

Project Plan for the Implementation of an Optimised Home Medical Delivery Service Across Northern England: A Case Study of CIVA Logistics and Baxter Healthcare

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1. Introduction

Project management provides organisations with a structured approach for planning, implementing and controlling projects to ensure that objectives are achieved within agreed time, cost and quality constraints (Project Management Institute (PMI), 2021). Effective planning is particularly important in healthcare logistics, where reliable distribution systems support continuity of patient care and the timely delivery of essential medical products. Well-defined project objectives, scope and stakeholder responsibilities help organisations reduce operational risks while improving efficiency and service quality (Kerzner, 2022).

This project focuses on the implementation of an optimised home medical delivery service operated by CIVA Logistics on behalf of Baxter Healthcare. Baxter Healthcare supplies a wide range of medical products and homecare therapies, while CIVA Logistics is responsible for distributing these products to patients receiving treatment at home, as well as to NHS and private hospitals throughout Northern England. Because many products are time-critical or temperature-sensitive, effective transport planning and operational coordination are essential to maintaining patient safety and service reliability.

The proposed project aims to improve the existing delivery operation by introducing standardised working procedures, optimised route planning and more effective coordination between warehouse staff, transport planners and delivery drivers. The implementation covers the primary operational locations served by CIVA Logistics, including Scunthorpe, Grimsby, Hull, Sheffield, Manchester, Leeds, York, Blackpool, Macclesfield, Halifax, Huddersfield, Bradford, Burnley, Bury, Northallerton, Middlesbrough, Stockton-on-Tees, Darlington, Durham and Newcastle upon Tyne.

The project is planned over a 24-week (approximately six-month) period and follows recognised project management principles throughout its lifecycle. The report outlines the project aim, objectives and scope before presenting the activities, Work Breakdown Structure (WBS), deliverables, milestones and resource requirements necessary to implement the proposed service improvements. Together, these elements provide a practical project plan designed to improve operational efficiency, service reliability and the quality of home medical deliveries across Northern England.

2. Project Aim

The aim of this project is to implement an optimised home medical delivery service for Baxter Healthcare, operated by CIVA Logistics, to improve the efficiency, reliability and coordination of medical product distribution across Northern England. The project seeks to enhance delivery planning, route optimisation and operational coordination while ensuring the safe transportation of time-critical and temperature-sensitive medical products to patients receiving homecare and to NHS and private healthcare facilities.

The implementation will be completed over a 24-week period using recognised project management principles to ensure that project objectives, stakeholder requirements and quality standards are achieved (PMI, 2021). In addition to improving delivery performance and resource utilisation, the project aims to strengthen collaboration between warehouse operations, transport coordinators, delivery drivers and healthcare providers through standardised operational procedures and effective communication. This structured approach is intended to support continuous service improvement while maintaining high standards of patient care and operational performance (Kerzner, 2022).

3. Project Objectives

Project objectives translate the overall project aim into measurable outcomes that guide implementation and provide a basis for evaluating project performance. Clearly defined objectives improve planning, support decision-making and enable progress to be monitored throughout the project lifecycle (PMI, 2021). For this project, the objectives have been developed using the SMART framework to ensure that they are specific, measurable, achievable, relevant and time bound.

Table 3.1 Project Objectives

Objective	Description
Objective 1	To implement an optimised home medical delivery service for Baxter Healthcare, operated by CIVA Logistics, across Northern England within a 24-week implementation period.
Objective 2	To improve delivery efficiency by reducing unnecessary travel time and optimising route planning through standardised scheduling procedures..
Objective 3	To ensure that all temperature-sensitive and time-critical medical products are transported in accordance with Baxter Healthcare procedures and relevant healthcare regulations.
Objective 4	To improve communication and coordination between warehouse personnel, transport coordinators, delivery drivers, hospitals and homecare patients through clearly defined operational processes.
Objective 5	To increase service reliability by improving on-time deliveries while reducing missed deliveries, failed collections and scheduling conflicts.

