

The background features a light gray line-art illustration of gym equipment, including a treadmill on the left and a dumbbell on the right. In the upper center, a laptop is depicted with an orange heart icon and a pulse line on its screen.

Gym & Sports OS — Request for Proposal (RFP)

A Comprehensive, Intelligent Platform for Managing Sports Facilities and Gym Complexes — Built on Modular, API-First Architecture with AI at its Core.

ENTERPRISE SAAS

B2B PLATFORM

AI-POWERED

Executive Summary & Vision

The **Gym & Sports OS** is envisioned as a next-generation organizational operating system purpose-built for sports facilities, fitness clubs, and multi-branch gym enterprises. This platform goes far beyond conventional gym management software — it is architected as a full-stack, enterprise-grade SaaS solution designed to unify every operational, financial, and member-facing process under a single, intelligent roof.

At its foundation, the system adopts an **API-First, Modular architecture**, allowing development teams to build, deploy, and scale individual modules independently without compromising system integrity. This design philosophy ensures that the platform can evolve incrementally — from a robust MVP to a fully AI-integrated, multi-branch SaaS powerhouse — without costly architectural rewrites.

The long-term strategic vision is to position Gym & Sports OS as the **de facto operating layer** for sports facility management across the region, with the potential to license the platform to third-party gym operators as a white-label B2B SaaS product. Artificial intelligence is not an afterthought here — it is embedded into the system's core, driving predictive analytics, churn prevention, and behavioral insights from day one of full deployment.

Strategic Objectives

- Unify all facility operations on a single intelligent platform
- Enable rapid scalability from single-branch to enterprise multi-branch
- Build a monetizable B2B SaaS product layer
- Embed AI and IoT capabilities as first-class features
- Deliver an exceptional, personalized member experience
- Establish an immutable, compliant audit and financial trail

Core System Modules Overview

Gym & Sports OS is structured around twelve specialized, independently deployable modules. Each module addresses a distinct operational domain, yet communicates seamlessly with all others through a unified API layer. The result is a cohesive, real-time operational intelligence platform.

 User & RBAC Management Multi-level role-based access control for CEOs, coaches, cafe staff, members, and guests.	 Auth & Security OTP login, QR codes, membership cards, facial recognition readiness, and immutable audit logs.
 Membership Management Time-based, session-based, and VIP packages with auto-calculated credits and renewal alerts.	 Access Control Real-time entry/exit tracking, attendance analytics, and biometric gate integration readiness.
 Dashboards & Panels Member health profiles, personal programs, digital wallets, and CEO-level financial dashboards.	 Services Marketplace Booking for coaches, massage, salon, cafe, lockers, and parking with integrated review system.
 HR & Payroll Shift scheduling, attendance, recruitment workflow, and automated salary, commission, and bonus calculations.	 Cafe, Salon & POS Inventory management, invoicing, waste tracking, and isolated accounting for service verticals.
 Financial System P&L reporting, coach commissions, receivables management, and multi-branch accounting consolidation.	 AI & IoT Engine Member churn prediction, behavioral analytics, smart assistant, smart locker and gate connectivity.
 Multi-Branch Management Independent and consolidated branch management with cross-branch member transfer capability.	 Mobile & API Layer API-first architecture ensuring seamless mobile app development and third-party integrations.

Module Deep Dive: Security, Access & Membership

The security and membership infrastructure forms the **trust backbone** of the entire platform. Every interaction — from a member's first login to a CEO reviewing financial reports — must pass through a secure, auditable, and permission-governed layer. This section details the technical depth required for the platform's identity, authentication, and membership subsystems.

Authentication & Security Architecture

The authentication system must support multiple credential types simultaneously. OTP-based login via SMS or email serves as the primary method for members, while QR code scanning and physical membership card NFC/barcode reading provide frictionless entry-point alternatives. The architecture must be designed to accommodate **facial recognition** as a future upgrade without requiring a fundamental rebuild of the auth layer.

All system actions — especially those involving financial data, access grants, or role modifications — must be recorded in an **immutable Audit Log** that cannot be edited or deleted by any system actor, including system administrators. This satisfies both internal governance needs and potential future regulatory compliance requirements.

