Project Management Plan for AFK Arena 2

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Abstract

This Project Management Plan (PMP) outlines the strategy for developing AFK Arena 2, a next-generation mobile RPG that integrates artificial intelligence, blockchain technology, and procedural content systems. It covers all critical aspects of project execution including scope, schedule, cost, quality, communication, risk, and human resources. The project adopts an Agile methodology to support iterative development and rapid market adaptation. With an 8.5-year timeline and a budget of $155.87 million USD, the project is financially viable with an NPV of $136 million, ROI of 132.79%, and a 2-year payback period. The plan also presents detailed management strategies, stakeholder roles, and milestone-based monitoring to ensure successful delivery and global launch.

Keywords: Project Management, Agile, AI Gaming, Blockchain, RPG, PMP, Mobile Game Development

Project Management Plan for AFK Arena 2

In today's mobile game industry, success depends not only on creativity and technology, but also on strong project management. AFK Arena 2 is a new idle RPG with AI and blockchain features. Managing such a game project requires careful planning, teamwork, and control over time and cost.

This paper presents a Project Management Plan (PMP) for AFK Arena 2. It includes the project goal, timeline, budget, team structure, and key management strategies. The plan is designed to support the project from beginning to launch.

The paper is divided into six parts. Section I introduces the project. Section II describes the team and roles. Section III explains the methods and subplans. Section IV lists the work to be done. Section V shows the schedule. Section VI covers the budget. The report ends with a conclusion.

Section I. Introduction

Project Description

AFK Arena 2 is a next-generation mobile fantasy role-playing game (RPG) sponsored by Lilith Games, aiming to expand its success in the AI-powered game market. The game integrates artificial intelligence (AI) for dynamic quest generation and combat systems, procedural world generation for long-term content expansion, and blockchain technology for a transparent player-driven economy. Major deliverables include an AI-powered combat system, procedural world environment, intelligent NPCs (Non-Player Characters) , and a blockchain-enabled marketplace. The project is led by project manager Yuxiang Huang, with sponsorship from Lilith Games and support from angel investors and global publishing partners.

High Level Schedule

The AFK Arena 2 project is scheduled to run from March 2025 to October 2033, encompassing a development cycle of approximately 8.5 years. Structured around iterative Agile development cycles and milestone-based reviews, the project is divided into five major phases designed to support adaptability and evolving goals. The initial phase, Planning and Pre-Development (2025), lays the foundation through requirement analysis, market research, and risk assessment. The second phase, Game Design and Prototyping (2026–2027), focuses on developing core gameplay systems, integrating AI-driven functionalities, enhancing UI/UX (User Interface/User Experience) design, and initiating blockchain economy implementation. This is followed by Full Development and Testing (2027–2030), which involves scaling the system architecture, optimizing AI behaviors, and conducting integration testing to ensure multi-platform stability. In the fourth phase, Optimization and Security Review (2031–2032), the emphasis shifts to performance evaluations, compliance checks with GDPR (General Data Protection Regulation) and CCPA (California Consumer Privacy Act) standards, and final preparations for live service rollout. The final phase, Launch and Post-Release Operations (2032–2033), involves the game's global release, implementation of ongoing content updates, and continuous player engagement strategies to sustain long-term user retention and market competitiveness.

High Level Budget

Based on the time-phased financial breakdown, the total project budget for AFK Arena 2 is estimated at $155,870,000 USD. The budget is divided into three major cost categories: labor, materials, and services. Labor costs account for approximately $105.5 million and encompass salaries and contributions for key project personnel, including game developers, AI engineers, backend engineers, quality assurance (QA) staff, and design specialists. These labor expenses

represent the most significant portion of the overall budget due to the resource-intensive nature of the development and testing phases. Materials costs are projected at $1.0 million. This category covers essential expenses such as software licenses required for development tools, server infrastructure, and specialized hardware needed to support AI training, multiplayer system hosting, and blockchain network deployment. Service-related costs are estimated at $49.3 million. These services include expenditures for external marketing campaigns, legal compliance consulting (particularly for GDPR and CCPA audits), and third-party QA and security review firms engaged to validate the system's performance and regulatory readiness prior to launch.

Project Need

The AFK Arena 2 project addresses a strategic opportunity to lead the next generation of mobile RPGs by integrating artificial intelligence, blockchain-enabled economies, and procedural content systems. Backed by an initial investment of $50 million, the project is financially justified with a projected Net Present Value (NPV) of $136,040,956, a Return on Investment (ROI) of 132.791%, and a Payback Period within the 2nd year. These metrics confirm the project's viability and long-term profitability. Beyond financial indicators, the project fulfills market demands for immersive, scalable, and intelligent mobile games that adapt dynamically to player behavior. As user expectations grow for AI-driven quest systems, intelligent NPCs, and secure decentralized economies, AFK Arena 2 positions itself as a high-impact solution for investors, developers, and players alike.

Discount Rate	10%
Initial Investment	$ 50,000,000

Year	0	1	2	3	4	5	6	7	8	9
Benefits	$ -	$ 40,000,000	$ 55,000,000	$ 70,000,000	$ 55,000,000	$ 45,000,000	$ 45,000,000	$ 45,000,000	$ 45,000,000	$ 45,000,000
Discounted Benefits	$ -	$ 36,363,636	$ 45,454,545	$ 52,592,036	$ 37,565,740	$ 27,941,460	$ 25,401,327	$ 23,092,115	$ 20,992,832	$ 19,084,393
Cumulative Discounted Benefits	$ -	$ 36,363,636	$ 81,818,182	$ 134,410,218	$ 171,975,958	$ 199,917,417	$ 225,318,744	$ 248,410,860	$ 269,403,692	$ 288,488,085
Costs	$ 50,000,000	$ 7,650,000	$ 9,775,000	$ 17,750,000	$ 12,105,000	$ 7,260,000	$ 2,825,000	$ 6,055,000	$ 10,490,000	$ 4,025,000
Discounted Costs	$ 50,000,000	$ 6,954,545	$ 8,078,512	$ 13,335,838	$ 8,267,878	$ 4,507,889	$ 1,594,639	$ 3,107,172	$ 4,893,662	$ 1,706,993
Cumulative Discounted Costs	$ 50,000,000	$ 56,954,545	$ 65,033,058	$ 78,368,896	$ 86,636,773	$ 91,144,662	$ 92,739,301	$ 95,846,474	$ 100,740,136	$ 102,447,129
Cash Flow (Benefit - Cost)	$ (50,000,000)	$ 32,350,000	$ 45,225,000	$ 52,250,000	$ 42,895,000	$ 37,740,000	$ 42,175,000	$ 38,945,000	$ 34,510,000	$ 40,975,000
Cash Flow (Discounted Benefits - Costs)	$ (50,000,000)	$ 29,409,091	$ 37,376,033	$ 39,256,198	$ 29,297,862	$ 23,433,571	$ 23,806,688	$ 19,984,943	$ 16,099,170	$ 17,377,400
Cumulative Discounted Benefits - Costs	$ (50,000,000)	$ (20,590,909)	$ 16,785,124	$ 56,041,322	$ 85,339,184	$ 108,772,755	$ 132,579,443	$ 152,564,386	$ 168,663,556	$ 186,040,956

