

# Project Report

## Prior Authorization Systems Website Redesign for Healthcare Company *Debadrita Dey*

### 1. Project Charter

#### 1.1 Project Background

The Prior Authorization System (PAS) is a critical web application used by pharmacists and nurses to manage prior authorization case handling. The current PAS website is obsolete, resulting in case approval delays, sluggish workflows, and significant downtime. Delays in drug authorizations, increased operating costs, and decreased patient satisfaction are the results of these issues.

The PAS Website Redesign Project aims to address these problems by developing a modern, responsive, and efficient system that improves workflow effectiveness, reduces processing time, and enhances the user experience in general. In order to provide a cost-effective, secure, and expandable solution that aligns with the long-term goals of the healthcare organization, this endeavor is crucial.

#### 1.2 Project Objectives

##### 1. Improve Workflow Efficiency:

- Reduce the amount of time that nurses and pharmacists spend processing cases.
- Reduce downtime and increase system efficiency.

##### 1. Modernize User Experience:

- Develop a fully responsive design for mobile and desktop users.
- Improve accessibility and user navigation for better ease of use.

##### 2. Increase Cost Savings:

- Optimize workflows to achieve cost savings of at least \$10 million.
- Reduce IT maintenance costs through a robust and scalable system.

##### 3. Ensure Security & Compliance:

- Implement stronger data security measures to ensure HIPAA compliance.

- Protect sensitive patient and case-related information.
4. Enable Scalability for Future Growth:
- Allow easy integration with AI-driven automation for future enhancements.
  - Support increased user traffic without performance degradation.

### 1.3 Project Stakeholders

Stakeholder	Role & Responsibility
<b>Healthcare IT Department</b>	Project Sponsor, ensuring alignment with IT infrastructure & compliance.
<b>Operations Team</b>	End-users (pharmacists, nurses) providing workflow requirements.
<b>Development Team</b>	Software engineers and UI/UX designers responsible for system implementation.
<b>QA &amp; Testing Team</b>	Ensures system functionality, performance, and security compliance.
<b>Compliance &amp; Security Team</b>	Ensures the new system adheres to regulatory and security standards.
<b>Senior Management</b>	Decision-makers, approving project milestones and funding.

### 1.4 Project Benefits

This project will provide significant benefits for both the healthcare company and end-users:

1. For the Healthcare Company:
  - Cost Savings: Reduction of at least \$10 million in operational costs.
  - IT Maintenance Reduction: A modern system will reduce downtime and IT overhead.
  - Competitive Edge: A scalable and AI-ready system for future growth.
2. For Pharmacists & Nurses:

- Faster Case Processing: Approvals and workflows will be significantly improved.
  - Enhanced User Experience: A modern and intuitive web interface.
  - Mobile Compatibility: Easy access from mobile and desktop devices.
3. For Patients:
- Faster Medication Approvals: Reducing wait times for critical medications.
  - Secure Data Handling: Ensuring sensitive health data remains protected.

## **2. Scope Statement**

### **2.1 Scope Description**

The Prior Authorization System (PAS) Website Redesign project involves modernizing the existing PAS platform to improve efficiency, enhance user experience, and ensure compliance with healthcare security standards. In order to save processing time for nurses and pharmacists and ensure seamless interaction with existing healthcare IT systems, the project will place a high priority on developing a scalable, user-centric, and responsive solution.

### **2.2 Acceptance Criteria**

- Performance & Efficiency: Reduce case processing time by at least 30%.
- User Experience: Provide a modern, mobile-friendly, and intuitive interface.
- System Stability: Achieve 99.9% uptime to minimize downtime issues.
- Security & Compliance: Ensure HIPAA compliance and data encryption for all transactions.
- Cost Savings: Achieve at least \$10 million in operational savings.
- Testing & Validation: Successfully pass unit testing, performance testing, and user acceptance testing (UAT) before deployment.

### **2.3 Deliverables**

- A completely redesigned website for Prior Authorization Systems.
- A user-friendly layout.
- Design that adapts
- Less interruptions and downtime for applications.
- Reduced costs and duration

## **2.4 Exclusions**

- Expansion to additional user groups beyond pharmacists and nurses.
- Incorporation of fax-based or manually-processed cases.
- Development of a mobile app (only mobile-friendly website).

## **2.5 Constraints**

The project is subject to the following constraints:

- Must be completed within 6 months.
- Cannot exceed \$3 million in development and deployment costs.
- Must adhere to HIPAA, GDPR, and internal IT security policies.
- The new system must handle at least 30% more cases per day than the previous version.

## **2.6 Assumptions**

The following presumptions underpin the project's operation:

- Healthcare IT will provide crucial links with the existing infrastructure.
- To confirm usability, pharmacists and nurses will participate in user testing.
- To help them get used to the new system, current users will receive efficient training.
- Security measures will continue to conform to industry norms in the healthcare industry.

## **2.7 Scope Creep**

Scope creep denotes the unregulated alterations or ongoing expansion of the project scope beyond the original specifications. In this project, possible risks of scope expansion include:

- Incorporating additional features outside the established requirements, like AI-enhanced automation, before finalizing the initial redesign.
- Broadening the user group to include individuals beyond pharmacists and nurses, resulting in heightened complexity and training expenses.
- Incorporating unplanned external systems, resulting in postponed project schedules and heightened budget needs.
- Stakeholder demands for extra compliance measures during development lead to rework and prolonged testing periods.

