

BA (Hons) Leadership and Management Skills in the Workplace

Module: Project Management (LCLM5003)

PROJECT PORTFOLIO

Parts A, B and C

Digital Modernisation of Passenger Flow and Logistics Coordination

Student Name: Mary Njonjo

Student ID: 2430934

Module code: LCLM5003

Module Lecturer: Xavier Matieni

DIGITAL MODERNISATION OF PASSENGER FLOW AND LOGISTICS COORDINATION

LCLM5003 PROJECT MANAGEMENT | PROJECT PORTFOLIO (PART A)
DIGITAL MODERNISATION OF PASSENGER FLOW & LOGISTICS COORDINATION
Building a Smarter, Safer and More Efficient Transport Network

Following the closure of the city's central transport hub due to safety and accessibility concerns, major disruption has affected passenger travel and freight logistics. Delays, congestion and poor coordination have reduced transport efficiency and increased economic losses.

This project proposes a digital modernization program that integrates real-time passenger information systems, smart data analytics and logistics coordination platforms.

The initiative aims to improve operational efficiency, enhance customer experience and support the city's wider smart transport and sustainability objectives.

- **Purpose (Objectives)**
 - Improve passenger flow efficiency
 - Reduce congestion and delays
 - Enhance logistics coordination
 - Increase transport network visibility
 - Improve customer experience
- **Desired End Results**
 - Reduced waiting times
 - Real-time transport information
 - Improved logistics performance
 - Increased customer satisfaction
 - Enhanced network resilience

- Passengers & Commuters
- Transport Operators
- Local Authority
- Freight Companies

- 20% reduction in passenger delays
- 99% system uptime
- 15% improvement in logistics performance
- 85% customer satisfaction

Successful system adoption

Activity / Phase	1	2	3	4	5	6
1. Initiation	█					
2. Planning	█	█				
3. Design & Development		█	█	█		
4. Testing				█	█	
5. Deployment					█	█
6. Monitoring & Optimization						█

Power \ Influence	Low Influence	High Influence
High Power	Manage Closely - Transport Operators - Technology Providers - Ministry of Transport - Project Delivery Team	Keep Satisfied - Local Authority - Emergency Services - Regulatory Bodies
Low Power	Keep Informed - Passengers - Freight Companies - Local Businesses	Monitor - Media - Environmental Groups

DIGITAL MODERNIZATION OF PASSENGER FLOW AND LOGISTICS					
1. initiation	3. design & development	4. Testing	5. deploying	6. closure	
1.1 project scope definition	2.1 requirements gathering	3.1 system	4.1 user acceptance testing	5.1 staff training	6.1 project evaluations
1.2 feasibility study	2.2 resource planning	3.2 platform development	2. security testing	5.2 system go live	6.2 lessons learned
1.3 stakeholder identification	2.3 data integration & migration	3.3 data integration and migration	4.3 pilot implementation	5.3 performance monitoring	6.3 final report handover

Activity	PM	IT Team	Operators	Authority
Define requirements	A	R	C	C
Design system	A	R	C	I
Build platform	A	R	I	I
Testing	A	R	C	I
Training	R	C	A	I
Deployment	A	R	C	I

R = Responsible A = Accountable C = Consulted I = Informed

Risk	Impact	Likelihood	Score	Mitigation
Cybersecurity breach	High (3)	Medium (2)	6	Security controls
Integration failure	High (3)	Medium (2)	6	Pilot testing
Data quality issues	Medium (2)	High (3)	6	Data validation
User resistance	Medium (2)	Medium (2)	4	Training programme
Vendor delays	Medium (2)	Low (1)	2	Contingency planning

The digital modernisation of passenger flow and logistics coordination will improve transport efficiency, enhance customer experience and strengthen operational resilience. Through the integration of smart technologies, real-time information systems and data-driven decision making, the project will support sustainable urban mobility and economic recovery. Successful implementation will create a connected, future-ready transport network that benefits passengers, businesses and public authorities.

