a non-negotiable requirement for all data storage and processing.
- Compliance with UK GDPR and NHS DSP Toolkit is mandatory from the outset.
- The initial pilot must be live within approximately 7-9 months to align with the next care-commissioning cycle.
- The data model must be extensible to support future features like eMAR and invoicing without requiring a full rebuild.

Assumptions

- The initial pilot will focus solely on CQC compliance for England, deferring specific RQIA requirements to a later phase.
- Hearthside Care will provide clear clinical rules and thresholds for the initial rule-based wellbeing signal generation.
- Carers will have access to a smartphone with internet connectivity during their shifts to use the mobile application.
- Agency staff will be responsible for initial data entry of client and carer profiles into the platform.
- The platform will be deployed as a single-tenant instance for the pilot, with multi-tenant capabilities enabled for broader rollout.

Dependencies

The external services and client inputs this build depends on — what a delivery lead confirms before committing to a date.

- Licensed care-data feed / NHS integration access (Phase 2) — confirm available APIs and accreditation timeline
- Auth0 Organizations tenant + HIPAA / UK-GDPR data-processing agreement signed
- Client-provided clinical wellbeing rules and thresholds for the rule-based signal
- Apple App Store + Google Play developer accounts for the carer mobile app
- Pilot care agencies and a carer cohort confirmed for UAT
- UK data-residency hosting region signed off by the client

6. PROPOSED TECHNICAL SOLUTION

Proposed Technical Solution

Architecture Overview

The Hearthside Care platform will adopt a multi-tenant, microservices-oriented architecture deployed on AWS. The core data entities include 'Client' (personal details, care plan), 'Carer' (personal details, availability, assigned clients), 'Visit' (timestamp, GPS, activities, notes), 'FamilyMember' (contact details, client association), and 'Agency' (tenant configuration, staff). The frontend will consist of a React Native mobile application for carers and a Next.js web

application for families and agency staff. These clients will interact with a Node.js/TypeScript backend API, hosted on AWS Lambda or Fargate, which handles business logic and data persistence. PostgreSQL, hosted on AWS RDS, will serve as the primary data store, utilizing a 'pooled database, separate schema' model for tenant isolation. Redis will provide caching and queueing capabilities. The primary workflow for a carer involves using the mobile app to clock in, which sends a GPS-stamped event to the backend. The backend records the 'Visit' entity, associating it with the 'Carer' and 'Client'. During the visit, the carer logs 'Activities' and 'Notes', which are updated against the 'Visit'. Upon clock-out, the final visit details are recorded. This data then feeds into a background process that updates the client's 'WellbeingSignal' entity, making it available for the Family Dashboard.

Recommended Stack

FRONTEND	Next.js 16 (App Router) with React 19 and Tailwind v4 for web applications; React Native (Expo) for the mobile application.
BACKEND	Node.js (TypeScript) with Hono on serverless (AWS Lambda) for API services.
DATABASE	PostgreSQL on AWS RDS (multi-AZ) for primary data storage; Redis for caching and queueing.
INFRA	AWS (eu-west-2 London region) for hosting, Vercel for Next.js deployments.
OBSERVABILITY	OpenTelemetry-first instrumentation, shipped to Sentry (errors) and CloudWatch (infra).
THIRD-PARTY	Auth0 (for user authentication and authorization), Google Maps API (for GPS services), Email Service (e.g., AWS SES), SMS Gateway (e.g., Twilio)

Technology Evaluation

DECISION	SELECTED	ALTERNATIVES	WHY
Backend Framework	**Node.js (TypeScript) with Hono**	Python 3.13 + FastAPI, NestJS	DBB Software's recommended pick, leveraging a shared TypeScript monorepo with the Next.js frontend for type safety and developer efficiency, optimized for serverless deployments.

Authentication Provider	**Auth0**	Better Auth, Clerk	Recommended for its robust feature set, including multi-factor authentication and support for organizations (multi-tenancy), simplifying identity management and security.
Cloud Provider	**AWS (eu-west-2)**	Microsoft Azure (UK South/West), Hetzner (EU)	Recommended pick, pending client confirmation, due to its comprehensive services, strong security posture, and explicit data residency options within the UK, crucial for compliance.

Architecture Decision Records

ADR-01. Multi-Tenant Architecture Approach

ACCEPTED

The platform needs to support multiple independent care agencies, each with their own clients, carers, and data, while sharing core application logic and infrastructure.

Decision: A 'pooled database, separate schema' approach will be used, where a single PostgreSQL database instance hosts multiple logical schemas, one for each tenant. This balances isolation with operational efficiency.