### 3. Project Management Organizational Structure

#### 3.1 Matrix Organizational Structure

The **Matrix Organizational Structure** will be used for this project, combining elements of both functional and dedicated teams. Team members will report to both the **project manager** and their respective **department heads** (IT, Compliance, Operations).

- **Cross-Functional Collaboration:** Pharmacists, nurses, IT engineers, and compliance officers must work together, making a flexible reporting structure essential.
- **Efficient Resource Utilization:** The company can leverage existing staff while still having a dedicated project manager overseeing the implementation.
- **Faster Decision-Making:** Stakeholders across different departments can communicate effectively, reducing delays in approvals.
- **Balanced Control:** While functional managers ensure quality and compliance, the project manager ensures timely execution.

#### Key Roles in the Matrix Structure

Role	Responsibility
<b>Project Manager</b>	Oversees the overall project execution, timeline, and deliverables.
<b>IT Department Head</b>	Ensures system security, compliance, and integration with healthcare infrastructure.
<b>Operations Lead</b>	Represents pharmacists and nurses, providing user requirements and feedback.
<b>Compliance Officer</b>	Ensures adherence to HIPAA and other healthcare regulations.
<b>Development Team</b>	Implements UI/UX improvements and backend optimizations.
<b>Testing Team</b>	Conducts performance, security, and user acceptance testing.

## **Benefits of the Matrix Structure for This Project**

- **Better Resource Allocation** – Specialists work across multiple projects without being fully dedicated.
- **Faster Adaptation to Changes** – Teams remain flexible while adhering to project goals.
- **Enhanced Coordination** – Ensures IT, operations, and compliance teams work in sync.
- **Stronger Stakeholder Engagement** – Key decision-makers remain involved throughout the project.

## **4. Project Priorities in Terms of Triple Constraints**

### **1. Quality/Performance (Highest Priority)**

- The redesigned PAS system must ensure high performance, reliability, and security to support healthcare operations.
- Compliance with HIPAA and healthcare security regulations is non-negotiable.
- The system must handle 30% more cases per day and maintain 99.9% uptime.

### **2. Time (Moderate Priority)**

- The project is constrained by a 6-month deadline.
- Timely delivery is important, but not at the expense of quality and compliance.
- Delays may be acceptable if they ensure proper testing and security validation.