NPV	$ 136,040,956
ROI	132.791%
Pay Back	2st Year

Figure 1 Business Case Analysis (NPV, ROI, Payback)

Section II. Organization

Part A. The organizational context

Lilith Games adopts a matrix organizational structure for AFK Arena 2, combining centralized project coordination with specialized departmental collaboration. Core departments include development, design, QA, marketing, and legal compliance, all reporting to the Project Manager. Each unit provides domain-specific expertise aligned with the game's AI and blockchain design goals. To support efficient project execution, Lilith Games applies a set of Organizational Process Assets (OPA) accumulated from previous RPG projects. These include reusable templates for WBS, standard AI integration guides, testing procedures, and milestone tracking tools. A lessons-learned database also helps teams avoid known risks and improve delivery speed. At the same time, several Enterprise Environmental Factors (EEF) influence this project. These include global privacy regulations such as GDPR and CCPA, blockchain compliance requirements, and industry trends showing a 10% annual growth in AI-powered RPGs. Additionally, recent restrictions from the FTC (Federal Trade Commission) on monetization models are shaping in-game design decisions.

Part B. The project management team organization

The organizational structure for AFK Arena 2 consists of five core departments operating under the leadership of the Project Manager. Each department is responsible for a distinct set of functions aligned with the project's technical and operational goals. The Design Team is responsible for developing gameplay systems, crafting the user interface, and delivering the visual and audio experience of the game. The Development Team focuses on building core technical systems, including AI behavior modules, multiplayer networking, blockchain

integration, and backend services. The Quality Assurance (QA) Team ensures feature stability through continuous functional testing, bug tracking, and user acceptance testing (UAT), playing a critical role in maintaining software quality standards. The Marketing Team leads efforts in user acquisition, community engagement, live operations strategy, and brand promotion to support the game's growth and player retention. Finally, the Security and Compliance Team oversees regulatory compliance efforts, data protection measures, and the integrity of blockchain-enabled systems to mitigate legal and operational risks. This structure allows each unit to focus on its area of expertise while maintaining cross-functional collaboration through sprint cycles and milestone reviews.

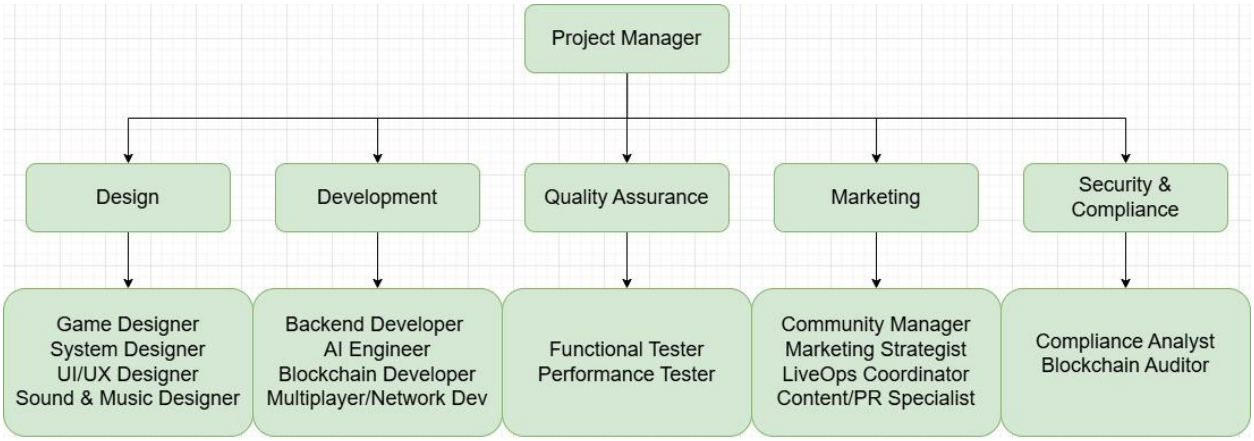


Figure 2 Organizational Chart

The Responsibility Assignment Matrix (RAM) clarifies the relationship between tasks and organizational units. It ensures that every major WBS (Work Breakdown Structure) item has one clear Responsible (R) party, while allowing other departments to participate as Performing (P) units. In this project, RAM was built based on the OBS (Organizational Breakdown Structure). Each department is mapped to specific WBS tasks depending on their functional area. For instance, The Development Team takes responsibility for system implementation, including AI and networking modules. The QA Team is responsible for user testing and system stability

checks. The Marketing Team handles community promotion and user engagement tasks. The Security & Compliance Team ensures legal and blockchain-related requirements are fulfilled. This matrix structure helps prevent role confusion and promotes accountability throughout the project lifecycle.

WBS ID/ OBS Units	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	3.6	4.1	4.2	4.3	5.1	5.2	5.3	5.4
Project Manager	RP															RP	RP		RP			
Design				RP	RP		RP	RP	RP													
Development				P	P	RP		P		RP	RP	RP	RP							RP		
Quality Assurance														RP	RP	P				P		
Marketing		RP																			RP	RP
Security & Compliance			RP			p												RP				

R = Responsible Organizational Unit *(only one "A" per task!)*
P = Performing Organizational Unit

Figure 3 Responsibility Assignment Matrix

Section III. Management Objectives & Technical Approach

Part A. Life Cycle Methodology & Phase Plan

The AFK Arena 2 project follows an Agile development methodology, structured around iterative sprints and milestone-based phases. This approach enables continuous feature improvement, rapid prototyping, and frequent testing cycles. Cross-functional teams collaborate throughout each sprint, enhancing output quality and communication. Agile development also allows the project to adapt to market feedback, changing technology, and internal review results. New gameplay features, AI behavior modules, and monetization strategies can be refined or removed between phases based on performance metrics.

The project is divided into five major phases. Each phase includes a set of core activities and a clear "kill point"—a decision checkpoint used to determine whether the project should

continue, pause, or pivot. These kill points help ensure that resources are only invested when progress meets quality, timeline, and performance expectations:

Phase 1: Planning & Pre-Production. This phase involves requirement analysis, market research, risk assessment, and early prototyping. The key milestone at the end of this phase is the approval of the Game Design Document (GDD) and a working prototype. If these deliverables do not meet internal expectations, the project may be revised before entering full development.

Phase 2: Alpha Development. In this stage, the team focuses on building core systems such as AI baseline behavior, blockchain foundations, and multiplayer architecture. The kill point here is passing internal stability tests. If the Alpha build fails to demonstrate basic functionality, the timeline and scope may be re-evaluated.