- Association for Project Management. (2019). *APM body of knowledge* (7th ed.). Association for Project Management.
- CERK, A. (2021). *Project risk management: A practical implementation approach*. Routledge.
- International Organization for Standardization. (2021). *ISO 21502:2020 Project, programme and portfolio management—Guidance on project management*. <https://www.iso.org>
- Kerzner, H. (2022). *Project management: A systems approach to planning, scheduling, and controlling* (13th ed.). Wiley.
- Meredith, J. R., Mantel, S. J., & Shafer, S. M. (2021). *Project management: A managerial approach* (10th ed.). Wiley.

Presented by : MARY NJONJO (2430934)

PART B

REFLECTION ON POSTER PRESENTATION FEEDBACK (GIBBS' REFLECTIVE CYCLE)

Description

During the assessment, I presented a poster on my selected project, **Digital Modernisation of Passenger Flow and Logistics Coordination**, to my lecturer and classmates in a 15-minute presentation. I explained the project's background, objectives, scope, stakeholders and key project-management issues using charts and diagrams. Following the presentation, I received verbal feedback from my lecturer and comments from classmates.

The feedback was useful because it addressed both my presentation skills and the quality of my project-management thinking. Although my understanding of the project was recognised positively, I realised that some project decisions required stronger justification and clearer connections between the different elements of the project plan.

Feelings

Before the presentation, I felt anxious about whether I had prepared sufficiently. After the first few minutes, I became more confident as I settled into the presentation. Positive feedback about being articulate and demonstrating a strong understanding of the project reassured me. I also valued the comments about proofreading and professional appearance.

However, the constructive feedback encouraged me to look more critically at the project itself. I realised that I had concentrated on including the required project-management tools rather than fully explaining why particular decisions had been made.

Evaluation

Overall, the presentation was a positive learning experience. My main strengths were communicating the project clearly, demonstrating subject knowledge and presenting confidently. However, the feedback showed that the final portfolio needed to move beyond descriptive content.

Although I had included the WBS, Gantt chart, RACI matrix and risk register, the relationship between the **business case, scope, schedule, resources, risks and expected benefits** needed to be clearer. For example, I had identified a £1.8 million budget without sufficiently explaining how it related to individual work packages. Similarly, the proposed performance targets needed clearer baseline measures.

This made me recognise that project-management tools should support decision-making rather than simply appear as separate sections of a project plan.

Analysis

The feedback changed my understanding of project management. Initially, I approached the WBS, Gantt chart, RACI matrix and risk register mainly as separate requirements. I now recognise that their value depends on integration.

The business case should establish why the project is required and what benefits it should achieve. Those benefits should determine the objectives and scope. The scope should inform the WBS, while the WBS should provide the basis for the schedule and resource allocation. Risks should then be considered in relation to these activities, while the stakeholder analysis should identify who is responsible and accountable for delivery.

For example, if the project aims to reduce passenger delays by 20%, the scope must include activities capable of producing that benefit, such as real-time passenger information and passenger-flow analytics. These activities require development work within the WBS, technical resources within the £1.8 million budget and sufficient development and testing time within the schedule.

The feedback also changed my understanding of project success. Initially, I concentrated on completing the project within six months and the £1.8 million budget. I now recognise that delivery on time and within budget would not be sufficient if passenger delays remained unchanged, system reliability was poor or transport operators failed to adopt the solution. Success should therefore consider both **project delivery and benefits realisation**.

I also realised that numerical targets need credible baselines and measurement methods. For example, the 20% delay reduction should be measured against existing passenger-delay data rather than treated as an isolated target.

Finally, I would now use a **hybrid project-management methodology**. Traditional controls are appropriate for budget, procurement, cybersecurity, regulatory requirements and formal approvals, while Agile practices are more suitable for software development, integration, testing and user feedback.

Conclusion

The main lesson from this experience is that effective project management requires **critical judgement, justification and integration**, rather than simply producing individual planning tools. The feedback helped me understand that the business case, scope, WBS, schedule, resources, stakeholders, risks and benefits should operate as one connected project-management system.

I have also learned that project success should not be measured only through time and cost. The project must ultimately demonstrate measurable improvements for passengers, transport operators and the sponsoring authority.