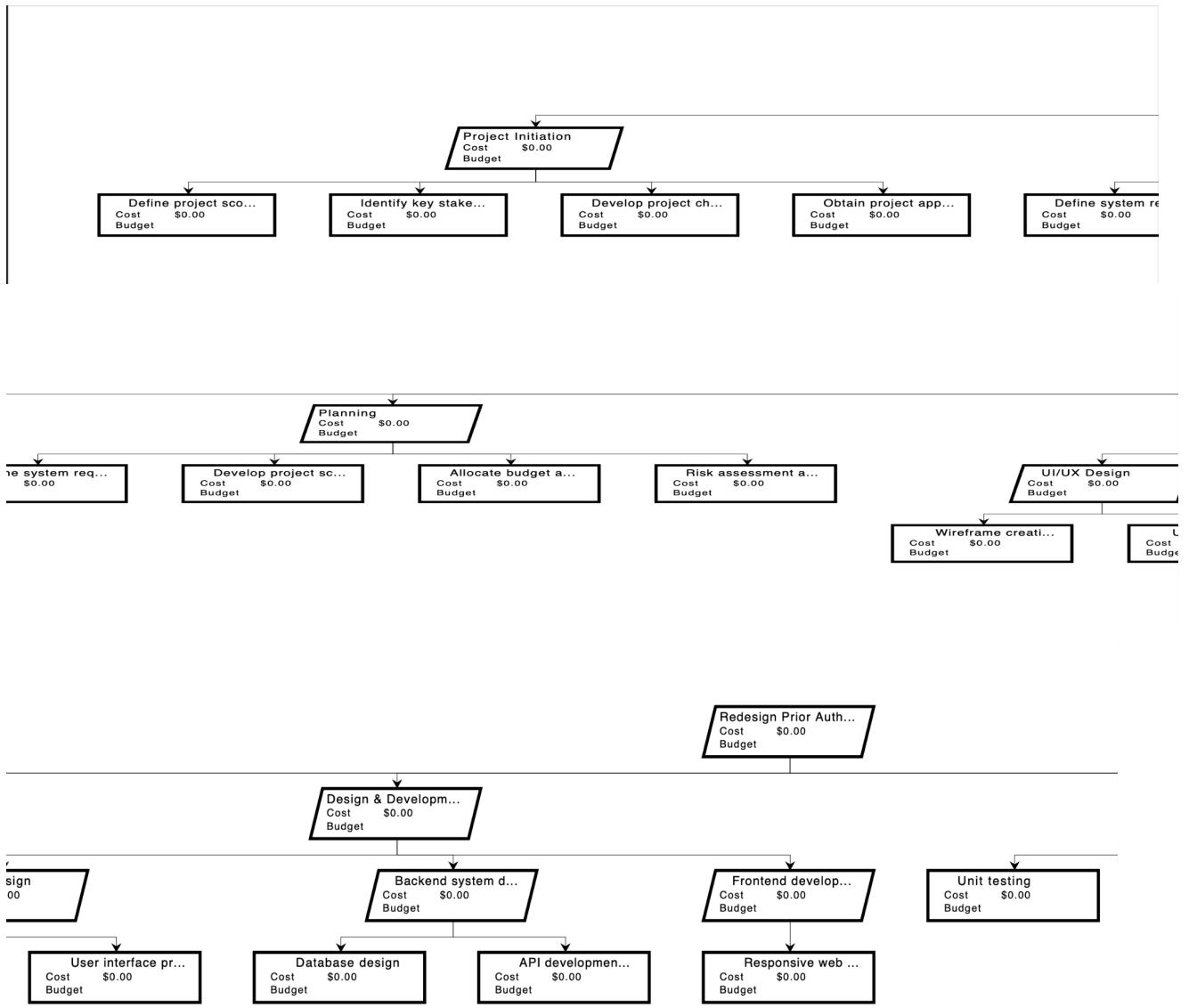
### **3. Cost (Lower Priority)**

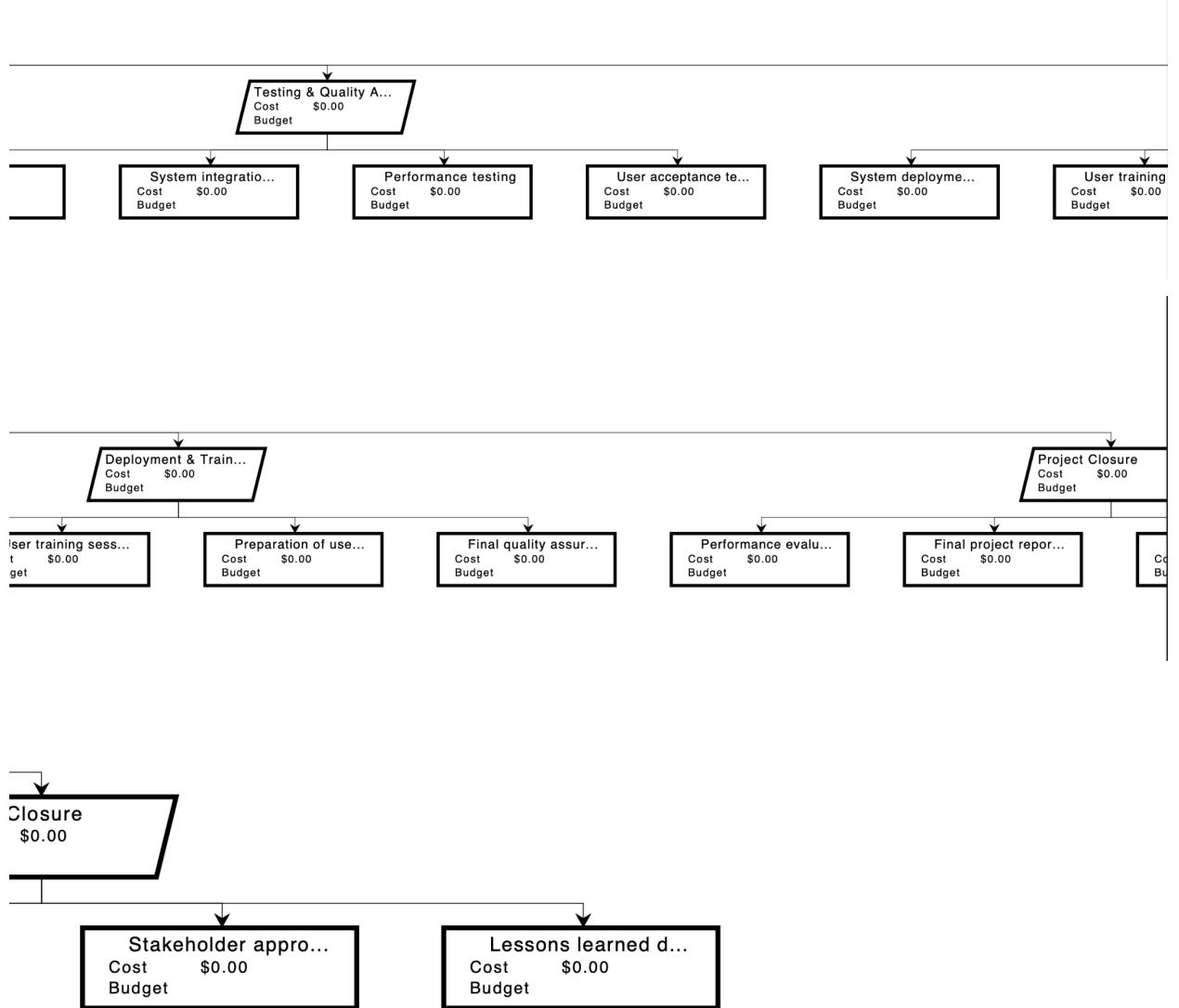
- The \$3 million budget is important but can be adjusted if necessary.
- If additional funds are required to meet compliance, security, or performance standards, they will be considered.
- The long-term cost savings of \$10 million in operations justify minor budget overruns.

## 5. Work Breakdown Structure (WBS)

### 5.1 WBS

Project libre doesn't show vertical WBS diagram





## 5.2 Responsibility Matrix Integration

The Work Breakdown Structure (WBS) is integrated with the project responsibility matrix to ensure clear ownership and accountability for each task.

WBS Task	Project Manager	IT Team	Operations Team	Compliance & Security
Define project scope	Responsible	Accountable	Consulted	Consulted
Develop project schedule	Responsible	Accountable	Consulted	Consulted
UI/UX Design	Consulted	Accountable	Consulted	Informed
Backend Development	Consulted	Accountable	Informed	Informed
System Testing	Consulted	Accountable	Informed	Responsible
Deployment & Training	Responsible	Consulted	Accountable	Consulted
Compliance & Security Review	Consulted	Consulted	Consulted	Accountable

This responsibility assignment ensures that all WBS tasks are aligned with team roles, reducing ambiguity and improving project execution.