Phase 3: Beta Development & Testing. This phase includes full feature integration, user interface polish, performance optimization, and user acceptance testing (UAT). Closed Beta feedback and in-game performance data serve as critical inputs. The project team will assess whether the game is technically and strategically ready for soft launch.

Phase 4: Soft Launch & Optimization. The game is released to select markets, where real users generate performance metrics. Marketing teams monitor regional KPIs (Key Performance Indicators), such as retention rate and in-app purchase behavior. If key targets are not met, monetization systems or gameplay loops may be adjusted before global release.

Phase 5: Global Launch & Live Operations. This final phase includes the full-scale launch, server scaling, live event planning, and ongoing updates. The kill point is tied to sustained performance metrics, including daily active users (DAU), retention rate, and revenue per user. These metrics help determine whether the game enters long-term operational support or requires strategic adjustments.

Part B. Subplans

Scope Management Plan

Scope management for AFK Arena 2 follows an Agile framework, with iterative reviews conducted at each phase. The project scope includes AI-driven quest generation, procedural world generation, blockchain economy systems, and multiplayer functionality.

Scope definition is based on a detailed Project Scope Statement, a structured Work Breakdown Structure (WBS) and dictionary, and formal scope approvals by the project manager, design leads, and Lilith Games executives. Strategic investors provide additional sign-off at key milestone gates.

Scope control follows a documented change control process. Team leads submit all change requests, each undergoing impact analysis on cost, schedule, and quality before review by the Change Control Board (CCB). Approved changes are then updated in the scope baseline.

Scope verification occurs at each major gate, using testing reports such as User Acceptance Testing (UAT), performance evaluations, and AI accuracy assessments. Stakeholder reviews ensure functionality and compliance with standards like GDPR and CCPA. Final executive sign-off confirms alignment with business goals.

Progress is tracked through milestone reviews, WBS task completion, and scope variance analysis. Biweekly status updates are provided through project dashboards and internal meetings.

Requirement Management Plan

Requirement management for AFK Arena 2 follows a structured Agile-based approach. Requirements include functional goals such as combat mechanics and AI/NPC logic, non-functional needs like system performance and privacy compliance, and strategic expectations related to blockchain integration and monetization.

Requirements are collected through stakeholder meetings, design workshops, and market analysis, then documented in a centralized repository managed by the product owner. During sprint planning, these inputs are reviewed and updated collaboratively. Collected requirements are categorized by feature domains such as combat, social systems, and economy. Prioritization uses methods like MoSCoW (Must, Should, Could, Won't) and Kano Analysis, with participation from design leads, marketing teams, and key stakeholders to align priorities with project goals.

Tracking and changes are managed through a Requirements Traceability Matrix (RTM), ensuring each requirement links to corresponding design tasks, code modules, and test cases. Changes follow the scope change control process and require validation through design approvals and QA coverage checks.

Verification and validation occur through internal playtesting, User Acceptance Testing (UAT), and regulatory compliance checks against GDPR and CCPA. Final validation involves stakeholder walkthroughs, user feedback sessions, and investor reviews to confirm alignment with business needs.

Communication of requirements and updates is handled through Confluence pages, Jira tracking, and sprint demos to maintain transparency across all project departments.

Schedule Management Plan

The schedule for AFK Arena 2 is managed under a hybrid Agile approach that combines sprint-based development with milestone tracking across five phases: Planning, Alpha, Beta, Soft Launch, and Global Release. The project timeline spans from March 2025 to October 2033. This plan defines how activities are scheduled, tracked, and adjusted across design, development, QA,

marketing, and deployment. The Project Manager maintains the master schedule, while team leads handle sprint planning and reporting.

Activities are derived from the Work Breakdown Structure (WBS) and sequenced using dependency types such as Finish-to-Start, Start-to-Start, and Finish-to-Finish. Tasks are estimated with a three-point method and organized into two-week sprints. Network diagrams visualize dependencies and critical paths. Jira supports task management and sprint planning; Gantt charts track milestones; burndown charts monitor sprint progress; network diagrams assist in path analysis; and Earned Value Management (EVM) measures Schedule Variance (SV) and Schedule Performance Index (SPI). The schedule baseline is approved at project initiation, with built-in buffers of two to four weeks per phase. Fast tracking and crashing may be used if delays occur. Schedule control is triggered when SPI falls below 0.9. Affected tasks are re-estimated, re-sequenced, and updated after PMO (Project Management Office) approval. Progress is reviewed biweekly through sprint retrospectives and milestone meetings, with monthly reports summarizing SPI, task completion rates, and upcoming blockers. Major milestones include GDD Approval (Aug 2025), Alpha Build Completion (Dec 2027), Beta Closed Testing (Aug 2029), Soft Launch (Q2 2032), and Global Release (Oct 2033).

Cost Management Plan

The Cost Management Plan defines how project costs for AFK Arena 2 will be estimated, budgeted, and controlled to maintain financial feasibility while supporting strategic goals.

Cost estimation uses bottom-up techniques and expert judgment, referencing the Work Breakdown Structure (WBS), time-phased Gantt chart, and resource allocation sheets. Labor, materials, and service costs are detailed by year and role. The total budget is $155,870,000 USD, divided into $105.5 million for labor, $1.0 million for materials, and $49.3 million for services.

Costs are distributed across nine years, with peak spending during years two to four driven by system development and QA activities.

Cost performance is monitored through Earned Value Management (EVM), tracking metrics such as Cost Performance Index (CPI), Schedule Performance Index (SPI), and Estimate at Completion (EAC). Variance thresholds are set at ±10%, and deviations beyond this require corrective actions and PMO approval. Reviews occur at the end of each major phase.

The Business Case Analysis (BCA) confirms project viability, showing an NPV of $136,040,956, an ROI of 132.79%, and a payback period within the second year, based on a 10% discount rate and $50 million initial investment.

Quality Management Plan

The Quality Management Plan defines the processes and standards to ensure AFK Arena 2 meets quality objectives for both product functionality and development efficiency. The project aims to deliver a high-performance, user-friendly game with stable server responses under one second, a critical bug rate below 0.5% after User Acceptance Testing (UAT), and a 95% post-launch player satisfaction score.

Quality assurance (QA) is embedded across the development cycle. Each sprint includes test planning and risk reviews, with peer code reviews and automated linting during integration. The QA team conducts regression testing after updates, while AI combat logic and blockchain features are validated in sandbox environments. Quality control (QC) spans unit testing for backend and AI modules, integration testing for system and multiplayer features, UAT before deployment, and performance testing under load conditions.

Quality metrics include bug severity ratios, sprint test case pass rates, post-release defect leakage rates, and player issue turnaround times. Continuous improvement is supported by

maintaining a Lessons Learned database and conducting retrospectives after major phases. Defects and failures are tracked and analyzed to prevent recurrence and enhance future processes.