ALTERNATIVES CONSIDERED

VIABLE **Separate Database per Tenant.** Offers strongest data isolation but significantly increases operational overhead and cost at scale.

VIABLE **Shared Schema with Tenant ID Column.** Simplest to implement but requires diligent application-level filtering on every query, increasing risk of data leaks if not perfectly implemented.

ADR-02. Mobile Application Framework

PROPOSED

Carers require a reliable mobile application for critical visit logging, including GPS and offline capabilities, across both iOS and Android devices.

Decision: React Native (Expo) is recommended for its ability to deliver a performant, near-native experience from a single codebase, accelerating development and maintenance. Expo simplifies build processes and provides a robust ecosystem for common mobile features.

ALTERNATIVES CONSIDERED

VIABLE **Native iOS/Android Development.** Offers maximum performance and platform-specific features but requires two separate development teams and codebases, increasing cost and time.

WEAK **Progressive Web App (PWA).** Lower development cost but offers limited access to device hardware (e.g., precise GPS in background) and less reliable offline capabilities compared to native apps.

ADR-03. Cloud Infrastructure Provider

PROPOSED

The platform requires a scalable, secure, and compliant cloud environment with strict UK data residency requirements.

Decision: AWS (specifically the London 'eu-west-2' region) is recommended. It offers a comprehensive suite of services, robust security features, and explicit data residency options within the UK, which is critical for compliance.

ALTERNATIVES CONSIDERED

VIABLE **Microsoft Azure (UK South/West).** A strong alternative with UK data centers and enterprise-grade services, particularly suitable if there are existing Microsoft ecosystem dependencies.

VIABLE **Hetzner (Falkenstein/Nuremberg).** Cost-effective EU hosting with strong privacy posture, but requires explicit confirmation of UK-specific data residency guarantees for PHI.