## 6. Communication Plan

Throughout the project lifecycle, teamwork, flawless execution, and stakeholder alignment depend on effective communication.

### 6.1 Communication Objectives

- Ensure that all stakeholders are informed on the project's risks, progress, and status.
- Create clear, structured channels of communication for feedback and decision-making.
- Minimize misunderstandings and ensure that project deliverables and objectives align.

## 6.2 Communication Matrix

Communication Type	Audience	Frequency	Medium	Owner
<b>Project Kickoff Meeting</b>	Project Team, Key Stakeholders	One-time	Virtual/In-Person	Project Manager
<b>Weekly Status Updates</b>	Project Team, Sponsors	Weekly	Email, Project Dashboard	Project Manager
<b>Stakeholder Updates</b>	Executive Sponsors, Management	Monthly	Presentation, Report	Project Manager
<b>Technical Meetings</b>	Developers, IT, Security	Bi-weekly	Virtual	Lead Developer
<b>Risk Review Meetings</b>	Project Team, Risk Owners	As needed	Virtual	Risk Manager
<b>User Training Sessions</b>	Pharmacists, Nurses, Support Teams	Before Deployment	In-person/Video Training	Training Lead
<b>Post-Implementation Review</b>	Project Team, Executives	One-time	Report/Meeting	Project Manager

## 6.3 Key Communication Tools & Platforms

- Email: Primary communication channel for updates and approvals.
- Project Dashboard (JIRA/Trello): Task tracking and real-time status updates.
- Microsoft Teams/Zoom: Virtual meetings and daily stand-ups.
- Google Drive/SharePoint: Document sharing and collaboration.
- Slack/Chat Groups: Quick discussions and issue resolution.

### **6.3 Escalation Process**

If a project risk, issue, or decision requires escalation:

- Team Lead Notifies the Project Manager
- Project Manager Assesses the Issue and Implications.
- Escalates to Executive Sponsors If Needed.
- A Decision is Made and Communicated Back to the Team.

### **6.4 Communication Success Metrics**

- 90%+ stakeholder satisfaction on communication clarity.
- Timely updates shared with stakeholders per agreed frequency.
- Minimal communication breakdowns impacting project timeline.

## **7. Project Times and Costs Estimation**

### **7.1 Bottom-Up Estimation (Parametric Procedures Applied to Specific Tasks)**

For this project, a Bottom-Up Estimation approach is used, specifically utilizing parametric estimation, because:

- Cost and time estimates are based on historical data from similar healthcare IT projects.
- It allows for data-driven cost allocation, improving accuracy by applying specific cost-per-task models.
- This method ensures precise budgeting for software development, testing, security, and compliance measures