Human Resource Management Plan

The Human Resource Management Plan defines how project personnel for AFK Arena 2 are identified, assigned, and managed to ensure role alignment and project efficiency. The project adopts a matrix structure led by the Project Manager, coordinating five core departments: Design, Development, Quality Assurance (QA), Marketing, and Security & Compliance. Design covers gameplay, UI/UX, art, and audio. Development handles backend, AI, blockchain, and multiplayer systems. QA manages testing and compliance checks. Marketing leads branding and launch efforts, while Security & Compliance oversees regulatory adherence and data protection.

Roles and responsibilities are mapped in the Responsibility Assignment Matrix (RAM), linking each Work Breakdown Structure (WBS) task to a Responsible (R) or Performing (P) party. Key roles include the Project Manager, Design Leads, Developers, QA Engineers, Marketing Strategists, and Compliance Officers, each accountable for specific deliverables.

The staffing plan aligns with the project timeline. Core teams are staffed internally, while specialized roles such as localization testers and compliance auditors are contracted during later phases. Personnel needs are reviewed quarterly, and new hires follow a standardized onboarding process, including at least one cross-functional workshop.

Training covers project background, sprint workflows, code standards, bug tracking, blockchain protocols, and compliance regulations such as GDPR and CCPA. Monthly workshops and knowledge-sharing sessions support ongoing development. Performance is evaluated every two sprint cycles, focusing on task completion, quality, teamwork, and responsiveness to feedback, supported by demos, Jira data, and peer reviews.

Team communication is maintained via weekly meetings, biweekly sprint reviews, daily Slack coordination, and Confluence documentation. Conflicts are resolved within teams where possible, escalating to the Project Manager as needed. Outcomes are recorded through retrospectives.

The Staffing Plan (histogram) illustrates the distribution of team members by role from 2025 to 2033. Each color-coded segment represents a functional team (e.g., Game Designers, AI Engineers), and numeric labels show annual headcounts. Data is derived from labor costs and the Gantt chart, based on a $200,000 USD annual salary benchmark.

Figure 4 Staffing Plan (histogram)

The data reflects team composition changes across the project lifecycle. For example, Game Designers peak in 2026 and taper post-prototype, while QA ramps up during integration phases (2029–2031). DevOps appears in the final years (2032–2033) to support live operations. This structure ensures resource alignment with workload intensity.

Communication Management Plan

The Communication Management Plan defines how project information for AFK Arena 2 will be generated, delivered, tracked, and managed to support team alignment and stakeholder satisfaction. The objective is to provide accurate and timely information using appropriate methods. The plan promotes proactive reporting, two-way feedback, and clear escalation pathways.

Stakeholder needs vary by role. The Project Manager maintains a communication matrix outlining recipients, information types, delivery methods such as email or dashboards, and frequencies including daily, biweekly, or monthly updates. Communication methods are categorized as interactive (real-time meetings and calls), push (broadcast emails and reports), and pull (on-demand access via Confluence or Notion). The communication schedule includes daily stand-ups for development and QA teams, biweekly sprint planning and retrospectives, monthly status reports to sponsors, and milestone briefings at major phase completions. Performance reporting covers status updates, milestone reviews, risk and issue logs, and sprint burndown charts. All records are archived for transparency and reference. Critical issues must be reported to the Project Manager within 24 hours. If unresolved, they are escalated to sponsors or department heads, and all escalations are logged. The Project Manager ensures consistency, version control, and proper standards in all communications, with periodic reviews at milestone checkpoints to maintain alignment.

The table below presents the stakeholder communication requirements for the AFK Arena 2 project. It defines the information type, delivery format, update frequency, communication owner, and intended purpose for each stakeholder group. The matrix supports consistent reporting, clear responsibilities, and effective information flow across all project phases.

The table below outlines the stakeholder communication requirements for the AFK Arena 2 project, specifying the information type, format, frequency, owner, and purpose for each group. It ensures clear responsibilities, timely updates, and consistent information flow across project phases.

Stakeholder	Title/Subject	Communication Type	Frequency	Communication Producer	Purpose/Notes
Project Sponsor	Monthly Status Report	PDF + Dashboard	Monthly	Project Manager	Keep sponsors informed of progress and risks
Project Manager	Milestone Briefing / Escalation Log	Slide Deck + Notion	Per Milestone / Ad-hoc	Project Manager	Align stakeholders at each major phase
Dev Team	Sprint Planning & Retrospective	Jira Board + Review Notes	Biweekly	Scrum Master	Ensure alignment within sprint scope
QA Team	Daily Stand-up Summary	Slack Update	Daily	QA Lead	Daily task sync and blocker escalation
Marketing Team	Launch Campaign Updates	KPIs + Summary Report	Monthly	Marketing Lead	Track marketing KPIs and milestones
Compliance Officer	Compliance Audit Checklist	Excel + Comments	End of Each Phase	Compliance Lead	Demonstrate compliance with regulations

Figure 5 Stakeholder Communications Requirements

The plan combines synchronous and asynchronous methods: daily Slack updates keep the QA team aligned, while monthly dashboards inform sponsors of progress. Milestone briefings and compliance audits use formal formats like deck slides and checklists. Each communication item is owned by a designated role—ensuring accountability and traceability across all teams.

Risk Management Plan

AFK Arena 2 applies a structured approach to risk management, following PMBOK (Project Management Body of Knowledge) guidelines with emphasis on early identification, mitigation, and continuous monitoring. The project maintains a centralized risk register, reviewed monthly, and adopts a moderate risk tolerance by managing risks rather than avoiding them.

Risks are identified through expert brainstorming, retrospectives, and analysis of technical challenges, particularly in AI system training, blockchain integration, and regulatory compliance. The risk register documents six key risks. R1 (AI Model Training Delay) and R2 (Blockchain Compliance Changes) are high-impact risks with varying probabilities under Technology and Financial categories. R3 (Key Personnel Turnover) poses People-related risks.

R4 (Low Player Interest in AI Content) and R5 (Platform Development Misalignment) relate to Market and Structure/Process issues. R6 (GDPR/CCPA Compliance Failure) is a low-probability but high-impact regulatory risk.

#	Rank	Risk Name	Category	Trigger	Probability	Impact	Description
R1	1	AI Model Training Delay	Technology	Extended training time	High	High	Poor training data or underestimated complexity may delay model readiness. This can impact features that rely on AI-generated content.
R2	2	Blockchain Compliance Changes	Financial	New policy announcement	Medium	High	New regulations or platform restrictions may require redesign of blockchain systems, causing delays or blocking deployment.
R5	3	Key Personnel Turnover	People	Staff resignation	Medium	High	Losing key staff may disrupt AI or system development, causing handover issues and delays.
R3	4	Low Player Interest in AI Content	Market	Negative beta feedback	Medium	Medium	Negative beta feedback may show weak interest in AI quests, reducing retention and core value of the system.
R4	5	Platform Development Misalignment	Structure/Process	iOS/Android schedule mismatch	Medium	Medium	Differences in Android/iOS progress may cause release mismatch, affecting marketing and player experience.
R6	6	GDPR/CCPA Compliance Failure	Technology	Compliance audit failure	Low	High	Audit failure due to privacy flaws may block global launch and expose legal risks.