Figure 1 — Architecture

High-Level System Architecture

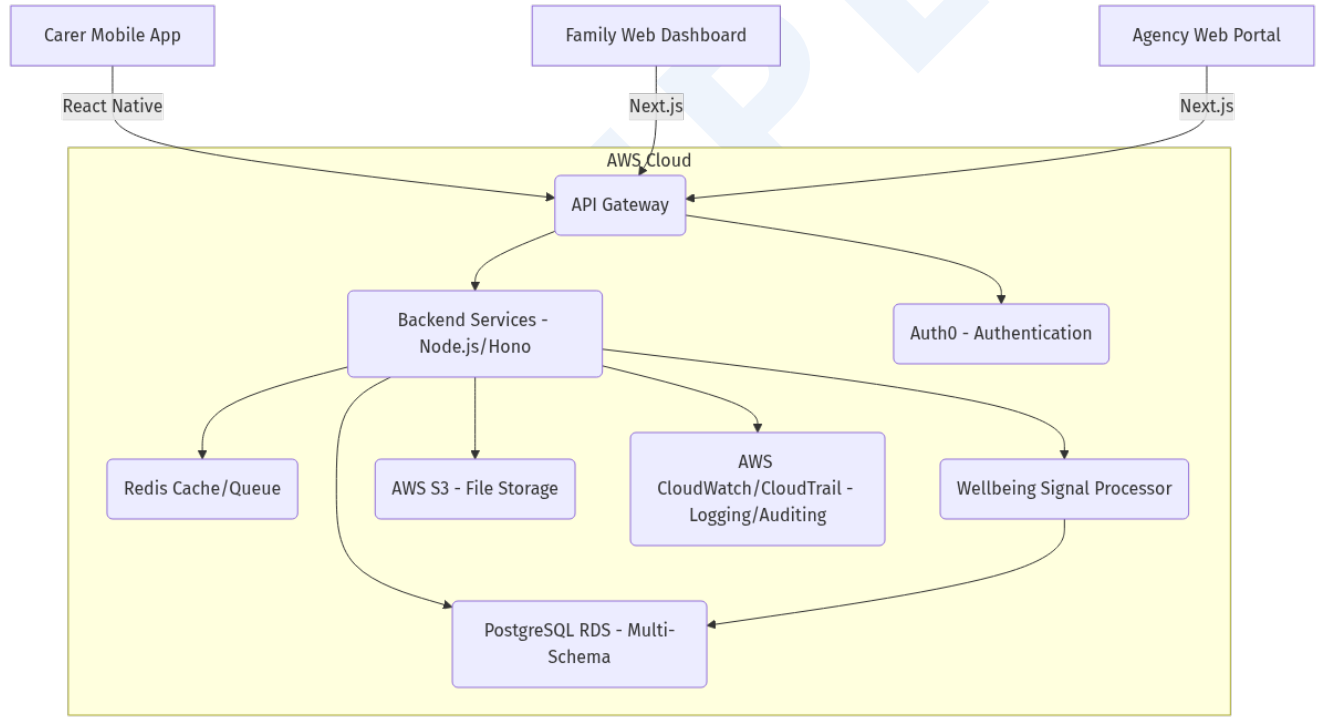


Figure 2 — Data model