Action Plan

I will use the feedback to strengthen the final project plan by providing clearer justification for selecting digital modernisation over alternative options and establishing measurable baselines for the KPIs. I

will also provide a detailed breakdown of the £1.8 million budget and connect expenditure more clearly to the WBS and schedule.

I will strengthen the stakeholder and RACI analysis by defining responsibilities for the sponsoring authority, regulation, cybersecurity and data governance. Finally, I will explicitly adopt a hybrid methodology and ensure that the business case, scope, schedule, resources, risks and expected benefits remain connected throughout the project lifecycle.

In future projects, I will establish these relationships from the beginning rather than developing each project-management tool separately.

PART C

DIGITAL MODERNISATION OF PASSENGER FLOW AND LOGISTICS COORDINATION

Table of Contents

1. Introduction
 2. Project Description and Success Measures
 3. Project Management Methodology
 4. Scope
 5. Work Breakdown Structure
 6. Quad Chart
 7. Gantt Chart
 8. Stakeholders' Involvement and RACI
 9. Allocation of Resources
 10. Risk Analysis
 11. Integrated Business Case and Benefits
 12. Conclusion
- References

1. Introduction

The closure of a metropolitan transport hub in November 2025 removed a critical interchange for passengers, buses and freight logistics, increasing congestion, journey disruption and economic pressure. The Digital Modernisation of Passenger Flow and Logistics Coordination project is intended to restore operational capacity by improving the use of existing transport infrastructure through real-time information, passenger-flow analytics and integrated logistics coordination.

Three strategic options were considered. Maintaining the current arrangements with minor operational improvements would have the lowest initial cost, but would not adequately address fragmented passenger information, weak logistics coordination or limited real-time decision-making. Major physical redevelopment could increase long-term capacity, but would require substantially greater capital investment, a longer delivery period and further construction disruption. Digital modernisation was therefore selected because it offers the strongest balance between cost, speed and operational improvement within the six-month timeframe and £1.8 million funding ceiling.

The choice is not risk-free. Digitalisation creates dependencies on legacy-system integration, data quality, cybersecurity and user adoption. These factors are therefore treated as design and governance requirements rather than issues to be considered only at the end. The business case remains valid only if the project can demonstrate measurable operational benefits while remaining within agreed cost, time and risk tolerances (Association for Project Management, 2019; ISO, 2021).

2. Project Description and Success Measures

The project will implement a digital layer across the affected transport network. Its principal deliverables are a real-time passenger information system, analytics for forecasting passenger movement, and a logistics platform that coordinates passenger and freight movements. The systems will integrate with existing transport data and provide information through operational dashboards, digital displays and mobile applications.

The project targets a 20% reduction in passenger delays, at least 95% system availability, a 15% improvement in logistics performance and at least 85% customer satisfaction. To avoid treating these figures as unsupported aspirations, a four-week pre-implementation baseline will be established. The targets represent material but achievable improvements for a digital intervention that improves coordination without adding major physical capacity.

KPI	Baseline and measurement	Target
Passenger delays	Four-week average delay minutes before implementation; compare with equivalent post-implementation periods	20% reduction
System availability	Automated monitoring: available service minutes / scheduled service minutes x 100	At least 95%
Logistics performance	Baseline average processing, journey and coordination times compared with post-implementation results	15% improvement
Customer satisfaction	Same survey instrument and	At least 85% positive

	scoring method before and after implementation	
--	--	--

Benefits will be reviewed at 4, 8 and 12 weeks after implementation. This separates technical completion from benefits realisation: a system that goes live on time is not successful if it fails to improve passenger and logistics outcomes. External causes such as severe weather or network-wide incidents will be recorded so that performance comparisons are not misleading.

3. Project Management Methodology

A hybrid project-management methodology is most appropriate. A fully traditional approach would provide strong control over budget, procurement, governance and approvals, but could be too inflexible for software development and integration. A fully Agile approach would support iterative development, but would provide insufficient structure for a publicly sponsored transport project with a fixed £1.8 million budget, six-month deadline, regulatory obligations and cybersecurity requirements.