## 7.2 Estimated Project Timeline

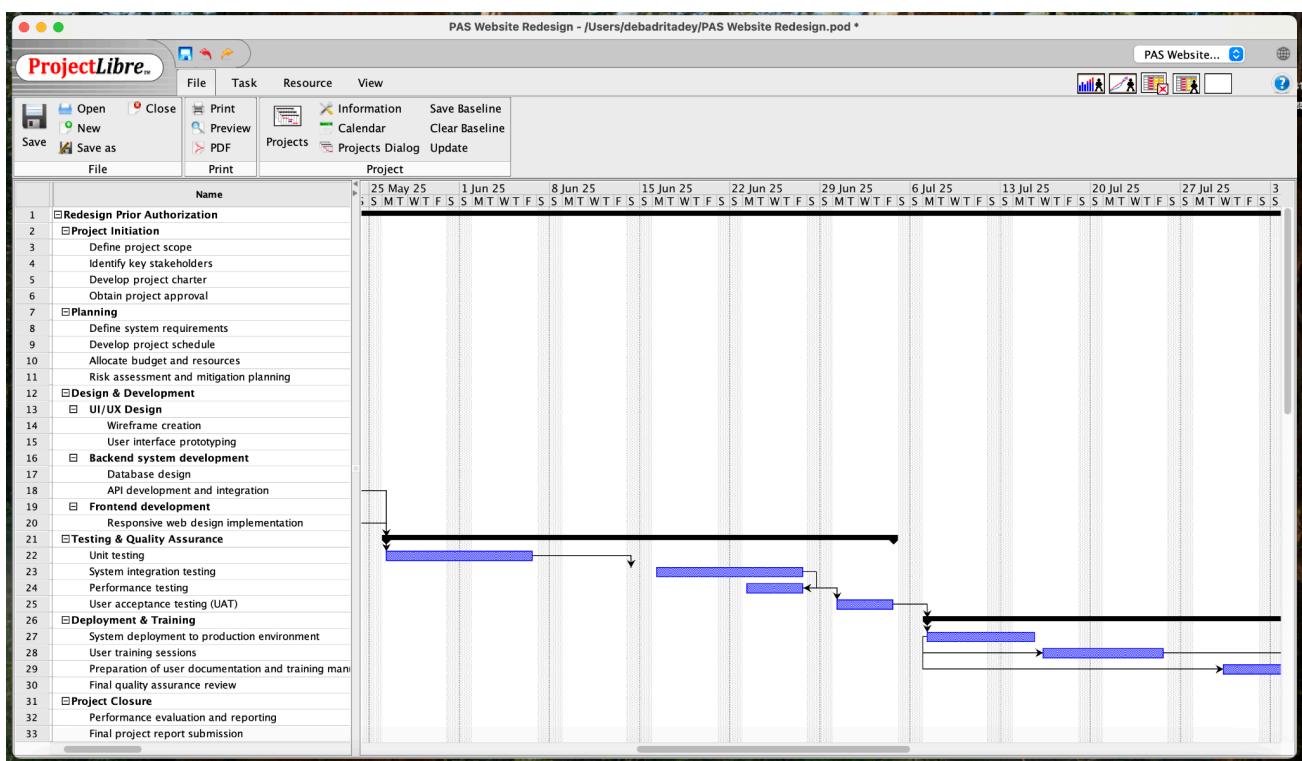
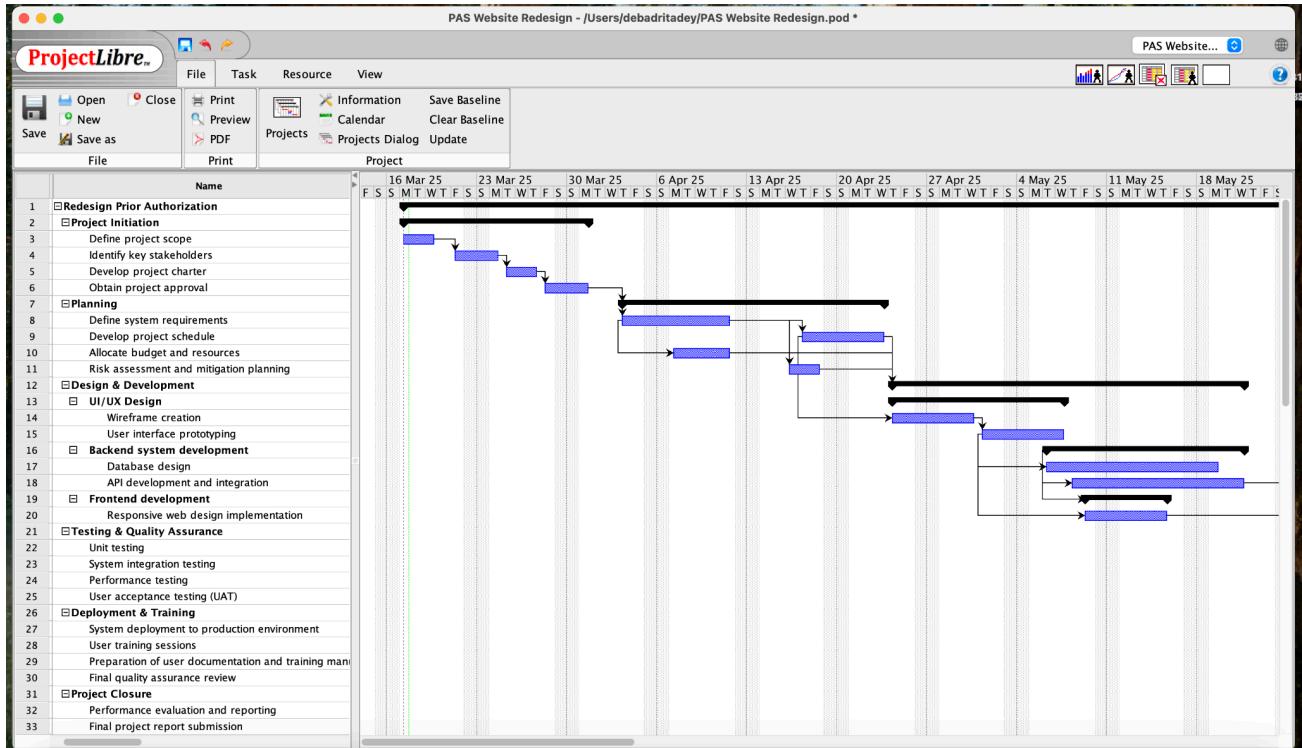
Phase	Duration
<b>Project Initiation</b>	2 weeks
<b>Planning</b>	4 weeks
<b>Design &amp; Development</b>	10 weeks
<b>Testing &amp; Quality Assurance</b>	6 weeks
<b>Deployment &amp; Training</b>	4 weeks
<b>Project Closure</b>	2 weeks
<b>Total Project Duration</b>	<b>28 weeks (~6 months)</b>