Figure 6 Risk Register

Qualitative analysis prioritizes R1, R2, and R3 as high priority; R4 and R5 as medium priority; and R6 as low priority.

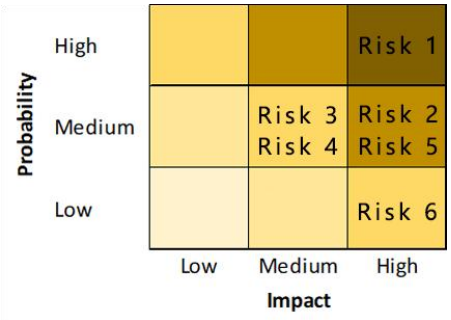


Figure 7 Probability / Impact Matrix

Response strategies include redesigning AI features to avoid regulatory conflict (R2), enhancing training datasets for mitigation (R1), outsourcing legal compliance for risk transfer (R6), accepting minor platform misalignments (R5), and contingency training for potential staff turnover (R3).

Risks are monitored monthly, with a designated risk officer updating the Project Manager and stakeholders on significant changes to support proactive management.

Procurement Management Plan

The AFK Arena 2 project requires selective procurement to support internal development efforts. Core components such as gameplay systems, AI model training, and blockchain infrastructure will be developed in-house by Lilith Games. However, specialized services including localization testing, blockchain compliance audits, security assessments, and promotional media production will be outsourced to leverage external expertise and improve cost efficiency.

Contract types will be chosen based on project needs. Fixed price contracts will apply to services with clearly defined deliverables, such as localization and media production. Time and Materials (T&M) contracts will be used for variable tasks like QA and security testing. Cost Plus Fixed Fee (CPFF) contracts are reserved for legal compliance reviews where scope may evolve.

Each procurement will be governed by a Statement of Work (SOW), detailing deliverables, performance standards, approval procedures, and payment terms. Vendor selection will follow a competitive process using RFQs (Request for Quotations) for standardized services and RFPs (Request for Proposals) for specialized work, with evaluation based on experience, methodology, pricing, and industry relevance.

Procurement activities are aligned with the overall schedule and reflected in the time-phased budget under "Services." Critical procurements such as localization and compliance audits are scheduled during the final development phases to ensure readiness for launch. Vendor contracts and performance will be reviewed quarterly to maintain alignment with project goals.

Stakeholder Management Plan

The AFK Arena 2 project involves a broad range of internal and external stakeholders, including the Lilith Executive Board, development and QA teams, localization vendors, platform

partners, compliance officers, and player communities. These stakeholders were identified during the initiation phase through stakeholder analysis based on organizational structure, project scope, and business objectives. Each stakeholder is evaluated by their level of influence over the project's outcomes and their interest in specific deliverables or risks. Stakeholders are categorized using a power-interest matrix, and their communication expectations and engagement sensitivity are further shaped by their organizational roles and project concerns. For example, internal roles such as developers and QA leads require constant feedback loops and sprint-level coordination, while external stakeholders like platform managers or compliance officers require milestone-based reporting aligned with submission windows or regulatory reviews.

The project team maintains a structured stakeholder register to support ongoing engagement and traceability. Each stakeholder entry includes their organization, point of contact role, internal/external classification, power and interest levels, as well as their primary project requirements and concerns. Engagement strategies are tailored accordingly—for instance, the Lilith Executive Board receives monthly reports with ROI tracking, while player communities are managed through live feedback and sentiment monitoring. More sensitive or adaptive strategies, such as how to respond to shifting stakeholder influence or resistance, are outlined separately in the confidential stakeholder engagement plan.

Stakeholder	Contact (Title)	Internal/External	Power	Interest	Project Requirements	Project Concerns
Lilith Executive Board	Executive Sponsor	Internal	High	High	Strategic alignment, ROI	Scope creep, missed ROI
Game Dev Team	Dev Lead	Internal	High	High	Timely implementation, code quality	Timeline slippage, feature rollback
QA & Testing Team	QA Manager	Internal	Medium	High	Bug tracking, performance stability	Regression bugs, retest delays
Localization Partners	Vendor PM	External	Low	Medium	On-time delivery, linguistic QA	Asset delays, unclear instructions
Platform Storefronts (e.g., Steam)	Account Manager	External	Medium	High	Store compliance, promo timing	Missing submission deadlines
Players & Community	Community Manager	External	Low	High	Engagement, feedback integration	Negative sentiment, unmet feedback
Compliance Department	Data Privacy Officer	Internal	Medium	High	Data compliance (GDPR, CCPA)	Unclear data handling policies
Live Operations Team	Live Ops Lead	Internal	Medium	High	Stable server uptime, hotfix response	Downtime, unresolved live issues

Figure 8 Stakeholder Register

The stakeholder register summarizes the primary entities involved in AFK Arena 2, their roles, power and interest levels, requirements, and concerns. It serves as the foundation for tailoring engagement strategies and ensuring transparent tracking of each stakeholder's impact throughout the project lifecycle.

Section IV. Work To Be Done

RTM

The Requirements Traceability Matrix (RTM) links high-level stakeholder requirements to specific WBS elements. It ensures that all defined requirements are addressed through project work, allowing for verification, validation, and scope control throughout the project lifecycle.

Each requirement is mapped to a WBS code and validated using appropriate acceptance criteria and verification methods such as AI combat testing, procedural content validation, and security audits. RTM also helps in identifying the responsible stakeholder and tracking status from initiation to approval.