Traditional controls will therefore govern the business case, scope, procurement, budget, phase gates, regulatory assurance and go-live approval. Agile principles will be used during design, development, integration and user testing, allowing technical components to be refined through short feedback cycles. This creates Agile flexibility within controlled governance boundaries and reduces the risk of discovering integration or usability problems only at the end (Misbahuddin, Rahman and Ahmad, 2024).

4. Scope

Scope is defined by the benefits required from the business case rather than by the technology available. This protects the schedule and budget from uncontrolled expansion (Odedairo, 2024). Any proposed change will be assessed for its effect on cost, schedule, risk and benefits before sponsor approval.

In Scope	Out of Scope
Digitisation of key passenger systems	Major physical reconstruction of the hub
Integration of logistics and operational data	Long-term physical maintenance
Real-time transport-flow coordination	Ongoing operations after handover
Cybersecurity and data-governance controls	Commercial and retail redevelopment
Testing, pilot, training and stakeholder communication	New rolling stock and unrelated network-wide works
Performance monitoring and benefits measurement	Activities outside the approved business case

5. Work Breakdown Structure

The WBS decomposes the approved scope into manageable work packages and provides the basis for scheduling, costing and accountability (Odedairo, 2024).

Phase	Work packages
1. Initiation	1.1 Business-case confirmation; 1.2 Scope; 1.3

	Feasibility; 1.4 Stakeholders; 1.5 Baseline measurement
2. Planning	2.1 Requirements; 2.2 Resources/procurement; 2.3 Data governance; 2.4 Cybersecurity; 2.5 Integration plan
3. Design & Development	3.1 Architecture; 3.2 Passenger platform; 3.3 Analytics; 3.4 Logistics platform; 3.5 Data integration
4. Testing & Pilot	4.1 Integration testing; 4.2 Security testing; 4.3 Data-quality testing; 4.4 UAT; 4.5 Pilot
5. Deployment	5.1 Training; 5.2 Migration; 5.3 Go-live; 5.4 Hypercare; 5.5 Monitoring
6. Closure	6.1 Evaluation; 6.2 Financial closure; 6.3 Lessons learned; 6.4 Handover; 6.5 Benefits review plan

The WBS is directly connected to the schedule and resource plan. Initiation and planning establish requirements and governance before major technical expenditure. Development receives the greatest concentration of technical resources, while testing cannot simply be shortened to recover delay because doing so would increase integration, cybersecurity and operational risk. The WBS therefore provides the foundation for both the Gantt schedule and the £1.8 million budget.

6. Quad Chart

The quad chart provides senior decision-makers with a concise view of purpose, stakeholders, desired outcomes and measures of success. Its value is that it connects the business problem to the benefits and decision criteria rather than presenting the project only as a technology implementation (Pinilla et al., 2022).

Purpose	Key Stakeholders	Desired Results	Measures
Restore passenger and logistics coordination through digital modernisation	Sponsor/SRO, PM, operators, passengers, suppliers, regulators	Reduced delays; reliable information; improved logistics; stronger resilience	20% delay reduction; 95% availability; 15% logistics improvement; 85% satisfaction

7. Gantt Chart

The project runs for six months, from November 2025 to April 2026. The critical sequence is initiation and planning, followed by design/development, testing/pilot, deployment and closure. Agile iterations occur inside the development and testing windows, while formal phase gates control movement between major stages.

Phase	Nov	Dec	Jan	Feb	Mar	Apr
Initiation	X					
Planning	X	X				
Design &		X	X	X		

Development						
Testing & Pilot				X	X	
Deployment					X	
Closure / Handover						X

8. Stakeholders' Involvement and RACI

Stakeholder governance distinguishes sponsorship, delivery, operations and independent assurance. The Sponsoring Authority/Senior Responsible Owner (SRO) remains accountable for the business case, major scope and budget decisions and final go-live approval. The Project Manager coordinates delivery but does not replace sponsor accountability. The Cybersecurity Lead owns specialist security assurance; the Data Governance Lead oversees data quality, access, privacy and retention; and the relevant regulator provides independent assurance where required (Frontiers in Built Environment, 2025).