Membership & RBAC System

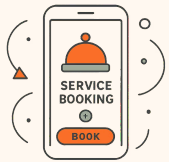
The Role-Based Access Control (RBAC) engine must support a minimum of six distinct system roles: CEO/Owner, Branch Manager, Coach, Service Staff (Cafe/Salon), Member, and Guest. Each role carries a distinct permission matrix that governs both UI access and API endpoint authorization. Permissions must be configurable at the role level and overridable at the individual user level.

The membership module must handle three core package archetypes: **time-based** (e.g., 1-month unlimited access), **session-based** (e.g., 20-session punch card), and **VIP/hybrid** packages with custom rules. The system must automatically calculate remaining credit, trigger renewal alerts at configurable thresholds, and freeze/unfreeze memberships as per business rules.

- ❏ Security and data compliance are non-negotiable requirements. All health and financial data must be encrypted at rest and in transit. Proposals must explicitly address the security architecture in their technical submission.

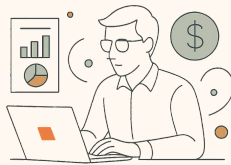
Module Deep Dive: Marketplace, Finance & HR

Three of the most operationally complex modules — the Services Marketplace, the Financial System, and the HR & Payroll engine — represent the highest business value components of the platform. Their correct implementation directly determines the platform's commercial viability and the ROI delivered to gym operators.



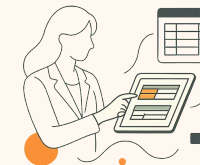
Services Marketplace

A fully integrated booking engine covering personal training sessions, massage therapy, salon services, cafe pre-orders, locker reservations, and parking slots. Each service vertical has independent pricing, availability calendars, and capacity management. Post-service review and rating functionality drives quality accountability. Revenue from each service is tracked independently and reconciled into the central financial system in real-time.



Financial System

A multi-entity accounting engine that handles revenue recognition, coach commission calculations (percentage-based and session-based), accounts receivable tracking, and multi-branch P&L consolidation. The system must generate daily, weekly, and monthly financial snapshots accessible to authorized stakeholders. All transactions must be traceable to their originating source event (membership sale, service booking, POS transaction, etc.).



HR & Payroll Automation

A comprehensive workforce management module covering shift scheduling with conflict detection, biometric or app-based attendance tracking, a structured recruitment pipeline, and fully automated payroll calculation. The payroll engine must handle base salary, session-based commission, performance bonuses, and deductions — generating payslips and accounting entries automatically at the end of each payroll cycle.

AI & IoT Integration: The Intelligence Layer

Why AI is a Core Requirement, Not a Feature

The decision to embed Artificial Intelligence into the platform's core — rather than bolting it on as a later enhancement — is a deliberate architectural and strategic choice. In an increasingly competitive fitness industry, the ability to **predict member behavior, prevent churn, and personalize the experience** at scale is what separates commoditized software from a true strategic asset.

The AI layer will be trained on the platform's own operational data: attendance patterns, purchase history, service utilization, and engagement frequency. This creates a **data flywheel** — the more members use the platform, the smarter the predictions become, creating a compounding competitive moat for gym operators using the system.

The IoT integration layer completes the loop between the digital platform and the physical facility. Smart lockers, biometric entry gates, and connected equipment sensors feed real-time data into the platform, enabling operational automation that was previously impossible without significant on-premise infrastructure investment.

Churn Prediction Engine

ML models that identify at-risk members 2–4 weeks before cancellation, triggering automated retention campaigns.

Behavioral Analytics

Deep analysis of member visit patterns, peak hours, service preferences, and engagement trends for operational optimization.

AI Smart Assistant

Conversational interface for members and staff to query schedules, book services, check balances, and get recommendations.