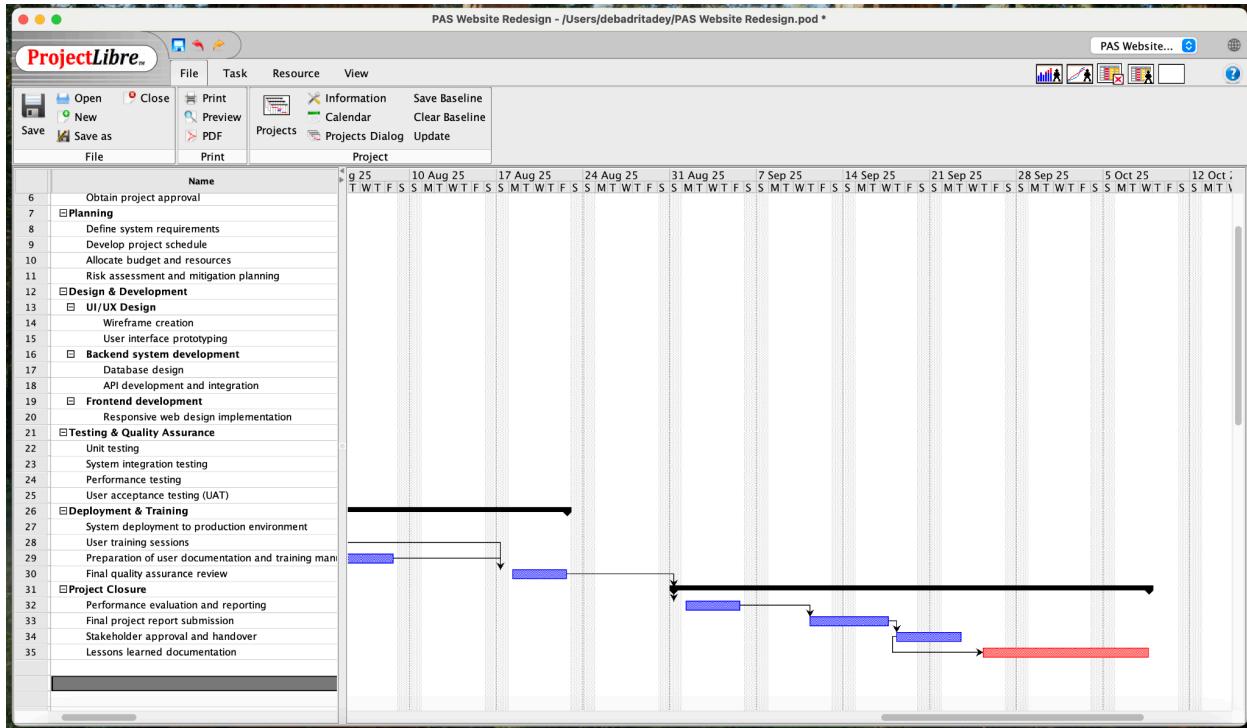
## 7.3 Estimated Project Costs

Cost Component	Estimated Cost (\$)
<b>Project Management &amp; Planning</b>	\$250,000
<b>UI/UX Design</b>	\$300,000
<b>Development &amp; Integration</b>	\$1,500,000
<b>Testing &amp; Quality Assurance</b>	\$500,000
<b>Deployment &amp; Training</b>	\$250,000
<b>Compliance &amp; Security Enhancements</b>	\$200,000
<b>Contingency (10%)</b>	\$300,000
<b>Total Estimated Cost</b>	<b>\$3,000,000</b>

## 8. Gantt Chart

### 8.1 Estimated Project Costs

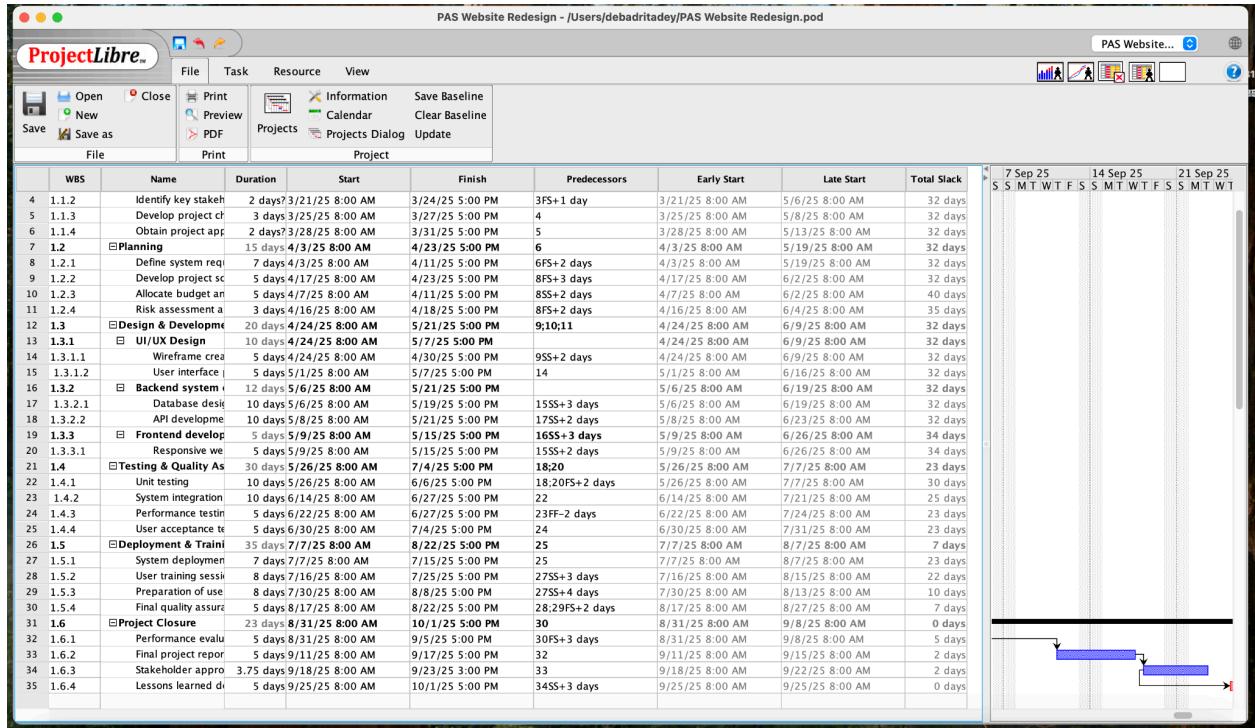




Task 35 is the last task in the project, ProjectLibre always treats it as critical by default. There is no other task after it, so ProjectLibre assumes any delay in this task delays the whole project.