Activity	Sponsor/SRO	PM	IT	Operators	Cyber	Data Gov.	Regulator
Business case	A	R	C	C	C	C	I
Requirements	C	A	R	R/C	C	C	I
System design	I	A	R	C	C	C	I
Data integration	I	A	R	C	C	R/C	I
Security controls	I	A	R	I	R	C	C
Data/privacy	I	A	C	C	C	R	C
Testing/UAT	I	A	R	R	R/C	C	I
Regulatory assurance	I	C	C	C	C	C	A/R
Go-live approval	A	R	C	C	C	C	C
Benefits review	A	R	C	R/C	I	C	I

R = Responsible; A = Accountable; C = Consulted; I = Informed. This structure prevents technical suppliers from independently approving their own work in high-risk areas such as security, data governance and regulatory compliance.

9. Allocation of Resources

The £1.8 million budget is treated as a controlled investment linked to WBS deliverables and the six-month schedule, rather than as a single overall estimate. Human resources include the Project Manager, business analysts, developers, integration specialists, data specialists, cybersecurity

specialists, quality-assurance staff, trainers and operator representatives. Technology resources include software, APIs, cloud/infrastructure, displays and licences.

Budget area	Allocation	WBS link
Project management, business analysis and governance	£180,000	Phases 1-6
System design and software development	£450,000	Phase 3
Data integration, APIs and migration	£270,000	Phases 2-5
Hardware, cloud, displays and licences	£225,000	Phases 3-5
Cybersecurity and data governance	£135,000	Phases 2-5
Testing, pilot and quality assurance	£135,000	Phase 4
Training and change/stakeholder management	£90,000	Phases 2 & 5
Deployment and go-live support	£135,000	Phase 5
Contingency reserve	£180,000	Controlled project-wide reserve
TOTAL	£1,800,000	

The largest allocation is for design and development because the digital platforms are the main technical deliverables. Data integration receives substantial funding because the benefits depend on accurate exchange between legacy and new systems. Cybersecurity and data governance have dedicated allocations because they must be embedded throughout design and testing. Resource loading follows the schedule: analysis and management peak early; development and data resources peak in the middle; testing and security resources increase before go-live; and training and operational support peak during deployment. The £180,000 contingency reserve equals 10% of the total budget and requires approved risk or change-control release (Sandhu et al., 2024).

10. Risk Analysis

Risk management is integrated with scope, schedule, resources and governance rather than treated as a separate administrative exercise (Cerić, 2021).

Risk	Impact/Likelihood	Mitigation	Owner / contingency
Cybersecurity breach	High / Medium	Security-by-design, access controls, penetration testing, backups	Cybersecurity Lead; isolate and restore
Integration failure	High / Medium	Early prototypes, API and pilot testing	IT Lead; revert to legacy interface
Data quality issues	Medium / High	Profiling, cleansing,	Data Governance

		validation and governance	Lead; manual verification
User resistance	Medium / Medium	Operator involvement, UAT, training and support	PM/Operators; extended support
Vendor/schedule delay	Medium / Low	Milestone control, alternatives and contingency	PM/Sponsor; approved contingency response

Cybersecurity risk justifies dedicated security resources and testing. Integration risk requires protected schedule time for API and pilot testing. Data-quality risk requires early governance work, while user resistance requires stakeholder engagement and training. Vendor delays may require contingency funding subject to sponsor approval. The register will be reviewed at each phase gate so that risk responses remain aligned with the evolving project.

11. Integrated Business Case and Benefits

The central management logic is: business need -> benefits -> scope -> WBS -> schedule -> resources -> risks and governance -> benefits realisation. This traceability provides stronger justification for expenditure because each major activity can be connected to an intended operational benefit.

For example, the business problem of passenger disruption creates the benefit objective of improved passenger flow, measured by the 20% delay-reduction KPI. Achieving this requires real-time passenger information and analytics within scope; platform development and integration within the WBS; developers, data specialists and infrastructure within the budget; protected testing time within the schedule; and assigned responsibilities across the PM, IT team, operators and data-governance roles. Integration or data-quality failure is therefore not simply a technical risk: it directly threatens the business benefit.