Core Data Model Entities

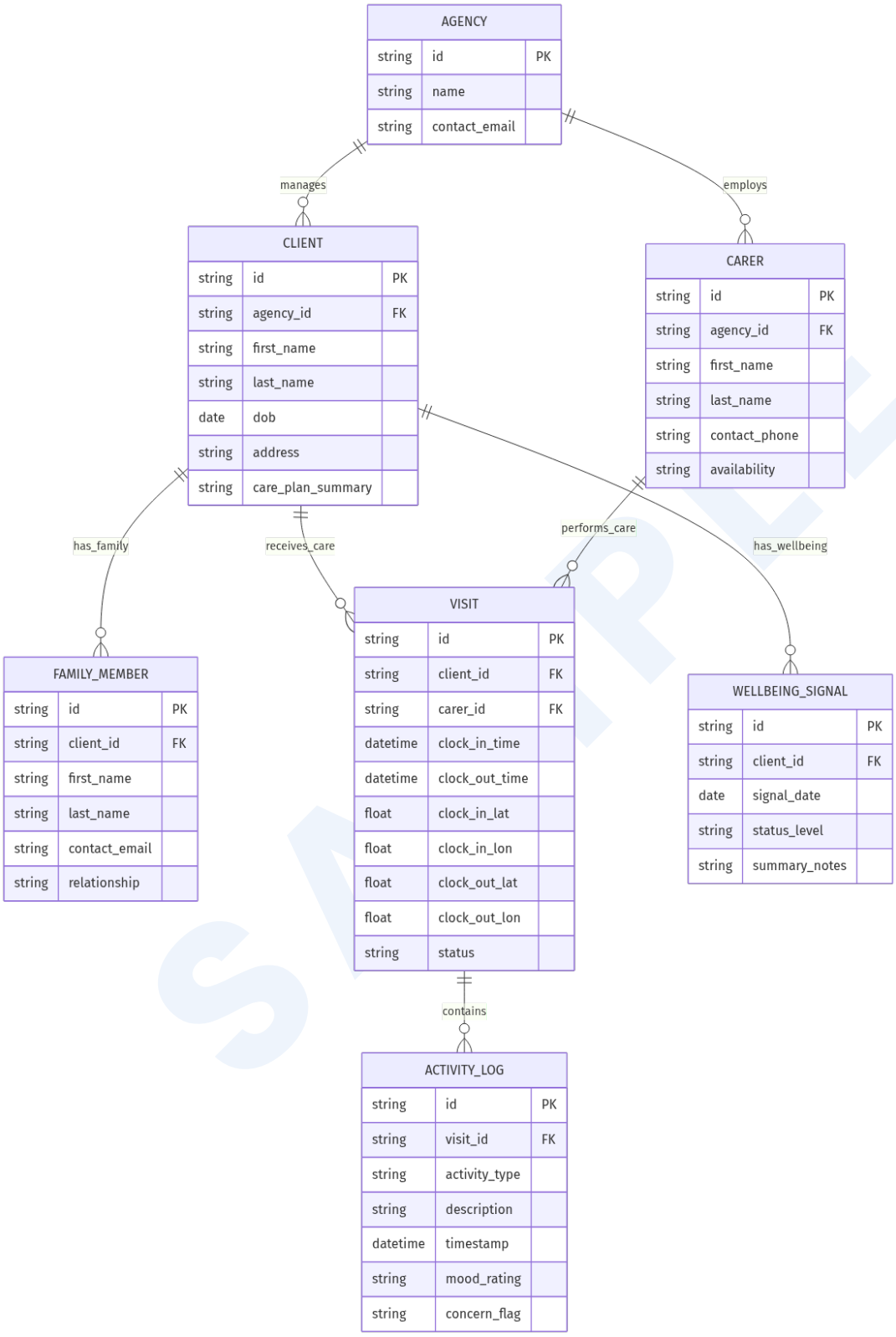
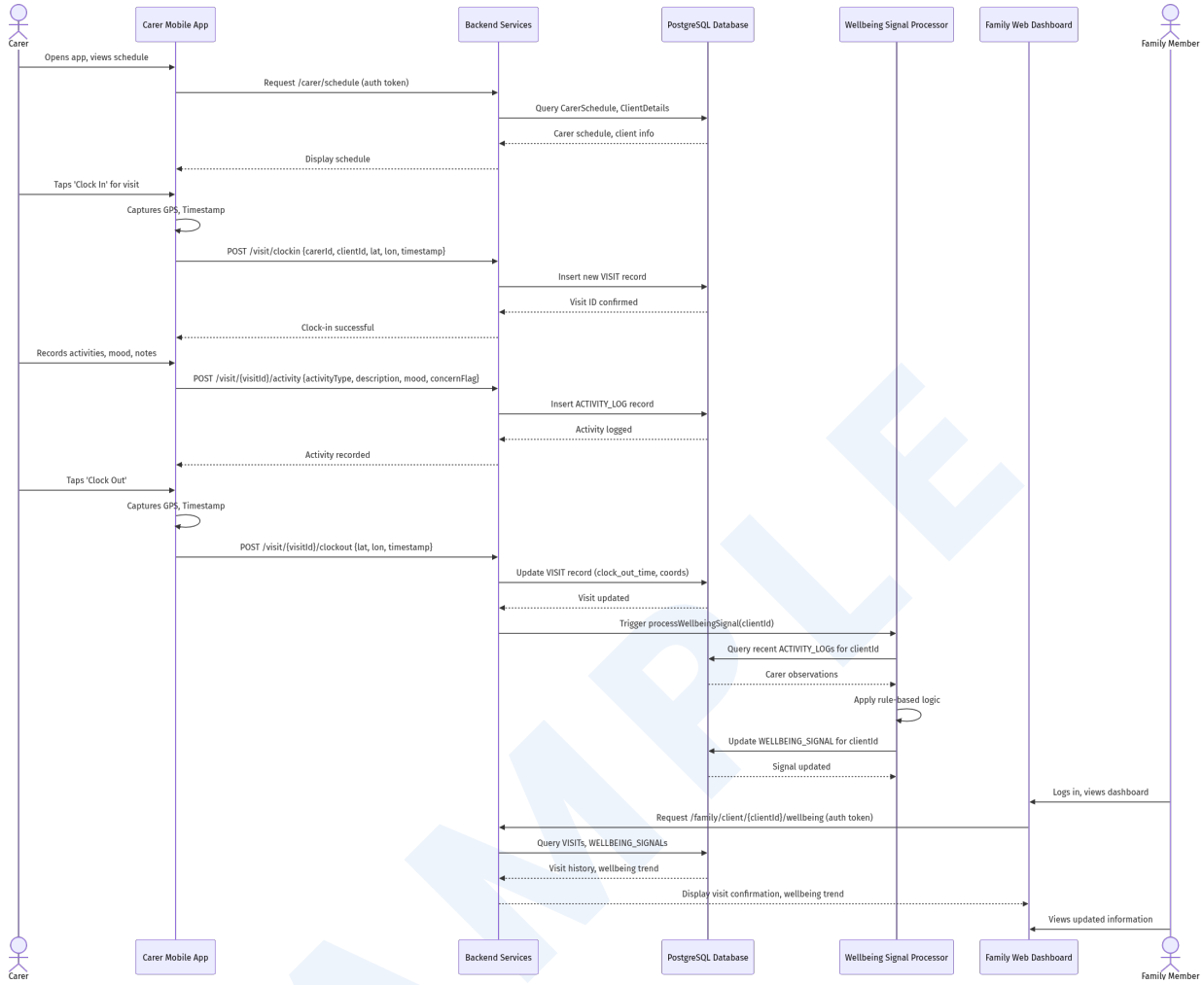


