



Prifysgol Cymru

Y Drindod Dewi Sant

University of Wales

Trinity Saint David

LCBB6006 – PROJECT MANAGEMENT

COURSEWORK ESSAY: PROJECT PLAN FOR THE DEVELOPMENT AND LAUNCH OF AN E-COMMERCE WEBSITE FOR A BOUTIQUE FASHION BRAND

STUDENT NAME: CODRIN-IOAN CHIRCIU

STUDENT ID: 2027548

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Contents

1. INTRODUCTION.....	3
2. PROJECT AIM, OBJECTIVES, AND SCOPE.....	4
2.1. Project Aim.....	4
2.2. Project Objectives.....	5
2.3. Project Scope.....	5
3. PROJECT OUTPUTS: DELIVERABLES AND DIRECT RESULTS.....	6
3.1. Key Deliverables.....	6
3.2. Direct Results.....	7
4. WORK BREAKDOWN STRUCTURE (WBS).....	8
4.1. WBS Hierarchical Structure.....	8
4.2. Activities, Sub-Activities, and Tasks.....	10
5. TIMELINE, MILESTONES, AND DELIVERABLES.....	12
5.1. Gantt Chart Overview.....	12
5.2. Milestone Table.....	13
6. RESOURCE PLANNING AND ALLOCATION.....	14
6.1. Personnel Resources.....	14
6.2. Material and Technological Resources.....	15
6.3. RACI Matrix (Responsibility Assignment).....	16
7. COST ESTIMATION AND BUDGETING.....	17
7.1. Cost Breakdown.....	17
8. RISK IDENTIFICATION AND MITIGATION.....	18
8.1. Risk Register.....	18
9. QUALITY MANAGEMENT AND ACCEPTANCE CRITERIA.....	19
9.1. Quality Objectives.....	19
9.2. Quality Control Steps.....	19
9.3. Acceptance Criteria.....	19
10. COMMUNICATION PLAN AND STAKEHOLDER MANAGEMENT.....	20
10.1. Stakeholder Identification.....	20
10.2. Communication Matrix.....	20
CONCLUSION.....	22
REFERENCES.....	23

1. INTRODUCTION

In the rapidly evolving digital marketplace, boutique fashion brands are increasingly seeking to establish a robust online presence to reach wider audiences and enhance customer engagement. This project plan details the comprehensive approach for the development and launch of a bespoke e-commerce website for "LuxeThreads," a fictional boutique fashion brand specializing in sustainable, high-end apparel. The plan encompasses the full project lifecycle, from initial requirements gathering to post-launch support, and is structured according to established project management best practices, including the use of a Work Breakdown Structure (WBS), milestone tracking, resource allocation, risk management, and quality assurance.

The rationale for this project is grounded in the need for LuxeThreads to expand its market reach, streamline sales operations, and provide a seamless, branded customer experience. The project will leverage modern web technologies and e-commerce best practices to deliver a scalable, secure, and user-friendly platform that aligns with the brand's values and business objectives.

2. PROJECT AIM, OBJECTIVES, AND SCOPE

2.1. Project Aim

The primary aim of this project is to design, develop, and launch a fully functional, aesthetically compelling, and secure e-commerce website for LuxeThreads, enabling the brand to increase online sales by 30% within the first year post-launch and to enhance customer engagement through personalized shopping experiences.

2.2. Project Objectives

The objectives of the project are formulated using the S.M.A.R.T. criteria (Specific, Measurable, Achievable, Relevant, Time-bound):

- **Objective 1:** Complete requirements gathering and system design within four weeks of project initiation.
- **Objective 2:** Develop and integrate a responsive, mobile-friendly website with secure payment processing and inventory management within twelve weeks.
- **Objective 3:** Implement SEO optimization and analytics tracking to improve site visibility and monitor user behavior.
- **Objective 4:** Conduct comprehensive testing (functional, usability, security) and achieve a defect rate of less than 2% prior to launch.
- **Objective 5:** Launch the website within 20 weeks from project start, followed by a four-week post-launch support period.

2.3. Project Scope

Inclusions:

- Requirements analysis and stakeholder consultation
- UI/UX design tailored to the LuxeThreads brand
- Frontend and backend development
- Integration with payment gateways (e.g., Stripe, PayPal)
- Inventory and order management system
- Content creation (product descriptions, images, blog)

- SEO and analytics setup
- Testing (unit, integration, user acceptance)
- Staff training and documentation
- Post-launch support and maintenance (first month)

Exclusions:

- Ongoing digital marketing campaigns (beyond initial SEO setup)
- Third-party logistics integration (beyond basic order management)
- Custom mobile app development (website will be mobile-responsive)

Constraints:

- Budget capped at \$120,000
- Project duration limited to 24 weeks
- Compliance with GDPR and PCI DSS standards

Assumptions:

- Stakeholders will provide timely feedback and approvals
- Required content and branding assets will be available by week 5

3. PROJECT OUTPUTS: DELIVERABLES AND DIRECT RESULTS

A successful project is defined by its outputs—tangible deliverables and measurable results that align with the objectives and scope.