Stakeholder	Description	Priority	WBS Code	Acceptance Criteria	Verification Method	Status
Software Dev Team	Implement adaptive AI-driven combat mechanics	Must-have	3.3	AI-driven enemy reactions must adapt to player skill level in real-time	Automated AI combat testing	Approved
Game Design Team	System must support dynamic terrain generation with 1000+ variables affecting landscape changes	Must-have	3.1	Fully functional procedural terrain adapting to player input	Procedural content generation test	Completed
QA Team	Multiplayer servers must support 2000+ concurrent users with latency below 50ms	Must-have	3.2	Stable multiplayer network with low latency	Load testing & stress testing	Testing
Design & Development Teams	Offer 100+ unique main and side quests with adaptive difficulty scaling	Should-have	2.1	At least 100 quests with difficulty dynamically adjusting to player level	QA functional testing	In Progress
IT Infrastructure Team	Ensure game servers maintain 99.9% uptime with automated failover handling	Must-have	3.4	Server uptime must reach 99.9%	System performance & load balancing test	Backlog
Security Team	Ensure full compliance with GDPR & CCPA regulations, encrypt user data at rest & in transit	Must-have	4.3	GDPR & CCPA compliance audits	Security audit & penetration testing	...
Finance Team	Enable secure blockchain transactions processing at 100,000 TPS with 1s confirmation	Should-have	2.3	Secure blockchain-based transaction system with transaction time <1s	Blockchain transaction validation test	...
Business Dev Team	Ensure 80% of revenue models are validated through market research	Could-have	1.2	Revenue projections validated through market tests	Market research analysis	...
Design Team	UI should achieve 95% user satisfaction in A/B tests	Should-have	2.4	95% of players report satisfaction with UI design	User feedback & A/B testing	...
Game Design Team	Provide full customization options with at least 50 skill variations	Should-have	2.5	Fully functional skill trees with 50+ options	Game balance testing	...
Audio Team	Deliver high-quality background music and immersive 3D spatial sound effects	Could-have	2.6	Game audio meets 3D spatial sound standards	Audio quality testing	...
Community Management Team	Support Twitch API integration for one-click live streaming	Could-have	5.4	Integrated Twitch API for seamless streaming	Integration & functionality testing	...

Figure 9 Requirements Traceability Matrix

Scope Baseline

Scope Statement

AFK Arena 2 is an AI-driven mobile RPG that integrates procedural world generation, adaptive combat, intelligent NPCs, and blockchain-based economies. Developed under Agile methodology, the project focuses on iterative delivery and rapid response to player feedback.

Key deliverables include game design documentation, a playable prototype, the final game release, QA reports, user manuals, and a marketing strategy.

The scope includes AI quest systems, procedural environments, multiplayer features, blockchain integration, mobile platform support (iOS/Android), and compliance with GDPR/CCPA. It excludes VR (Virtual Reality), console versions, and physical merchandise.

Assumptions include stable regulations, access to skilled talent, advancing AI/blockchain tech, and a capable player base. Constraints include a $50M budget, five-year timeline, and technical risks of large-scale integration.

Stakeholders include investors (targeting 30% ROI within 2 years), players (expecting immersive AI gameplay), and the dev team (requiring advanced tools and collaboration).

Scope approval involves internal and executive review. All deliverables must meet predefined technical, quality, and regulatory criteria.

Scope changes must be formally proposed, assessed for impact, and approved by project leadership before being integrated into the roadmap.

Work Breakdown Structure

The Work Breakdown Structure (WBS) for AFK Arena 2 is organized around five major phases that reflect Agile iterations and milestone checkpoints. Phase 1 focuses on planning and pre-development activities, including requirement gathering, market analysis, and risk

assessment. Phase 2 centers on game design and early prototyping across the first three sprints, covering AI systems, UI/UX development, blockchain integration, and core gameplay mechanics. Phase 3 addresses full system development and continuous testing from sprint 4 to sprint 9, emphasizing system implementation, multiplayer functionality, and integration testing. Phase 4 involves monitoring, feedback, and sprint adjustments during sprints 10 to 15, concentrating on performance optimization, budget tracking, and compliance reviews. Phase 5 covers deployment, live service initiation, and iterative updates starting from sprint 16, including launch activities, player engagement features, and community-driven enhancements.

This WBS structure supports project scheduling, cost estimation, risk control, and scope verification, providing a systematic framework for tracking project progress across development stages.

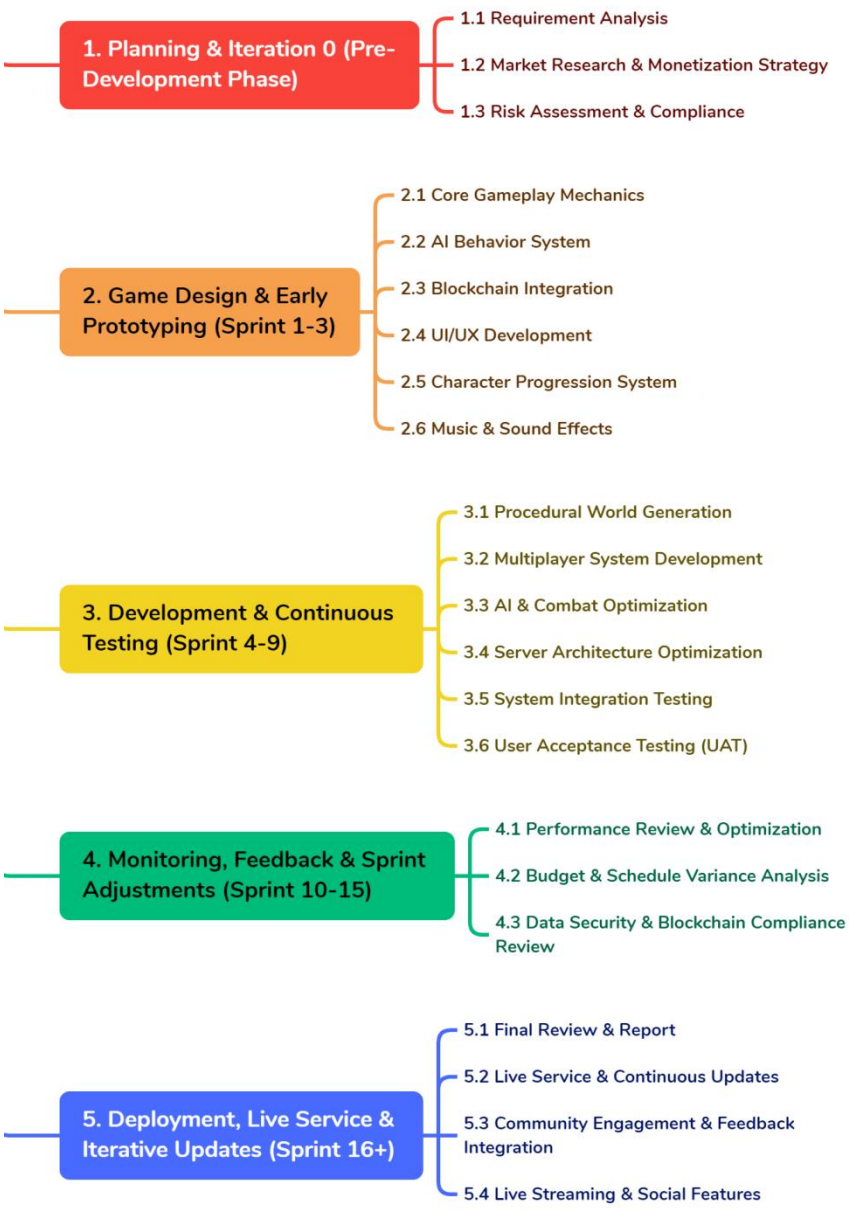


Figure 10 Work Breakdown Structure

Section V. Schedule

Network Diagram

The AFK Arena 2 project follows a phased schedule based on Agile iterations. The network diagram outlines the logical sequence of tasks, highlighting dependencies and the overall workflow. The project begins with requirement analysis (1.1), followed by market

research and risk assessment (1.2, 1.3). These feed into core gameplay design (2.1), which then branches into concurrent developments such as AI behavior (2.2), UI/UX (2.4), and blockchain integration (2.3). Tasks are interlinked through finish-to-start relationships, meaning one must be completed before the next begins. Critical paths—such as from AI behavior to combat optimization and system integration—are essential for maintaining the overall timeline. The diagram supports decision-making by visualizing project flow and identifying potential bottlenecks.