Figure 3 — Sequence

Carer Visit Logging and Family Dashboard Update Workflow



Worked Example

One concrete end-to-end trace of the primary workflow — how a real request flows through the system.

A carer completes a visit for a client, logs their activities and observations via the mobile app, and the family member then views the updated visit confirmation and wellbeing trend on their dashboard.

1. 1. Carer Clocks In

```
Carer 'Sarah Jones' arrives at client 'Evelyn Smith's' home at 09:00 on 2026-07-22. Sarah opens the mobile app, selects Evelyn, and taps 'Clock In'. The app captures GPS coordinates (e.g., 51.5074, -0.1278) and the timestamp. The app sends a POST request to the backend with {'carerId': 'carer-123', 'clientId': 'client-456', 'timestamp': '2024-07-22T09:00:00Z', 'latitude': 51.5074, 'longitude': -0.1278}. The backend creates a new Visit record in the database.
```

2. 2. Carer Logs Activities

```
During the visit, Sarah records activities: 'Personal Care: Assisted with dressing', 'Meals: Prepared breakfast', 'Medication Prompts: Reminded for morning meds'. She notes Evelyn's mood as 'Content' and flags 'No Concerns'. The app sends multiple POST requests to the backend with payloads like {'activityType': 'Personal Care', 'description': 'Assisted with dressing', 'timestamp': '2024-07-22T09:30:00Z'}. These create ActivityLog records linked to the Visit.
```

3. 3. Carer Clocks Out

```
At 10:00, Sarah taps 'Clock Out'. The app captures new GPS coordinates and the timestamp. It sends a POST request to the backend with {'timestamp': '2024-07-22T10:00:00Z', 'latitude': 51.5075, 'longitude': -0.1279}. The backend updates the Visit record with the clock-out time and coordinates.
```

4. 4. Wellbeing Signal Processing

```
Upon visit completion, a background process is triggered. It queries the ActivityLog records for 'client-456' for 2026-07-22. Based on rules (e.g., 'Mood: Content' + 'No Concerns' = 'Stable'), it determines Evelyn's wellbeing status for the day as 'Stable'. This updates the WellbeingSignal record for 'client-456' for 2026-07-22 to {'signal_date': '2026-07-22', 'status_level': 'Stable', 'summary_notes': 'Client was content, no concerns noted.'}.
```

5. 5. Family Member Views Dashboard

```
Evelyn's daughter, 'Maria Smith', logs into the Family Web Dashboard. The dashboard makes a GET request to the backend for client-specific information. The backend retrieves the latest Visit records and WellbeingSignal data. Maria sees a confirmation for Sarah's visit from 09:00-10:00, a summary of activities, and a 'Stable' wellbeing trend for Evelyn, with no new decline alerts.
```

7. IMPLEMENTATION PLAN

Implementation Plan

W1-W4

M1: Foundation & Carer App Core

· Project setup and environment configuration
· Core data model definition (Client, Carer, Visit)
· Carer mobile app: Login, Schedule View, Clock-in/out (GPS+Timestamp)

Exit: Carers can securely log in, view their schedule, and successfully clock in and out of visits with location data captured.

W5-W8

M2: Visit Logging & Wellbeing Rules

· Carer mobile app: Activity Logging, Mood Recording, Concern Flagging
· Backend service for processing carer observations
· Initial rule-based wellbeing signal generation logic

Exit: Carers can fully log visit details, and the backend successfully generates a daily wellbeing signal for clients based on these observations.

W9-W12

M3: Family Dashboard & Agency Scheduling

· Family web dashboard: Visit Confirmation, Wellbeing Trend Display, Basic Alerts
· Agency web portal: Carer Management, Basic Rostering & Scheduling
· Multi-tenant agency setup functionality

Exit: Family members can view visit confirmations and wellbeing trends, and agency staff can manage carers and create basic schedules for a single tenant.

W13-W16

M4: Compliance & Pilot Readiness

· Agency web portal: CQC-ready compliance reporting module
· User roles and permissions for agency staff and family members
· Security hardening and initial penetration testing

Exit: The platform supports CQC-compliant reporting, all user roles are functional, and the system is ready for a pilot launch in one region.

W17-W20

M5: Pilot Launch & Feedback

· Pilot launch support and monitoring
· User feedback collection mechanisms
· Minor bug fixes and performance optimizations

Exit: The platform is successfully deployed and in use by pilot agencies, with initial user feedback being collected and addressed.

W21-W28

M6: Scalability & Refinement

· Performance and scalability optimizations for UK-wide rollout
· Advanced security audit and compliance review (NHS DSP Toolkit)
· Refinement of wellbeing signal rules based on pilot data
· Infrastructure as Code (IaC) for multi-region deployment readiness

Exit: The platform is optimized for scale, meets full NHS DSP Toolkit standards, and is ready for broader UK rollout.

Roadmap Beyond MVP

Where this product can go after the MVP ships — the phases we'd sequence next, and the gate to enter each.

- **Phase 2: Enhanced Care Management**
  Implement Electronic Medication Administration Records (eMAR) and integrate with external HR/payroll systems for comprehensive carer management.
- **Phase 3: Advanced Intelligence & Expansion**
  Introduce LLM-assisted decline detection, expand compliance reporting to include RQIA for Northern Ireland, and explore multi-language support.
- **Phase 4: Financial & Growth Tools**
  Develop visit invoicing and payroll generation capabilities within the platform, and explore integrations with accounting software.