## 8.1 Early, late, and slack activity times

	WBS	Name	Duration	Start	Finish	Predecessors	Early Start	Late Start	Total Slack	7 Sep 25	14 Sep 25	21 Sep 25
1	1	Redesign Prior Author	143 days	7/17/25 8:00 AM	10/1/25 5:00 PM		3/17/25 8:00 AM	4/30/25 8:00 AM	0 days			
2	1.1	Project Initiation	11 days	7/17/25 8:00 AM	3/31/25 5:00 PM		3/17/25 8:00 AM	4/30/25 8:00 AM	32 days			
3	1.1.1	Define project scope	3 days	7/17/25 8:00 AM	3/19/25 5:00 PM		3/17/25 8:00 AM	4/30/25 8:00 AM	32 days			
4	1.1.2	Identify key stakeholders	2 days	7/21/25 8:00 AM	3/24/25 5:00 PM	3FS+1 day	3/21/25 8:00 AM	5/6/25 8:00 AM	32 days			
5	1.1.3	Develop project plan	3 days	7/25/25 8:00 AM	3/27/25 5:00 PM	4	3/25/25 8:00 AM	5/8/25 8:00 AM	32 days			
6	1.1.4	Obtain project approval	2 days	7/28/25 8:00 AM	3/31/25 5:00 PM	5	3/28/25 8:00 AM	5/13/25 8:00 AM	32 days			
7	1.2	Planning	15 days	4/3/25 8:00 AM	4/23/25 5:00 PM	6	4/3/25 8:00 AM	5/19/25 8:00 AM	32 days			
8	1.2.1	Define system requirements	7 days	4/3/25 8:00 AM	4/11/25 5:00 PM	6FS+2 days	4/3/25 8:00 AM	5/19/25 8:00 AM	32 days			
9	1.2.2	Develop project scope	5 days	4/17/25 8:00 AM	4/23/25 5:00 PM	8FS+3 days	4/17/25 8:00 AM	6/2/25 8:00 AM	32 days			
10	1.2.3	Allocate budget and resources	5 days	4/17/25 8:00 AM	4/11/25 5:00 PM	8SS+2 days	4/7/25 8:00 AM	6/2/25 8:00 AM	40 days			
11	1.2.4	Risk assessment and mitigation planning	3 days	4/16/25 8:00 AM	4/18/25 5:00 PM	8FS+2 days	4/16/25 8:00 AM	6/4/25 8:00 AM	35 days			
12	1.3	Design & Development	20 days	4/24/25 8:00 AM	5/21/25 5:00 PM	9:10:11	4/24/25 8:00 AM	6/9/25 8:00 AM	32 days			
13	1.3.1	UI/UX Design	10 days	4/24/25 8:00 AM	5/7/25 5:00 PM		4/24/25 8:00 AM	6/9/25 8:00 AM	32 days			
14	1.3.1.1	Wireframe creation	5 days	4/24/25 8:00 AM	4/30/25 5:00 PM	9SS+2 days	4/24/25 8:00 AM	6/9/25 8:00 AM	32 days			
15	1.3.1.2	User interface design	5 days	5/1/25 8:00 AM	5/7/25 5:00 PM	14	5/1/25 8:00 AM	6/16/25 8:00 AM	32 days			
16	1.3.2	Backend system development	12 days	5/6/25 8:00 AM	5/21/25 5:00 PM		5/6/25 8:00 AM	6/19/25 8:00 AM	32 days			
17	1.3.2.1	Database design	10 days	5/6/25 8:00 AM	5/19/25 5:00 PM	15SS+3 days	5/6/25 8:00 AM	6/19/25 8:00 AM	32 days			
18	1.3.2.2	API development	10 days	5/8/25 8:00 AM	5/21/25 5:00 PM	17SS+2 days	5/8/25 8:00 AM	6/23/25 8:00 AM	32 days			
19	1.3.3	Frontend development	5 days	5/9/25 8:00 AM	5/15/25 5:00 PM	16SS+3 days	5/9/25 8:00 AM	6/26/25 8:00 AM	34 days			
20	1.3.3.1	Responsive web design	5 days	5/9/25 8:00 AM	5/15/25 5:00 PM	15SS+2 days	5/9/25 8:00 AM	6/26/25 8:00 AM	34 days			
21	1.4	Testing & Quality Assurance	30 days	5/26/25 8:00 AM	7/4/25 5:00 PM	18:20	5/26/25 8:00 AM	7/7/25 8:00 AM	23 days			
22	1.4.1	Unit testing	10 days	5/26/25 8:00 AM	6/6/25 5:00 PM	18:20FS+2 days	5/26/25 8:00 AM	7/7/25 8:00 AM	30 days			
23	1.4.2	System integration	10 days	6/14/25 8:00 AM	6/27/25 5:00 PM	22	6/14/25 8:00 AM	7/21/25 8:00 AM	25 days			
24	1.4.3	Performance testing	5 days	6/22/25 8:00 AM	6/27/25 5:00 PM	23FF-2 days	6/22/25 8:00 AM	7/24/25 8:00 AM	23 days			
25	1.4.4	User acceptance testing	5 days	6/30/25 8:00 AM	7/4/25 5:00 PM	24	6/30/25 8:00 AM	7/31/25 8:00 AM	23 days			
26	1.5	Deployment & Training	35 days	7/7/25 8:00 AM	8/22/25 5:00 PM	25	7/7/25 8:00 AM	8/7/25 8:00 AM	7 days			
27	1.5.1	System deployment	7 days	7/7/25 8:00 AM	7/15/25 5:00 PM	25	7/7/25 8:00 AM	8/7/25 8:00 AM	23 days			
28	1.5.2	User training sessions	8 days	7/16/25 8:00 AM	7/25/25 5:00 PM	27SS+3 days	7/16/25 8:00 AM	8/15/25 8:00 AM	22 days			
29	1.5.3	Preparation of use	8 days	7/30/25 8:00 AM	8/8/25 5:00 PM	27SS+4 days	7/30/25 8:00 AM	8/13/25 8:00 AM	10 days			
30	1.5.4	Final quality assurance	5 days	8/17/25 8:00 AM	8/22/25 5:00 PM	28:29FS+2 days	8/17/25 8:00 AM	8/27/25 8:00 AM	7 days			
31	1.6	Project Closure	23 days	8/31/25 8:00 AM	10/1/25 5:00 PM	30	8/31/25 8:00 AM	9/8/25 8:00 AM	0 days			
32	1.6.1	Performance evaluation	5 days	8/31/25 8:00 AM	9/5/25 5:00 PM	30FS+3 days	8/31/25 8:00 AM	9/8/25 8:00 AM	5 days			
33	1.6.2	Final project report	5 days	9/11/25 8:00 AM	9/17/25 5:00 PM	32	9/11/25 8:00 AM	9/15/25 8:00 AM	2 days			
34	1.6.3	Stakeholder approval	3.75 days	9/18/25 8:00 AM	9/23/25 5:00 PM	33	9/18/25 8:00 AM	9/22/25 8:00 AM	2 days			