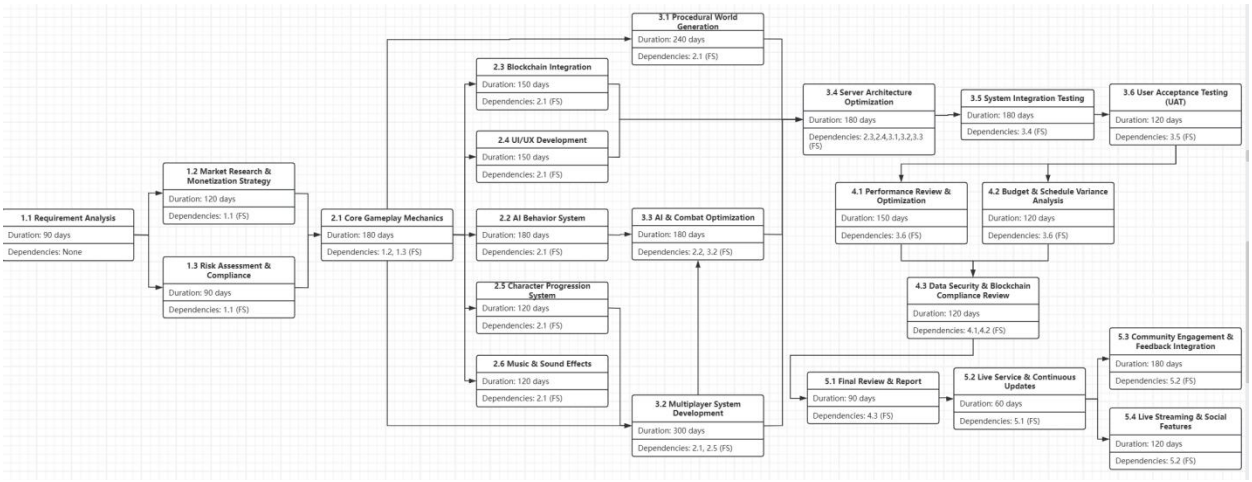
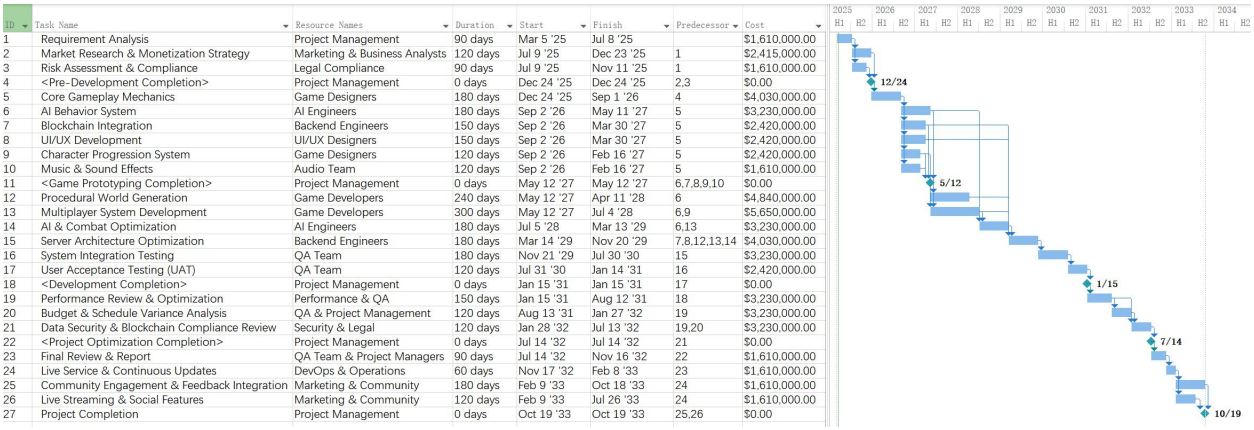


Figure 11 Network Diagram

Gantt Chart

The Gantt chart provides a time-based visualization of all project activities, showing task durations, start and end dates, resource assignments, and key milestones. For example, Phase 1 (planning tasks 1.1–1.3) spans March to December 2025. Game design and early prototyping (2.x tasks) occur between December 2025 and May 2027. Core development (3.x tasks) stretches through 2028–2030, followed by testing and optimization (4.x tasks) in 2031–2032. The final deployment and post-release activities (5.x tasks) are planned from late 2032 to project completion in October 2033. Milestones such as "<Pre-Development Completion>" or "<Game

Prototyping Completion>" help mark important transitions. The Gantt chart enables progress tracking and facilitates resource leveling across overlapping activities.