DBBS PRE-BUILT SOLUTIONS

Modules you don't have to build

These pieces of your scope map onto modules in DBB Software's open-source platform (github.com/DBB-Software/dbbs-solutions) — production-tested in prior engagements. We do not start them from scratch; we start with a configured drop-in.

Auth + MFA + SSO
Auth0 / Cognito adapter with MFA, SSO, role-based access. Plug-and-play for B2B logins.

File Uploads + Storage
S3 / R2 / Vercel Blob uploads with on-the-fly thumbnail generation and signed URLs.

Notifications (Email + SMS + Push)
Twilio + SendGrid + push notifications with template management and delivery tracking.

Sentry + Langfuse Observability
Pre-wired Sentry errors + Langfuse LLM traces + CloudWatch metrics. Drop-in stack.

CI/CD Pipelines
GitHub Actions + Vercel / AWS deploy pipelines with preview environments and rollbacks.

RELEVANT WORK

Selected DBBS case studies

A selection of comparable work from our portfolio — the closest matches to your domain and build type. Full case studies on dbbsoftware.com.

RetinaRisk Case Study ’

Building a Diabetic Retinopathy Care Platform with Mobile App and Provider Portal DBB Software built a multi-surface healthcare platform for RetinaRisk. The platform helps patients track their risk of diabetic retinopathy and gives clinicians a single interface for managing patient data. About the Client RetinaRisk, an EU-based health technology company, is dedicated to preventing vision loss...

DispatchHealth onboarding platform ’

Delivering a Modern Self-Scheduling Platform for At-Home Care Find out how DBB Software helped a leading provider of in-home urgent medical care build a scalable digital self-scheduling and onboarding platform that enables patients to request care independently while reducing call-center load and improving insurance data accuracy. About the Client- DispatchHealth delivers high-quality, on-demand...

DispatchHealth migration ’

Modernizing a Healthcare Platform by Migrating a Monolith to Microservices Find out how DBB Software helped a leading U.S. at-home healthcare provider modernize its core platform by decomposing a large Ruby on Rails monolith into scalable Golang microservices, improving performance, reliability, and long-term maintainability across mission-critical patient experience flows. About the Client...

8. TEAM COMPOSITION

Team Composition

The DBBS team that ships this project on your behalf — end-to-end. Not staff augmentation of your engineers.

Product Manager

×1 FTE

Defines product vision, manages roadmap, gathers requirements, and ensures alignment with business goals and user needs.

Technical Lead

×1 FTE

Oversees technical architecture, guides engineering decisions, ensures code quality, and mentors the development team.

Frontend Engineer

×2 FTE

Develops the Carer Mobile App (React Native) and the Family/Agency Web Dashboards (Next.js), ensuring responsive and intuitive user interfaces.

Backend Engineer

×2 FTE

Builds the core API services, manages database interactions, implements business logic, and develops the wellbeing signal processing engine.

DevOps / Platform Engineer

×1 FTE

Manages cloud infrastructure (AWS), implements CI/CD pipelines, ensures system scalability, reliability, and observability.

QA Engineer

×1 FTE

Designs and executes test plans, performs functional, integration, performance, and security testing, and ensures overall product quality and compliance.

Compliance & Security Specialist

×0.5 FTE

Advises on UK GDPR, NHS DSP Toolkit, and CQC compliance, reviews security practices, and ensures data protection standards are met.

9. RISK ASSESSMENT

Risk Assessment & Mitigations

RISK	IMPACT	MITIGATION
Two-sided Cold Start Problem	HIGH	Focus the pilot on a single region with existing Hearthside Care clients and carers, ensuring immediate utility. Founder-led onboarding for initial agencies and carers will build early momentum and gather critical feedback.
Regulatory Compliance Drift	HIGH	Design the compliance reporting module with configurable parameters to adapt to minor CQC/RQIA changes. Maintain a dedicated compliance specialist on the team to monitor regulatory updates and advise on necessary platform adjustments.
Data Integrity and PHI Exposure	HIGH	Implement robust data validation, encryption (AES-256 at rest, TLS 1.3 in transit), strict RBAC, and regular security audits. No PHI in application logs. Conduct regular penetration testing and vulnerability assessments.

Inaccurate Wellbeing Signal / AI Misinterpretation	HIGH	Start with a transparent, rule-based system for wellbeing signals, validated by Hearthside Care's clinical experts. Any future LLM-assisted decline detection will incorporate human-in-the-loop validation and clear disclaimers about AI-generated insights.
Ongoing Licensed Data / API Costs	MEDIUM	Licensed-data and API costs (e.g., for mapping services, SMS gateway) can represent a material slice of annual operating cost at the coverage and seat tier this product targets; budget separately from the build cost. Implement usage caps and telemetry on the costliest surfaces, and explore tier-based throttling where applicable.