## 9. Risk Management Plan

### 9.1 Risk Assessment Matrix

Risk Likelihood	Risk Impact	Risk Level
Low (1-3)	Minimal impact on cost, schedule, or quality.	Low (1-3)
Medium (4-6)	Some project disruption but can be managed.	Medium (4-6)
High (7-9)	Significant delay, cost overrun, or project failure.	High (7-9)

## 9.2 Risk Register Table

ID	Risk Description	Category	Likelihood (1-9)	Impact (1-9)	Risk Level (Likelihood × Impact)	Risk Response Strategy	Mitigation Plan	Contingency Plan	Owner
R1	System integration issues with existing healthcare IT	Technical	6	7	42 (High)	Mitigation	Conduct early API testing, ensure modular architecture.	If integration fails, revert to manual authorization process until a fix is implemented.	IT Lead
R2	Delay in UI/UX Design approval	Schedule	5	6	30 (Medium)	Mitigation	Allocate buffer time, expedite design review cycles.	Use a default UI template to prevent project delays.	Design Lead
R3	Budget overrun due to unforeseen infrastructure upgrades	Financial	4	8	32 (Medium)	Mitigation	Set a contingency budget, track spending bi-weekly.	Secure additional emergency funding from management.	Finance Team
R4	Security vulnerabilities affecting HIPAA compliance	Compliance	7	9	63 (High)	Avoidance	Implement penetration testing, follow strict data security protocols.	If a breach occurs, immediately isolate affected systems and notify stakeholders.	Compliance Officer
R5	Key stakeholder resistance to system changes	Operational	5	7	35 (Medium)	Mitigation	Conduct stakeholder engagement meetings and training.	Provide additional training and assign internal champions to support adoption.	Change Manager
R6	Cybersecurity threats (DDoS, phishing) affecting uptime	External	6	8	48 (High)	Transfer	Deploy enhanced monitoring, disaster recovery plan.	Activate backup servers and engage cybersecurity firm if attacks persist.	IT Security

## 10. Expected Challenges

### 10.1 Managing the Team

- Coordination between technical & non-technical teams can lead to misalignment and delays.

- Remote & hybrid work may cause collaboration issues and time zone conflicts.
- Task dependencies & bottlenecks may slow down progress if teams wait on each other.
- Using Agile sprints & weekly stand-ups can help manage dependencies.
- Assigning a Project Coordinator can improve inter-team communication.

## 10.2 Relationship with Stakeholders

- Resistance to change from pharmacists & healthcare professionals may slow adoption.
- Conflicting priorities between IT teams (technical feasibility) and healthcare staff (usability).
- Stakeholders' availability for approvals can cause delays in the decision-making process.
- Regular stakeholder engagement meetings and early pilot testing can ensure smooth adoption.
- User feedback loops before finalizing designs can prevent rework.

## 10.3 Uncertainties & Risks

- System integration challenges with existing healthcare IT may cause unexpected issues.
- Compliance risks (HIPAA, GDPR) can force last-minute system modifications.
- Cybersecurity threats (DDoS, data breaches) may require additional security investments.
- Allocating time for extensive API testing and early compliance audits helps mitigate risks.
- Cybersecurity monitoring tools should be implemented from the beginning.

## 10.4 Possible Resource Constraints

- Shortage of skilled developers & IT staff can slow down development.
- Key stakeholder unavailability may delay approvals and feedback cycles.
- Infrastructure limitations (servers, data storage) may require additional investments.
- Cross-training team members can reduce dependency on specific people.

- Pre-defined approval deadlines for stakeholders can speed up decision-making.

## 10.5 Cost-Related Problems

- Unexpected infrastructure & security costs can cause budget overruns.
- Scope creep & additional feature requests can extend the timeline and increase costs.
- Delays in project completion lead to increased resource expenses.
- Strict scope management & approval processes can prevent unnecessary expansions.
- Setting aside a 10-15% contingency budget helps cover unforeseen expenses.
- Weekly budget tracking ensures cost overruns are detected early.