Objective 6	To optimise the use of vehicles, drivers and operational resources in order to improve productivity without compromising service quality or patient safety.
Objective 7	To provide operational training for all employees involved in the revised delivery procedures before full implementation.
Objective 8	To complete the project within the approved budget, agreed schedule and required quality standards while achieving stakeholder satisfaction.

Collectively, these objectives establish clear performance targets for the implementation of the optimised delivery service. They also provide measurable criteria against which project progress and overall success can be assessed, supporting effective monitoring and continuous improvement throughout the implementation process (Burke, 2022).

4. Project Scope (Revised Version)

Project scope defines the boundaries of a project by specifying the work required to achieve the agreed objectives while identifying activities that fall outside the project's responsibility. A clearly defined scope supports effective planning, reduces the risk of scope creep and ensures that project resources remain focused on delivering the intended outcomes (PMI, 2021; Burke, 2022).

This project focuses on implementing an optimised home medical delivery service operated by CIVA Logistics for Baxter Healthcare across Northern England. The implementation aims to improve delivery planning, transport coordination, route optimisation and warehouse operations while maintaining compliance with healthcare regulations governing the transportation of medical products. The project supports deliveries to patients receiving homecare, together with NHS and private healthcare facilities served within the existing operational network.

To ensure effective project control, the scope has been divided into activities included within the project and those that are specifically excluded from implementation.

Table 4.1 In Scope

Project Activities Included

Analysis of the existing home medical delivery process.

Design and implementation of standardised delivery procedures.

Route optimisation and delivery scheduling improvements.

Coordination between warehouse operations and transport planning.

Driver allocation and workload balancing.

Staff training on the new operational procedures.

Quality assurance and performance monitoring during implementation.

Delivery of medical products to patients' homes.

Delivery of medical products to NHS and private hospitals within the operational region.

Monitoring project performance against agreed objectives and milestones.

Table 4.2 Out of Scope

Project Activities Excluded

Construction of new warehouse facilities.

Procurement of additional delivery vehicles.

Expansion of operations outside Northern England.

Development of new medical products.

Changes to Baxter Healthcare's manufacturing processes.

Long-term maintenance activities following project completion.

Integration of international logistics operations.

Development of a customer ordering platform or mobile application.

Clearly distinguishing between activities that are included and excluded provides a realistic framework for managing stakeholder expectations and controlling project delivery. Defining these boundaries also supports effective resource allocation and helps ensure that the project remains aligned with its objectives, schedule and available resources throughout the implementation period (Kerzner, 2022).

5. Activities Required to Deliver the Project Outputs (Revised Version)

The successful implementation of the proposed home medical delivery service requires a series of planned activities that guide the project from initiation to completion. Organising activities into logical phases improves project coordination, supports effective resource allocation and enables progress to be monitored throughout the project lifecycle (PMI, 2021). For this project, the implementation has been divided into six key phases, each producing a specific output that contributes to the overall project objectives.

Table 5.1 Major Project Activities

Activity	Description	Expected Output
Project Initiation and Planning	Establish the project team, identify stakeholders, define project objectives, develop the implementation plan and obtain project approval.	Approved Project Plan
Operational Process Analysis	Analyse existing delivery processes, evaluate delivery routes, review warehouse operations and identify operational inefficiencies.	Current Process Assessment Report
Service Design and Process Optimisation	Develop standard operating procedures (SOPs), optimise delivery routes, improve scheduling and establish communication processes.	Optimised Operational Process Design
Implementation and Staff Training	Introduce the revised operational procedures, deliver staff training and implement the improved delivery coordination process.	Implemented Delivery Service and Trained Staff
Performance Monitoring and Quality Assurance	Monitor operational performance, evaluate key performance indicators (KPIs), identify corrective	Quality Assurance and Performance Report

	actions and ensure compliance with healthcare quality standards.	
Project Closure and Final Evaluation	Evaluate project outcomes, document lessons learned, prepare the final report and formally close the project.	Project Closure Report

The activities follow the recognised project lifecycle, progressing from planning and operational analysis to implementation, monitoring and project closure. This phased approach ensures that operational improvements are evaluated before full deployment, reducing implementation risks and supporting informed decision-making (Kerzner, 2022). These activities also provide the basis for the Work Breakdown Structure (WBS), where each phase is further divided into manageable work packages and tasks.