AI Opportunities

Where applied AI/ML adds defensible value to this product — built responsibly, with provider abstraction, fallbacks, and human-in-the-loop where it matters.

- **Rule-Based Wellbeing Signal (MVP)**

  Automate the generation of a client wellbeing status based on carer observations, providing immediate value to family dashboards.

  Approach: Implement a configurable rule engine that processes structured carer input (mood, activity, flagged concerns) to derive a composite wellbeing score or status. This forms the foundation for future AI enhancements.

- **LLM-Assisted Decline Detection (Post-MVP)**

  Analyze free-text carer notes and structured observations to detect subtle patterns indicative of client decline, beyond simple rule thresholds.

  Approach: Develop a pipeline that feeds anonymized carer notes and structured data into a fine-tuned LLM. The LLM would identify nuanced changes in behavior or health, flagging potential decline for agency review. This requires a human-in-the-loop validation process to ensure accuracy and prevent 'hallucinations'.

- **Carer Observation Summarization (Post-MVP)**

  Automatically summarize daily or weekly carer observations for family members and agency staff, reducing reading time and highlighting key points.

  Approach: Utilize an LLM to generate concise summaries of carer visit notes, focusing on key activities, mood changes, and flagged concerns. Summaries would be reviewed for accuracy before presentation to users.

10. DEVELOPMENT PROCESS

Development Process

Cadence

Two-week sprints

Ceremonies

- Sprint Planning
- Daily Stand-ups
- Sprint Review
- Sprint Retrospective

Tooling

GitHub for version control · Jira for project management · Slack for team communication · Confluence for documentation

Support & Maintenance

Post-launch, DBBS offers a tiered support and maintenance agreement, providing ongoing operational stability and continuous improvement.

Service levels: Critical (P1) issues: 1-hour response, 4-hour resolution target. High (P2) issues: 2-hour response, 8-hour resolution target. Medium (P3) issues: 4-hour response, 24-hour resolution target. Low (P4) issues: 8-hour response, 48-hour resolution target.

- 24/7 monitoring of critical systems and infrastructure
- Bug fixes and security patches
- Performance optimization and scalability management
- Minor feature enhancements and platform updates
- Dedicated support channel for incident reporting

Testing & QA Strategy

A 'shift-left' testing approach will be adopted, integrating testing throughout the development lifecycle. This includes automated tests at multiple levels and manual testing for critical user flows and compliance verification.

- Unit Testing (for individual functions and components)
- Integration Testing (for API endpoints and service interactions)
- End-to-End Testing (for critical user journeys across mobile and web platforms)
- Performance Testing (to ensure scalability and responsiveness)
- Security Testing (including penetration tests and vulnerability scans)
- User Acceptance Testing (UAT) with Hearthside Care staff and pilot users

Data Strategy & AI-Readiness

The data strategy prioritizes security, privacy, and compliance with UK GDPR and NHS DSP Toolkit standards. All data will be stored in PostgreSQL with a multi-schema approach for tenant isolation. Strict access controls (RBAC) will govern who can view and modify PHI. Data quality will be maintained through input validation in the carer app and agency portal.

- Data ownership for each agency tenant will be clearly defined, with DBBS acting as a data processor.
- Anonymization and pseudonymization techniques will be applied for any data used in analytics or future AI model training.
- Data retention policies will be enforced automatically based on regulatory requirements and client agreements.
- Audit trails for all PHI access and modification will be maintained for compliance purposes.
- A data governance framework will be established to manage data definitions, quality, and lifecycle.

OVERALL EFFORT

Start lean: ~16 weeks · Full rollout: ~28 weeks

Full build sizing: Extra Large — 6+ months

WHAT OUR CLIENTS SAY

“They provided quality healthcare CRM software with great support, making the experience enjoyable.”

Linda William · Technical Operations Manager at Blue Medi Home Health Care Center

Standards & Best Practices

This scope document is generated by an AI pipeline, not hand-authored by a consultant — so it is fair to ask whether its structure is rigorous or merely plausible. Each section is deliberately organised to follow the principles of a recognised documentation, requirements, or delivery standard, so a reviewing engineer can navigate it like a hand-authored design document. We are precise about what we claim: we structure the document to these frameworks; we do not claim formal certification or audited compliance (and most are not certifications). The exception is ISO/IEC 27001, which DBB Software genuinely holds. The only verification run on this free document is the automated groundedness check noted below.

arc42 — architecture documentation

The document's flow — project context and goals, scope, constraints and assumptions, the proposed technical solution, quality attributes, and risks — follows the arc42 architecture-documentation template. arc42 is a template, not a certification.