3.1. Key Deliverables

Deliverable	Description	Acceptance Criteria	Due Date
Requirements Specification Document	Detailed documentation of functional and non-functional requirements	Approved by stakeholders	Week 4
UI/UX Design Mockups	Visual prototypes of website pages and user flows	Stakeholder sign-off	Week 6
Developed E-Commerce Website	Fully functional, responsive website with integrated payment and inventory	Passes all functional and security tests	Week 16
Content Assets	Product images, descriptions, and blog posts	Uploaded and formatted on the website	Week 14
SEO and Analytics Setup	Implementation of SEO best practices and Google Analytics integration	Verified by SEO audit and analytics tracking	Week 17
Testing Reports	Documentation of test cases, results, and defect resolution	All critical defects resolved	Week 18
Training Materials	User manuals and training sessions for staff	Staff able to perform key site operations	Week 19
Launch Plan and Go-Live	Final deployment and public launch of the website	Site live and accessible to customers	Week 20
Post-Launch Support	Bug fixes, performance monitoring, and user support for four weeks post-launch	All critical issues addressed	Week 24

3.2. Direct Results

- Enhanced brand visibility and customer reach
- Streamlined order processing and inventory management
- Improved customer satisfaction through intuitive UI/UX
- Data-driven insights via analytics for ongoing optimization

Analysis:

The deliverables are structured to ensure traceability from requirements through to deployment and support. Each deliverable is linked to specific acceptance criteria and deadlines, facilitating milestone tracking and quality assurance. The inclusion of both technical (website, integrations) and non-technical (content, training) outputs ensures a holistic approach to project success.

4. WORK BREAKDOWN STRUCTURE (WBS)

4.1. WBS Hierarchical Structure

A Work Breakdown Structure (WBS) decomposes the project into manageable sections, enabling effective planning, resource allocation, and progress tracking.

Level 1: Project: LuxeThreads E-Commerce Website Development

- 1.0 Project Management
- 2.0 Requirements Analysis
- 3.0 Design
- 4.0 Development
- 5.0 Content Creation
- 6.0 Testing & Quality Assurance
- 7.0 Deployment & Launch
- 8.0 Training & Documentation
- 9.0 Post-Launch Support

Level 2 and Below:

WBS Code Task/Sub-Task

- | | |
|-----|---------------------------------|
| 1.1 | Project Planning & Scheduling |
| 1.2 | Stakeholder Communication |
| 1.3 | Progress Monitoring & Reporting |
| 2.1 | Stakeholder Interviews |
| 2.2 | Requirements Documentation |
| 2.3 | Approval of Requirements |
| 3.1 | UI/UX Wireframes |

WBS Code Task/Sub-Task

3.2	Visual Design
3.3	Design Approval
4.1	Frontend Development
4.2	Backend Development
4.3	Payment Gateway Integration
4.4	Inventory Management System
4.5	Security Implementation
5.1	Product Photography
5.2	Copywriting (Product Descriptions, Blog)
5.3	Content Upload
6.1	Unit Testing
6.2	Integration Testing
6.3	User Acceptance Testing (UAT)
6.4	Security Testing
7.1	Hosting Setup
7.2	Data Migration
7.3	Go-Live
8.1	Staff Training Sessions
8.2	User Manuals and Documentation
9.1	Bug Fixes and Updates
9.2	Performance Monitoring
9.3	Customer Support

Analysis:

The WBS provides a clear, hierarchical decomposition of the project, ensuring that all critical activities are identified and assigned. This structure supports effective scheduling, resource allocation, and risk management, as recommended by PMBOK and PRINCE2 methodologies.

4.2. Activities, Sub-Activities, and Tasks

Example: 4.0 Development

- 4.1 Frontend Development
 - 4.1.1 Develop Homepage
 - 4.1.2 Develop Product Listing Pages
 - 4.1.3 Develop Product Detail Pages
 - 4.1.4 Implement Shopping Cart UI
 - 4.1.5 Responsive Design Testing
- 4.2 Backend Development
 - 4.2.1 Set Up Database Schema
 - 4.2.2 Implement User Authentication
 - 4.2.3 Develop Order Processing Logic
 - 4.2.4 Integrate Inventory Management
- 4.3 Payment Gateway Integration
 - 4.3.1 Integrate Stripe API
 - 4.3.2 Integrate PayPal API
 - 4.3.3 Test Payment Workflows
- 4.4 Security Implementation
 - 4.4.1 SSL Certificate Installation
 - 4.4.2 Implement Data Encryption

- 4.4.3 Conduct Security Audits

Analysis:

Breaking down activities into sub-activities and tasks enables granular tracking and assignment, reducing ambiguity and facilitating parallel work streams. This approach aligns with best practices for WBS development in software and web projects.