This integrated approach also supports continued justification. If testing shows that the solution cannot achieve acceptable reliability or if costs exceed tolerance without corresponding benefits, the sponsor should reconsider scope, sequencing or continued investment. This reflects the principle that project governance should protect value rather than merely protect completion dates (Kerzner, 2022).

12. Conclusion

The Digital Modernisation of Passenger Flow and Logistics Coordination project is a benefits-led organisational intervention rather than simply an IT installation. Digital modernisation is preferred to maintaining the status quo or undertaking immediate major reconstruction because it provides the strongest fit with the six-month timeframe, £1.8 million budget and need for rapid operational improvement. The decision remains dependent on successful integration, cybersecurity, data quality and operator adoption.

A hybrid methodology provides the appropriate balance between governance and flexibility. Formal controls protect the business case, budget, regulatory obligations and go-live decision, while iterative development and testing allow technical solutions to improve through feedback. The budget is directly connected to WBS activities and schedule demands, and the strengthened RACI makes sponsor, cybersecurity, data-governance and regulatory accountability explicit.

Most importantly, success will not be defined only by completion within six months and budget. It will require evidence of a 20% reduction in passenger delays, at least 95% system availability, a 15% improvement in logistics performance and at least 85% customer satisfaction. Formal reviews at 4, 8 and 12 weeks after implementation will connect the original business problem and investment to measurable operational value.

References

- Association for Project Management (2019) APM Body of Knowledge. 7th edn. Princes Risborough: Association for Project Management.
- Cerić, A. (2021) Project Risk Management: A Practical Implementation Approach. London: Routledge.
- Frontiers in Built Environment (2025) 'Examining the impact of risk management practices on sustainable project performance in the construction industry: the role of stakeholder engagement', *Frontiers in Built Environment*, 11, 1575827. doi:10.3389/fbuil.2025.1575827.
- Gibbs, G. (1988) *Learning by Doing: A Guide to Teaching and Learning Methods*. Oxford: Oxford Polytechnic.
- International Organisation for Standardisation (2021) ISO 21502:2020 Project, Programme and Portfolio Management - Guidance on Project Management. Geneva: ISO.
- Kerzner, H. (2022) *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*. 13th edn. Hoboken, NJ: Wiley.
- Meredith, J.R., Mantel, S.J. and Shafer, S.M. (2021) *Project Management: A Managerial Approach*. 10th edn. Hoboken, NJ: Wiley.
- Misbahuddin, M., Rahman, A. and Ahmad, N. (2024) 'Project management methodologies and project success: a contemporary review', *Journal of Project Management*, 9(3), pp. 189-204.
- Odedairo, B.O. (2024) 'Assessing the influence of various work breakdown structures on project completion time', *Engineering, Technology & Applied Science Research*, 14(2), pp. 13773-13779. doi:10.48084/etasr.7023.
- Pinilla, L.S., Artelt, S., Burimova, A., Lopez de Lacalle, N. and Toledo-Gandarias, N. (2022) 'Project success criteria evaluation for a project-based organisation and its stakeholders - a Q-methodology approach', *Applied Sciences*, 12(21), p. 11090. doi:10.3390/app122111090.
- Sandhu, M.A., Al Ameri, T., Shahzad, A. and Naseem, A. (2024) 'The role of the project management office in the implementation of strategic plans in project-based organisations', *PLOS ONE*, 19(7), e0306702. doi:10.1371/journal.pone.0306702.
- Trstenjak, M., Benešova, A., Opetuk, T. and Cajner, H. (2025) 'Human factors and ergonomics in industry 5.0 - a systematic literature review', *Applied Sciences*, 15(4), p. 2123. doi:10.3390/app15042123.
- Vo, H.M. and Yang, J. (2026) 'Incorporating stakeholder perception into risk assessment model: an empirical study of highway construction projects', *Engineering, Construction and Architectural Management*, 33(7), pp. 5244-5274. doi:10.1108/ECAM-11-2024-1494.
- Zhang, P., Fu, Y. and Lu, B. (2025) 'Analysing the coupling coordination and forecast trends of digital transformation and operational efficiency in logistics enterprises', *Journal of Theoretical and Applied Electronic Commerce Research*, 20(3), p. 211. doi:10.3390/jtaer20030211.