

Project Lead & Researcher

As the Project Lead and Researcher, I spearheaded the strategic direction, ensuring our efforts were grounded in robust research and aligned with both project goals and broader ethical standards.

Responsibilities

- Defined project goals, research scope, and ethical framework for DefibMap London.
- Conducted thorough market and academic research on AED access in urban environments.
- Coordinated tasks, timelines, and documentation for the multidisciplinary team.
- Ensured alignment with Sustainable Development Goals, particularly "Good Health & Well-being" (SDG 3).
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Key Contributions

- Structured the comprehensive project proposal and guided critical user research initiatives.
- Oversaw all design decisions, fostering effective team collaboration and communication.
- Ensured the project met stringent ethical and legal standards, including GDPR and Open Data principles.
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Project Initiation & Early Direction

The initial phase established a robust framework, ensuring clear objectives and efficient collaboration from the project's inception.

Assembled Multidisciplinary Team

Brought together diverse expertise across front-end, back-end, data, DevSecOps, and research, ensuring clear roles and responsibilities from the outset.

Established Collaboration Infrastructure

Implemented key communication (WhatsApp, MS Teams) and file-sharing (OneDrive) tools to foster seamless teamwork and document management.

Defined Core Problem Statement

Guided the team to focus on the critical challenge: rapidly locating AEDs in London during out-of-hospital cardiac arrests (OHCA), forming the project's foundation.

Developed Initial Project Roadmap

Created a comprehensive timeline, mapping research, ideation, design, development, testing, and presentation prep to module weeks for focused progress.

Outcome: Strong foundation and clear direction. This phase ensured the team started with clarity, stability, and a unified purpose.



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Planning, Roles & Structure

The second step focused on meticulously structuring the project. We defined clear roles, created a detailed roadmap, and implemented efficient task management to ensure a focused and productive development process for DefibMap London.

Assigned Clear Team Roles

Responsibilities were allocated based on individual strengths, ensuring a balanced workflow, clear accountability, and avoiding confusion across the project team.

Built Detailed Project Timeline

A week-by-week roadmap was created, outlining key tasks from research and design to data integration, development, testing, and presentation prep, keeping the group organised and aware of expectations.