6. Work Breakdown Structure (WBS)

A Work Breakdown Structure (WBS) is a deliverable-oriented decomposition of the total project scope into smaller, manageable components that can be planned, assigned and monitored effectively (PMI, 2021). By dividing the project into hierarchical work packages, the WBS improves cost estimation, scheduling, resource allocation and progress tracking throughout the project lifecycle.

For the implementation of the optimised home medical delivery service, the WBS has been developed around the project's major deliverables and implementation phases. Each level breaks the project into increasingly detailed activities, ensuring that all required work is identified and clearly assigned. This structured approach supports project control, reduces the likelihood of overlooked tasks and provides a foundation for scheduling, risk management and performance monitoring.

6.1 Work Breakdown Structure (WBS)

1. Project Initiation and Planning

1.1 Define Project Objectives

1.2 Identify Stakeholders

1.3 Develop Project Plan

1.4 Risk Assessment

1.5 Project Approval

2. Operational Process Analysis

2.1 Analyse Existing Delivery Routes

2.2 Review Warehouse Operations

2.3 Evaluate Vehicle Utilisation

2.4 Identify Operational Inefficiencies

2.5 Prepare Assessment Report

3. Service Design and Process Optimisation

3.1 Develop Standard Operating Procedures (SOPs)

3.2 Optimise Delivery Routes

- 3.3 Improve Delivery Scheduling
- 3.4 Define Communication Procedures
- 3.5 Establish Quality Control Measures
- 3.6 Validate New Operational Process

4. Implementation and Staff Training

- 4.1 Allocate Resources
- 4.2 Configure Operational Procedures
- 4.3 Train Warehouse Staff
- 4.4 Train Delivery Drivers
- 4.5 Pilot Implementation
- 4.6 Full-Service Roll-out

5. Performance Monitoring and Quality Assurance

- 5.1 Monitor Delivery Performance
- 5.2 Measure Key Performance Indicators (KPIs)
- 5.3 Conduct Quality Audits
- 5.4 Resolve Operational Issues
- 5.5 Produce Performance Report

6. Project Closure and Final Evaluation

- 6.1 Final Performance Review
- 6.2 Obtain Stakeholder Acceptance
- 6.3 Document Lessons Learned
- 6.4 Final Project Report
- 6.5 Project Closure

The WBS provides a logical framework for organising project work into manageable components that can be monitored throughout implementation. By establishing clear relationships between deliverables, work packages and individual tasks, it supports effective coordination, accountability and project control. The WBS also forms the basis for

subsequent planning activities, including scheduling, resource allocation and milestone monitoring, helping ensure that the project is delivered within the agreed scope, time and quality requirements (Kerzner, 2022).

7. Deliverables, Milestones and Timeline

Project deliverables are the tangible outputs produced during the project lifecycle, while milestones represent significant checkpoints used to measure progress and confirm the successful completion of key phases (PMI, 2021). Defining both deliverables and milestones enables project managers to monitor performance, verify that objectives are being achieved and maintain effective control over the implementation schedule.

For the implementation of the optimised home medical delivery service, each major project phase is associated with a specific deliverable and milestone. These outputs provide measurable evidence of progress and ensure that the project advances in a structured and controlled manner.