ISO/IEC/IEEE 29148 — requirements engineering

Requirements follow this standard's principles: functional requirements are individually stated, each carries a priority, and each is paired with testable acceptance criteria; scope is split into in-scope, out-of-scope, and measurable success metrics; non-functional requirements are a distinct set alongside ranked quality attributes.

MoSCoW prioritisation (three-band)

Every functional requirement carries an explicit P0/P1/P2 priority mapping to Must / Should / Could, separating the committed core from negotiable scope. It is a three-band application (no 'Won't' band); deliberately excluded items live in the out-of-scope section.

The C4 model (Simon Brown) — architecture diagrams

The architecture is shown as a C4-style system view, with a data-flow diagram and sequence diagrams, describing structure and runtime behaviour at consistent abstraction levels. Sequence diagrams are a recognised C4 dynamic supplement; the data-flow diagram is a complementary view, not itself a C4 diagram type.

Architecture Decision Records (Michael Nygard)

Significant technical choices are captured as ADRs — context, decision, and consequences — alongside a technology-evaluation table and an entity-relationship data model, so each recommendation is traceable to a stated rationale and its trade-offs rather than asserted.

IEEE 1016 — Software Design Description

The proposed-solution chapter is organised in the spirit of an IEEE 1016 design description — architecture overview, recommended stack, data model, ADRs, and a rendered diagram set — sized to a scope document, not a full IEEE 1016 specification with formal viewpoint coverage.

ISO/IEC 27001 — information security (DBB Software is certified)

DBB Software holds ISO/IEC 27001 certification for its information-security management system — the one formal, audited certification here, and a property of DBB the organisation, NOT of this document. Separately, the document includes a data-handling table (data class, lawful basis, retention, residency) reflecting GDPR-style data governance.

Automated groundedness verification

The honesty control specific to this machine-generated document: before delivery an automated check flags any external reference or URL not supported by DBB's real delivery content, an allowlist of DBB canonical paths and documentation domains, or vetted reference-entity URLs. It rewrites flagged references surgically and fails open — a sourcing check, not a human standards audit.

Paid Scoping Sprint — estimation & delivery governance (not in this free document)

The deeper paid Scoping Sprint deliverable additionally provides a PMI-style Work Breakdown Structure with effort bands, a basis-of-estimate (cost drivers, assumptions, contingency, and a three-point range), a sprint-by-sprint delivery plan, a Sprint-0 mobilisation plan, a RACI matrix, a Definition of Done, and a change-control process. None of these are part of this free document — listed here for transparency.

In plain terms: this is a free, AI-generated document whose structure follows the principles of arc42, ISO/IEC/IEEE 29148, the C4 model, IEEE 1016, MoSCoW, ADRs, and PMI / agile delivery practice — none of which are certifications, and none of which this document has been audited or certified against. The only verification run on it is the automated groundedness check above. ISO/IEC 27001 is the single held certification, and it belongs to DBB Software, not to this document.

11. NEXT STEPS

Next Steps

1. Schedule a 30-minute Discovery call to confirm assumptions and refine the project scope.
2. Conduct a Build Readiness Diagnostic to assess current infrastructure, data, and team capabilities.
3. Initiate a fixed-bid Scoping Sprint to produce detailed user stories, technical specifications, and a precise project plan.
4. Kick off the MVP build with a dedicated DBBS team, delivering the core platform features.

IF YOU TAKE THE NEXT STEP

What DBBS Discovery produces

- A refined technical architecture validated against your constraints — not invented from a chat.
- UX wireframes for the core flows, signed off by your team.
- A frozen scope: every functional requirement explicitly in or out.
- A fixed-price quote for the MVP build, with milestones and dependencies mapped.
- A team composition + onboarding plan ready to start the build the day Discovery closes.

On budget: we don't quote from a single chat. An indicative, phase-by-phase range — and the fixed-price MVP quote — come out of the Discovery phase above, once the scope is frozen and the architecture validated.

DBB Software is ISO/IEC 27001 certified. Your data, source code, and IP are handled under an independently audited information-security management system.

HOW THIS SCOPE WAS PRODUCED

This document was produced by our team using DBB Software's AI-accelerated scoping process from the details you shared — a strong first pass, and one worth validating with our team before you build on it. That is exactly what our **DBBS Product Discovery** phase does: our product + engineering professionals turn this into a validated, buildable plan and a fixed-price Statement of Work.

Start DBBS Product Discovery ->

SCAN OR CLICK TO BOOK