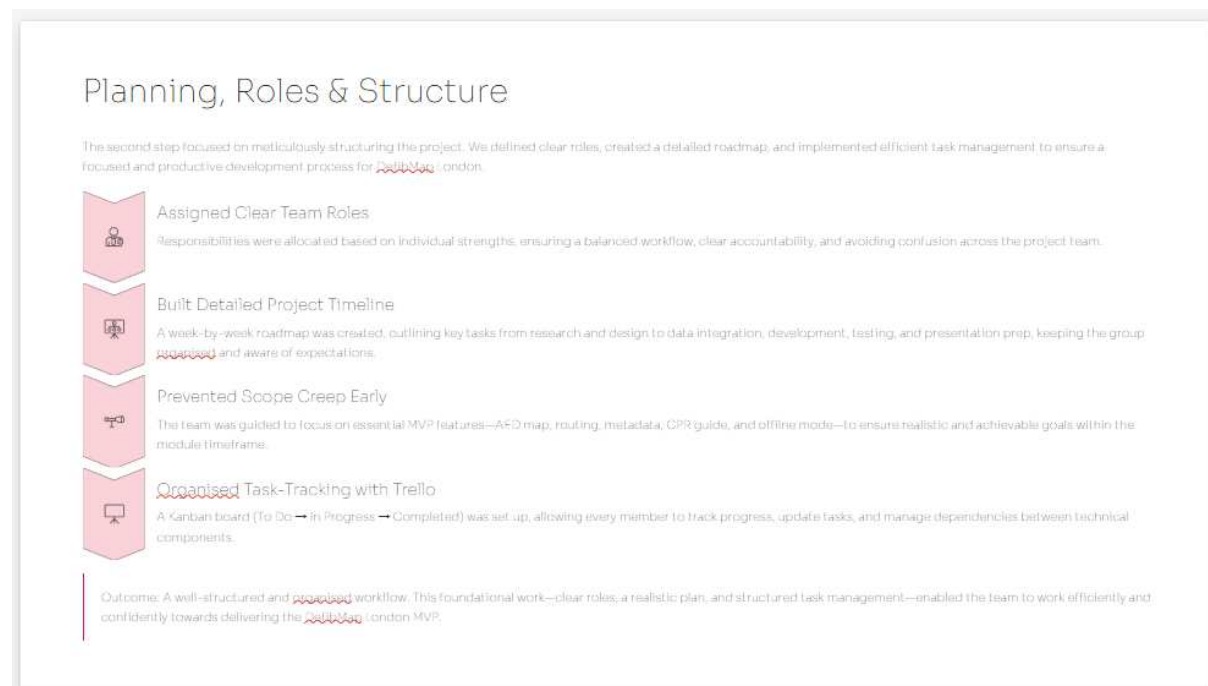
Prevented Scope Creep Early

The team was guided to focus on essential MVP features—AED map, routing, metadata, CPR guide, and offline mode—to ensure realistic and achievable goals within the module timeframe.

Organised Task-Tracking with Trello

A Kanban board (To Do → In Progress → Completed) was set up, allowing every member to track progress, update tasks, and manage dependencies between technical components.

Outcome: A well-structured and organised workflow. This foundational work—clear roles, a realistic plan, and structured task management—enabled the team to work efficiently and confidently towards delivering the DefibMap London MVP.



Research Coordination

This critical phase established DefibMap's scientific foundation by meticulously coordinating team research, ensuring our solutions are rooted in robust evidence and a deep understanding of the problem.

Coordinated Academic & Industry Research

I ensured each member explored credible sources, including OHCA statistics, public-health research, OpenStreetMap datasets, and emergency-response literature.

Built Critical Domain Understanding

I guided the team to focus on the critical medical reality: survival drops 7–10% per minute without defibrillation, and AEDs in London are often inaccessible or unknown during emergencies.

Structured Findings for Presentation

I organised the research results into a clear structure covering the problem, existing gaps, user-needs, and emerging technology, ensuring the team delivered a strong and academically grounded first presentation.

Managed Shared Bibliography

I created a consolidated reference file so all team members used consistent citation methods and maintained academic integrity.

Outcome: A solid evidence-based foundation for our design and development. The research phase ensured the project was aligned with real public-health needs and grounded in credible data.

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Ideation & Requirements

Definition

This crucial stage transformed research insights into actionable plans, laying the groundwork for DefibMap's development by defining core features and user experience.

Led Ideation Workshops

Facilitated brainstorming and "How might we...?" sessions to convert research insights into practical solution features for DefibMap London.

Defined Functional Requirements

Key features included the AED map, GPS routing, availability metadata, CPR guide, and a community verification system.

Defined Non-Functional Requirements

Ensured focus on emergency usability, offline-first capability, GDPR compliance, low latency, and a simple UI suitable during high stress.

Coordinated User Journeys & Wireframes

Guided the Front-End Developer to design user flows for finding an AED, following directions, and reading CPR instructions quickly.

Outcome: A clear blueprint guiding prototype development. The team had a shared vision of how the platform should function and look, ensuring a focused and effective build process.

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Legal, Ethical & Risk Management

This critical phase, undertaken in close collaboration with Gabriel, focused on establishing a robust legal and ethical framework, ensuring DefibMap London adheres to stringent data privacy, open-data, and risk management standards.

Outlined Safety-Critical Risks

Collaborated to identify key risks like inaccurate AED data, indoor-only devices, outdated locations, and incorrect user submissions, ensuring a comprehensive risk register was developed.

Ensured GDPR Compliance

Discussed and confirmed that the app would not store personal data and that GPS processing remained client-side, aligning with GDPR and privacy principles.

Shaped Ethical Community Submissions

Supported Gabriel in defining a robust verification workflow and moderation process for community AED submissions, preventing false information and upholding ethical standards.