ID	Task Name	Resource Names	Duration	Start	Finish	Predecessor	Cost
1	Requirement Analysis	Project Management	90 days	Mar 5 '25	Jul 8 '25		$1,610,000.00
2	Market Research & Monetization Strategy	Marketing & Business Analysts	120 days	Jul 9 '25	Dec 23 '25	1	$2,415,000.00
3	Risk Assessment & Compliance	Legal Compliance	90 days	Jul 9 '25	Nov 11 '25	1	$1,610,000.00
4	<Pre-Development Completion>	Project Management	0 days	Dec 24 '25	Dec 24 '25	2,3	$0.00
5	Core Gameplay Mechanics	Game Designers	180 days	Dec 24 '25	Sep 1 '26	4	$4,030,000.00
6	AI Behavior System	AI Engineers	180 days	Sep 2 '26	May 11 '27	5	$3,230,000.00
7	Blockchain Integration	Backend Engineers	150 days	Sep 2 '26	Mar 30 '27	5	$2,420,000.00
8	UI/UX Development	UI/UX Designers	150 days	Sep 2 '26	Mar 30 '27	5	$2,420,000.00
9	Character Progression System	Game Designers	120 days	Sep 2 '26	Feb 16 '27	5	$2,420,000.00
10	Music & Sound Effects	Audio Team	120 days	Sep 2 '26	Feb 16 '27	5	$1,610,000.00
11	<Game Prototyping Completion>	Project Management	0 days	May 12 '27	May 12 '27	6,7,8,9,10	$0.00
12	Procedural World Generation	Game Developers	240 days	May 12 '27	Apr 11 '28	6	$4,840,000.00
13	Multiplayer System Development	Game Developers	300 days	May 12 '27	Jul 4 '28	6,9	$5,650,000.00
14	AI & Combat Optimization	AI Engineers	180 days	Jul 5 '28	Mar 13 '29	6,13	$3,230,000.00
15	Server Architecture Optimization	Backend Engineers	180 days	Mar 14 '29	Nov 20 '29	7,8,12,13,14	$4,030,000.00
16	System Integration Testing	QA Team	180 days	Nov 21 '29	Jul 30 '30	15	$3,230,000.00
17	User Acceptance Testing (UAT)	QA Team	120 days	Jul 31 '30	Jan 14 '31	16	$2,420,000.00
18	<Development Completion>	Project Management	0 days	Jan 15 '31	Jan 15 '31	17	$0.00
19	Performance Review & Optimization	Performance & QA	150 days	Jan 15 '31	Aug 12 '31	18	$3,230,000.00
20	Budget & Schedule Variance Analysis	QA & Project Management	120 days	Aug 13 '31	Jan 27 '32	19	$3,230,000.00
21	Data Security & Blockchain Compliance Review	Security & Legal	120 days	Jan 28 '32	Jul 13 '32	19,20	$3,230,000.00
22	<Project Optimization Completion>	Project Management	0 days	Jul 14 '32	Jul 14 '32	21	$0.00
23	Final Review & Report	QA Team & Project Managers	90 days	Jul 14 '32	Nov 16 '32	22	$1,610,000.00
24	Live Service & Continuous Updates	DevOps & Operations	60 days	Nov 17 '32	Feb 8 '33	23	$1,610,000.00
25	Community Engagement & Feedback Integration	Marketing & Community	180 days	Feb 9 '33	Oct 18 '33	24	$1,610,000.00
26	Live Streaming & Social Features	Marketing & Community	120 days	Feb 9 '33	Jul 26 '33	24	$1,610,000.00
27	Project Completion	Project Management	0 days	Oct 19 '33	Oct 19 '33	25,26	$0.00

Figure 12 Gantt Chart

Section VI. Cost

Time-Phased Budget

The total budget for AFK Arena 2 is $155,870,000 USD, distributed across nine years from 2025 to 2033 based on a time-phased model aligned with project milestones. Costs are categorized into labor, materials, and services.

Labor costs, totaling $105.5 million, dominate the budget, with peak spending during 2026–2030 for game development, AI, backend, and QA efforts. The Game Development Team represents the largest expense at over $20.98 million. QA staffing costs increase significantly between 2027 and 2031 to support intensive testing phases.

Materials account for $960,000, mainly spent in 2025 on project management software licenses and DevOps hardware infrastructure. Service costs reach $49.3 million, emerging heavily between 2030 and 2033 to support compliance auditing, security testing, and community operations. Major service components include $6.46 million for performance and QA, $4.84 million for security and legal, and $3.22 million each for QA support and marketing initiatives.

Budget distribution follows project stages. Early years (2025–2026) focus on planning and design with moderate spending. Core development years (2027–2030) drive peak expenditures, reaching $17.75 million in 2027. Final years (2031–2033) prioritize compliance, community building, and operations with approximately $10.5 million allocated.

Financial control relies on milestone-based reviews and performance tracking using Earned Value Management (EVM), ensuring accurate forecasting, ROI tracking, and responsive cost management throughout the project lifecycle.

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	total
Labor										
Game Designers	$2,015,000	$3,725,000	$1,210,000	$0	$0	$0	$0	$0	$0	$6,950,000
AI Engineers	$0	$1,615,000	$1,615,000	$1,615,000	$1,615,000	$0	$0	$0	$0	$6,460,000
Backend Engineers	$0	$1,210,000	$1,210,000	$0	$4,030,000	$0	$0	$0	$0	$6,450,000
UI/UX Designers	$0	$2,420,000	$2,420,000	$0	$0	$0	$0	$0	$0	$4,840,000
Audio Team	$0	$805,000	$805,000	$0	$0	$0	$0	$0	$0	$1,610,000
Game Developers	$0	$0	$10,490,000	$10,490,000	$0	$0	$0	$0	$0	$20,980,000
QA Team	$0	$0	$0	$0	$1,615,000	$2,825,000	$1,210,000	$0	$0	$5,650,000
Project Management	$1,127,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,127,000
DevOps & Operations	$0	$0	$0	$0	$0	$0	$0	$563,500	$563,500	$1,127,000
Materials										
Project Management (only SW Licenses)	$483,000	$0	$0	$0	$0	$0	$0	$0	$0	$483,000
DevOps & Operations (only HW Purchases)	$0	$0	$0	$0	$0	$0	$0	$241,500	$241,500	$483,000
Services										
Marketing & Business Analysts	$2,415,000	$0	$0	$0	$0	$0	$0	$0	$0	$2,415,000
Legal Compliance	$1,610,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,610,000
Performance & QA	$0	$0	$0	$0	$0	$0	$3,230,000	$3,230,000	$0	$6,460,000
Security & Legal	$0	$0	$0	$0	$0	$0	$0	$3,230,000	$0	$3,230,000
QA & Project Management	$0	$0	$0	$0	$0	$0	$1,615,000	$3,225,000	$0	$4,840,000
Marketing & Community	$0	$0	$0	$0	$0	$0	$0	$0	$3,220,000	$3,220,000
total	$7,650,000	$9,775,000	$17,750,000	$12,105,000	$7,260,000	$2,825,000	$6,055,000	$10,490,000	$4,025,000	$155,870,000

Figure 13 Time-Phased Budget

Conclusion

The AFK Arena 2 Project Management Plan presents a comprehensive roadmap for the successful execution of a large-scale mobile RPG project featuring AI-driven gameplay systems and blockchain integration. Beginning with an overview of the project's strategic importance and market positioning, the plan proceeds to outline the organizational structure, development lifecycle, scope, schedule, cost, quality, risk, and communication strategies necessary for the project's success.

Through detailed sections on resource management, risk mitigation, time-phased budgeting, and agile scheduling, this PMP ensures alignment between project objectives and

execution across all stages. Each section—from work breakdown to schedule control—contributes to delivering a stable, scalable, and engaging game product.

With an estimated budget of $155.87 million and an 8.5-year timeline, the project demonstrates strong financial viability as supported by a Net Present Value (NPV) of $136 million and a Return on Investment (ROI) of 132.79%, with break-even forecasted in the second year. The PMP also incorporates rigorous quality metrics, a structured communication plan, and stakeholder-oriented deliverables to support success.

In summary, this Project Management Plan provides a structured, risk-aware, and strategically aligned foundation to guide AFK Arena 2 from conceptualization to global launch.