IoT Device Integration

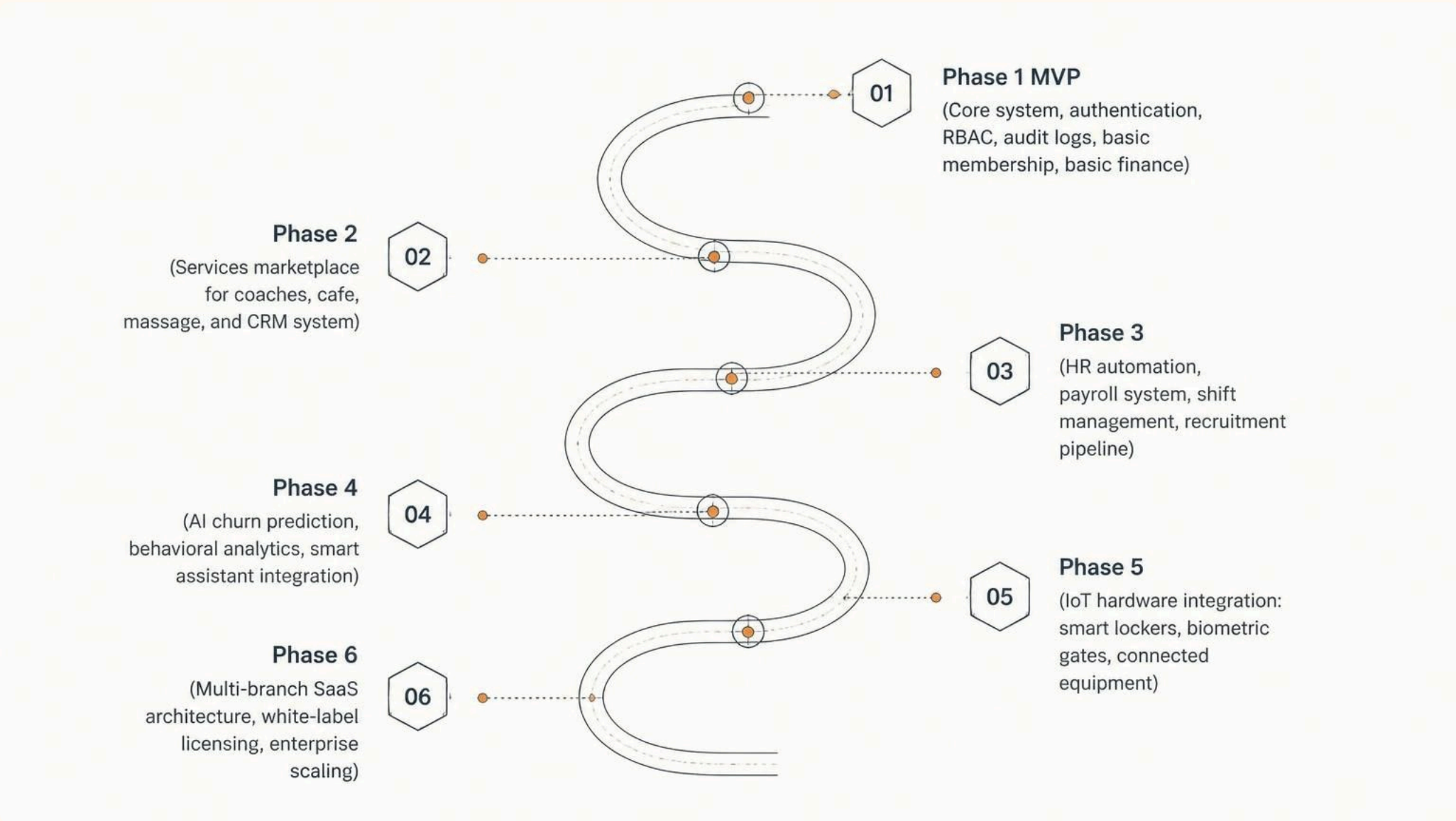
API-level connectivity with smart lockers, biometric gates, turnstiles, and fitness equipment sensors.

Automated Notifications

AI-triggered push, SMS, and email communications for renewals, promotions, and personalized health reminders.

Development Roadmap & Phase Plan

The development strategy is organized into six progressive phases, each building upon the previous to deliver increasing value with controlled risk. Phase 1 (MVP) is the **immediate priority** and the subject of this RFP. Proposals are required only for Phase 1, though teams are encouraged to demonstrate their strategic understanding of the full roadmap in their technical submissions.