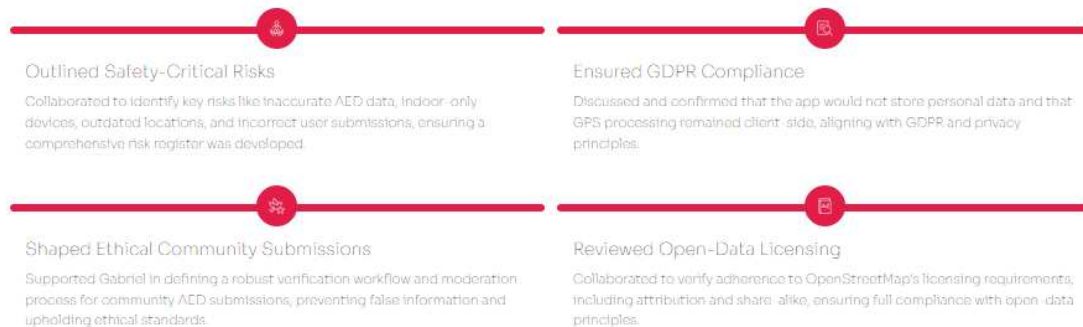
Reviewed Open-Data Licensing

Collaborated to verify adherence to OpenStreetMap's licensing requirements, including attribution and share-alike, ensuring full compliance with open-data principles.

Outcome: A legally safe, ethical, and well-coordinated risk-management approach. By working closely with Gabriel—clarifying responsibilities, expectations, and legal requirements—we ensured the project followed all necessary standards while keeping the system safe, responsible, and compliant.

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Development & MVP Build

This phase was pivotal in transforming our strategic planning and research insights into a functional prototype. I actively managed the technical execution, ensuring seamless integration and alignment with our core objectives.

Technical Development Coordination

Ensured front-end, back-end, and data pipelines progressed in sync, proactively avoiding delays and maintaining alignment across all development efforts.

Emergency-Friendly UI Standards

Guided the UI team to prioritise simplicity, large buttons, minimal steps, clear icons, and a stress-friendly interface for the React Native application.

Database & ETL Integration

Oversaw the Supabase schema design, ensuring it meticulously captured essential AED fields including coordinates, metadata, and critical access hours.

Progress Monitoring & Issue Resolution

Maintained weekly progress checks, actively identified potential roadblocks, and redistributed responsibilities to unblock technical issues efficiently.

Outcome: A functional MVP aligned with domain requirements. The prototype successfully combined safety, usability, and technical reliability, ready for further iteration.

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Testing, Feedback & Iteration

This phase was crucial for refining DefibMap London, translating initial concepts into a robust, user-centric application through rigorous testing and continuous feedback integration.

Led Comprehensive Prototype Testing

Organised testing sessions focusing on routing speed, GPS accuracy, map rendering, offline functionality, and metadata clarity across various London scenarios.

Logged & Prioritised Fixes

Documented identified bugs, assigned responsibilities for resolution, and coordinated UI/UX improvements based on real-world test results and user feedback.

Ensured Emergency Usability

Verified that the design supported users under stress, incorporating large tap targets, clear navigation prompts, minimal text, and quick paths to CPR instructions.

Validated AED Data Accuracy

Ensured the application meticulously handled London's complex urban geography and integrated dataset effectively, verifying the precision of AED locations and accessibility.

Outcome: A more reliable, user-friendly, and emergency-ready prototype. This iterative testing process significantly sharpened the platform and strengthened its real-world applicability.



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Final Presentation Delivery

This critical stage involved orchestrating the culmination of our project efforts into a cohesive, impactful, and professionally delivered presentation, ensuring our story was told effectively.

Designed Presentation Structure

I crafted the logical flow of the presentation, from the initial problem statement through to research, design, development, data insights, prototyping, evaluation, and overall impact.

Coordinated Speaking Roles & Rehearsals

I meticulously allocated speaking parts, managed rehearsal schedules, ensured smooth transitions between speakers, and refined timing for a seamless delivery.

Presented Project Manager Narrative

I took the lead in presenting the overarching narrative of planning, coordination, risk management, technical alignment, and the ethical considerations that underpinned the project's success.

Prepared Documentation for Submission

I oversaw the final review and preparation of all supporting documents, references, and visuals, guaranteeing a comprehensive and professional project submission.

Outcome: A coherent, impactful, and professionally delivered project. The team presented a unified narrative, clearly supported by robust research, technical execution, and strong coordination, demonstrating DefibMap London's potential.