5. TIMELINE, MILESTONES, AND DELIVERABLES

A detailed timeline with milestones is essential for tracking progress and ensuring timely delivery of project outputs.

5.1. Gantt Chart Overview

Phase	Start Week	End Week	Key Milestones
Project Initiation	1	2	Project Kickoff
Requirements Analysis	2	4	Requirements Sign-Off
Design	4	6	Design Approval
Development	6	16	Feature Complete
Content Creation	8	14	Content Ready
Testing & QA	14	18	UAT Complete
Deployment & Launch	18	20	Go-Live
Training & Documentation	17	19	Staff Trained
Post-Launch Support	20	24	Support Period Ends

5.2. Milestone Table

Milestone	Description	WBS Reference	Planned Date
M1: Project Kickoff	Formal start of the project	1.1	Week 1
M2: Requirements Approved	Requirements document signed off	2.3	Week 4
M3: Design Approved	UI/UX designs approved by stakeholders	3.3	Week 6
M4: Feature Complete	All core features developed	4.0	Week 16
M5: Content Ready	All content uploaded and formatted	5.3	Week 14
M6: UAT Complete	User acceptance testing passed	6.3	Week 18
M7: Go-Live	Website launched to the public	7.3	Week 20
M8: Staff Trained	All staff trained on system use	8.1	Week 19
M9: Support Period Ends	End of post-launch support	9.3	Week 24

Analysis:

The timeline is structured to allow for overlapping activities where feasible (e.g., content creation concurrent with development), optimizing resource utilization and reducing project duration. Milestones are strategically placed to mark critical decision points and deliverable completions, supporting effective project control and stakeholder communication.

6. RESOURCE PLANNING AND ALLOCATION

Effective resource planning ensures that the project has the necessary personnel, materials, and tools to achieve its objectives within the defined constraints.

6.1. Personnel Resources

Role	Responsibilities	Estimated Effort (FTE Weeks)
Project Manager	Overall coordination, scheduling, reporting	24
Business Analyst	Requirements gathering, documentation	4
UI/UX Designer	Wireframes, visual design	4
Frontend Developer	Website interface development	10
Backend Developer	Server-side logic, database, integrations	12
QA Engineer	Testing, defect tracking	4
Content Creator	Product descriptions, blog posts, images	6
SEO Specialist	SEO setup, analytics integration	2
Trainer/Support Staff	Staff training, post-launch support	4

Analysis:

Resource allocation is based on the estimated effort required for each phase, with overlapping assignments to maximize productivity. The use of specialized roles (e.g., SEO specialist, QA engineer) ensures that domain-specific expertise is applied where needed, reducing risk and enhancing quality.

6.2. Material and Technological Resources

Resource	Purpose	Source/Notes
Web Hosting	Website deployment	AWS, Azure, or equivalent
SSL Certificate	Secure data transmission	Purchased from provider
Payment Gateway APIs	Payment processing	Stripe, PayPal
CMS Platform	Content management	WordPress, Shopify, or custom
Development Tools	Code development and version control	Git, IDEs
Testing Tools	Automated and manual testing	Selenium, JIRA
Analytics Tools	User behavior tracking	Google Analytics
Image Editing Software	Product image preparation	Adobe Photoshop

Analysis:

Selection of reliable, industry-standard tools and platforms minimizes integration risks and supports scalability. Cloud-based hosting and services are preferred for flexibility and cost-effectiveness.

6.3. RACI Matrix (Responsibility Assignment)

A RACI matrix clarifies roles and responsibilities for key tasks.

Task/Deliverable	Project Manager	Business Analyst	UI/UX Designer	Developers	QA Engineer	Content Creator	SEO Specialist	Stakeholders
Requirements Gathering	A	R	C	C	C	C	C	I
Design	C	C	R	C	C	C	C	A/I
Development	C	C	C	R	C	C	C	I
Testing	C	C	C	C	R	C	C	I
Content Creation	C	C	C	C	C	R	C	I
SEO/Analytics	C	C	C	C	C	C	R	I
Training	R	C	C	C	C	C	C	I
Go-Live	A	C	C	R	R	C	C	I

Legend: R = Responsible, A = Accountable, C = Consulted, I = Informed

Analysis:

The RACI matrix ensures clarity in task ownership, reducing confusion and facilitating efficient decision-making. It also supports stakeholder engagement by identifying consultation and information flows.

7. COST ESTIMATION AND BUDGETING

Accurate cost estimation is critical for project feasibility and financial control.