WBS	Work Package	Main Deliverable	Milestone	Estimated Timeline
1.0	Project Initiation and Planning	Approved Project Charter and Project Management Plan	Project formally approved by Baxter Healthcare and CIVA Logistics management	Week 1-2
2.0	Operational Process Analysis	Operational Assessment Report identifying current delivery challenges	Completion of operational review and approval of improvement opportunities	Week 3-4

3.0	Service Design and Process Optimisation	Optimised delivery procedures, Standard Operating Procedures (SOPs) and route optimisation plan	Approval of redesigned operational processes	Week 5-8
4.0	Implementation and Staff Training	Fully implemented delivery procedures and trained operational staff	Successful completion of staff training and operational roll-out	Week 9-16
5.0	Performance Monitoring and Quality Assurance	Performance evaluation report including KPIs and quality audit results	Achievement of agreed operational performance targets	Week 17-21
6.0	Project Closure and Final Evaluation	Final Project Report, Lessons Learned Register and Project Closure Documentation	Formal acceptance and closure of the project	Week 22-24

The planned deliverables and milestones provide a structured framework for tracking project performance throughout the 24-week implementation period. Regular milestone reviews enable the project team to identify potential delays, evaluate progress against the schedule and implement corrective actions where necessary. This approach supports effective governance, enhances stakeholder confidence and contributes to the successful delivery of the project within the agreed scope, time and quality requirements (Kerzner, 2022).

8. Resource Requirements

The successful implementation of the optimised home medical delivery service depends on the effective allocation and management of project resources. Appropriate resource planning ensures that the required personnel, equipment, technology and financial support are available throughout the project lifecycle, enabling activities to be completed efficiently while maintaining quality, safety and compliance standards (PMI, 2021).

The resources required for this project can be grouped into four main categories: human resources, physical resources, technological resources and financial resources. Together, these resources support project implementation, operational continuity and the achievement of the planned deliverables.

8.1 Personnel Resources

Resource Category	Required Resources	Purpose
Human Resources	Project Manager, Operations Manager, Warehouse Supervisor, Transport Coordinators, Delivery Drivers, Warehouse Operatives, Quality Assurance Officer	Manage project activities, coordinate operations, deliver training, monitor quality and ensure successful implementation.
Physical Resources	Distribution warehouse, temperature-controlled delivery vehicles, loading equipment, handheld scanning devices, PPE and office facilities	Support the storage, handling and transportation of medical products while ensuring operational efficiency and regulatory compliance.
Technological Resources	Route optimisation software, warehouse management system (WMS), delivery tracking system, communication devices and Microsoft Project	Support scheduling, resource planning, real-time delivery monitoring, communication and project control.
Financial Resources	Project budget for staff training, operational	Provide the financial support necessary to complete the

	improvements, software implementation, equipment maintenance and contingency funding	project within the approved budget and planned schedule.
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Effective resource management extends beyond the availability of assets by ensuring that resources are allocated efficiently and monitored throughout the project. Regular reviews of resource utilisation help identify potential shortages, avoid unnecessary costs and maintain project performance against the agreed schedule and objectives (Kerzner, 2022). By aligning resource allocation with project priorities, the implementation can be completed more efficiently while maintaining high standards of operational performance and patient service.

9. Conclusion

This project plan has presented a structured approach for implementing an optimised home medical delivery service for Baxter Healthcare, operated by CIVA Logistics, across Northern England. By applying recognised project management principles, the report has demonstrated how effective planning, clearly defined objectives and appropriate resource allocation can support the successful delivery of a complex healthcare logistics project.

The project plan established the scope of the implementation, identified the activities required to achieve the intended outcomes and organised these activities through a Work Breakdown Structure supported by defined deliverables, milestones and resource requirements. Together, these components provide a practical framework for managing project execution, monitoring progress and maintaining control over time, cost and quality throughout the 24-week implementation period.

Successful implementation of the proposed service improvements is expected to enhance operational efficiency, strengthen coordination between key stakeholders and improve the reliability of medical deliveries to homecare patients and healthcare providers. These improvements contribute not only to better logistics performance but also to the continuity and quality of patient care, where timely and secure delivery of medical products is essential.

Overall, the project demonstrates how structured project management practices can support continuous operational improvement within healthcare logistics. By aligning project objectives with organisational requirements and stakeholder expectations, the proposed implementation provides a realistic and achievable plan for delivering a more efficient, reliable and sustainable home medical delivery service (PMI, 2021; Kerzner, 2022).

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