7.1. Cost Breakdown

Category	Estimated Cost (USD)
Personnel (Salaries)	\$70,000
Hosting & Infrastructure	\$8,000
Software Licenses	\$5,000
Payment Gateway Fees	\$2,000
Content Creation	\$10,000
Testing & QA	\$5,000
Training & Documentation	\$3,000
Contingency (10%)	\$11,000
Total	\$114,000

Analysis:

The budget includes a 10% contingency to accommodate unforeseen expenses, aligning with best practices in project cost management. Regular budget reviews will be conducted at each milestone to ensure financial control and early identification of variances.

8. RISK IDENTIFICATION AND MITIGATION

Proactive risk management enhances project resilience and success rates.

8.1. Risk Register

Risk Description	Probability	Impact	Priority	Mitigation Strategy	Owner
Delayed stakeholder feedback	Medium	High	High	Set clear deadlines, regular reminders	Project Manager
Scope creep	Medium	High	High	Strict change control, documented approvals	Project Manager
Integration issues with payment	Low	High	Medium	Early prototyping, vendor support	Backend Dev
Security vulnerabilities	Low	High	High	Security audits, compliance checks	QA Engineer
Content delivery delays	Medium	Medium	Medium	Parallel content creation, buffer time	Content Creator
Budget overrun	Low	High	Medium	Regular budget tracking, contingency fund	Project Manager
Staff turnover	Low	Medium	Low	Knowledge transfer, documentation	Project Manager

Analysis:

Risks are prioritized based on probability and impact, with mitigation strategies assigned to specific owners. The risk register will be reviewed bi-weekly, and new risks will be added as identified during project execution.

9. QUALITY MANAGEMENT AND ACCEPTANCE CRITERIA

Quality assurance ensures that deliverables meet stakeholder expectations and industry standards.

9.1. Quality Objectives

- All website features must pass functional and security testing with a defect rate below 2%.
- Website must load in under 3 seconds on standard broadband connections.
- Mobile responsiveness must be verified across major devices and browsers.
- Payment processing must comply with PCI DSS standards.
- Content must be free of grammatical errors and accurately reflect product details.

9.2. Quality Control Steps

- **Requirements Review:** Stakeholder sign-off on requirements document.
- **Design Review:** UI/UX mockups approved by stakeholders.
- **Code Reviews:** Peer review of code for maintainability and security.
- **Testing:** Comprehensive test plans covering unit, integration, UAT, and security.
- **User Acceptance Testing:** End-users validate functionality and usability.
- **Launch Readiness Review:** Final checklist before go-live.

9.3. Acceptance Criteria

- All critical and high-priority defects resolved prior to launch.
- Website passes SEO audit with a minimum score of 85/100.
- Staff demonstrate proficiency in site management during training.
- Analytics tracking confirms data capture for key user actions.

Analysis:

Quality management is embedded throughout the project lifecycle, with clear metrics and

checkpoints. Acceptance criteria are aligned with project objectives and stakeholder expectations, supporting a successful launch and ongoing performance.

10. COMMUNICATION PLAN AND STAKEHOLDER MANAGEMENT

Effective communication is vital for stakeholder alignment and project transparency.

10.1. Stakeholder Identification

Stakeholder	Role/Interest	Communication Needs
Project Sponsor	Budget, strategic alignment	Weekly status reports
Brand Manager	Branding, content, user experience	Design and content reviews
IT Manager	Technical oversight, security	Technical updates
Sales Team	Order management, customer feedback	Training, feedback sessions
End Users (Customers)	Usability, satisfaction	Feedback surveys post-launch

10.2. Communication Matrix

Communication Type	Frequency	Audience	Medium	Owner
Project Kickoff	Once	All stakeholders	Meeting	Project Manager
Weekly Status Report	Weekly	Sponsor, Team Leads	Email/Portal	Project Manager
Design Review	Bi-weekly	Brand Manager	Meeting	UI/UX Designer
UAT Feedback	As needed	End Users	Survey/Meeting	QA Engineer

Go-Live Announcement	Once	All stakeholders	Email/Portal	Project Manager
Post-Launch Support	Ongoing	Sales, Support	Helpdesk	Support Staff

Analysis:

The communication plan ensures timely, relevant information flows to all stakeholders, supporting decision-making and engagement. Regular status updates and feedback loops facilitate early issue identification and resolution.

CONCLUSION

This project plan provides a comprehensive, structured approach to the development and launch of the LuxeThreads e-commerce website, integrating industry best practices in project management, resource planning, risk mitigation, and quality assurance. The use of a detailed WBS, milestone-driven timeline, and clear communication and stakeholder engagement strategies ensures that the project is positioned for success. By adhering to the outlined plan, LuxeThreads can expect to achieve its strategic objectives, deliver a superior online shopping experience, and establish a scalable foundation for future growth.

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