Phase 1 Scope (MVP) — RFP Subject

- Core system architecture and database schema design
- Complete authentication system (OTP, QR, membership card)
- Full RBAC engine with configurable permission matrices
- Immutable audit logging infrastructure
- Membership package management (time/session/VIP)
- Basic access control and attendance tracking
- Foundational financial transaction recording and reporting
- Member-facing web panel (profile, wallet, attendance history)

Architecture Principles Across All Phases

- Every module exposes and consumes standardized REST/GraphQL APIs
- No hard coupling between modules — inter-module communication via event bus
- Horizontal scalability built into the infrastructure design from Phase 1
- Database schema versioning and migration management from day one
- Comprehensive API documentation (OpenAPI/Swagger) mandatory for every endpoint
- Test coverage requirements: minimum 80% unit test coverage for core modules

Technical Requirements for Development Teams

This section defines the non-negotiable technical standards and competency requirements for all teams and individual developers submitting proposals. Proposals that do not demonstrate clear capability across these dimensions will not be considered for evaluation. These requirements reflect the architectural ambition of the platform and the long-term codebase that must remain maintainable, extensible, and secure throughout its multi-year evolution.

1 Modular & API-First Architecture Mastery

Demonstrated experience designing systems where every feature is a first-class API consumer. The team must show prior work with modular monolith or microservices architecture patterns. The ability to design clean domain boundaries, define service contracts, and enforce separation of concerns is mandatory. Teams should specify their preferred technology stack and justify its suitability for a high-concurrency, multi-tenant SaaS environment. Backend frameworks evaluated include but are not limited to: Node.js (NestJS), Python (FastAPI/Django), Go, or Laravel for PHP teams.

2 Security & Data Protection Standards

The platform handles two categories of highly sensitive data: **personal health records** (fitness programs, biometric data, health profiles) and **financial records** (transactions, payroll, commission statements). All proposals must explicitly address encryption strategies (AES-256 at rest, TLS 1.3 in transit), authentication security (JWT with refresh token rotation, rate limiting on auth endpoints), and the technical implementation of the immutable audit log (append-only database pattern or blockchain-inspired ledger). OWASP Top 10 compliance is a baseline requirement.

3 Documentation & Code Quality Standards

The codebase produced under this contract must be maintainable by future development teams — including the teams that will build the mobile application and IoT integrations in later phases. This requires: comprehensive inline code documentation, OpenAPI 3.0 specification for all API endpoints, Entity-Relationship diagrams for all database schemas, Architecture Decision Records (ADRs) for all major technical choices, and a structured README with local development setup instructions. Code review processes and branching strategies (Git flow or trunk-based development) must be defined in the proposal.

Evaluation Criteria & Proposal Scoring

All submitted proposals will be evaluated by the project steering committee against a standardized scoring matrix. This framework ensures objective comparison across all dimensions of delivery capability. Teams are strongly encouraged to structure their proposal documents in alignment with these criteria to facilitate efficient evaluation.

Evaluation Dimension	Weight	Max Score
Technical Architecture Quality & Modularity Approach	25%	25 pts
Relevant Prior Experience & Portfolio Evidence	20%	20 pts
MVP Delivery Timeline Realism & Detail	20%	20 pts
Financial Proposal & Cost Breakdown Clarity	15%	15 pts
Security & Data Protection Approach	10%	10 pts
Documentation & Code Quality Standards	5%	5 pts
Strategic Understanding of Full Roadmap	5%	5 pts

Proposal Format

Technical approach document, team CV/portfolio, timeline (Gantt or sprint plan), and itemized financial estimate.

MVP Scope Only

Proposals must cover Phase 1 scope exclusively. Pricing and timelines for Phases 2–6 may be included as optional appendices.

Interview Stage

Shortlisted teams will be invited to a technical deep-dive session with the project steering committee before final selection.

Call for Proposals — Submit Your MVP Bid

We are seeking a technically exceptional development team that can transform this architectural vision into a production-grade, secure, and maintainable MVP — on time, within budget, and built to last.

Qualified development teams, software studios, and senior freelance developers are formally invited to submit their technical proposals for the **Phase 1 (MVP) implementation** of the Gym & Sports OS platform. This is a high-visibility, technically challenging engagement that offers significant long-term partnership potential as the platform scales through its six-phase roadmap.

What Your Proposal Must Include

- **Technical Architecture Document:** Proposed tech stack, system design, module boundaries, and database architecture overview
- **MVP Delivery Timeline:** Sprint-level or Gantt breakdown for Phase 1 scope with clear milestones and deliverables
- **Itemized Financial Estimate:** Detailed cost breakdown by module, phase, and resource type
- **Team Profile & Portfolio:** Relevant prior projects demonstrating SaaS, fintech, or health-tech platform experience
- **Security Architecture Summary:** Explicit description of data protection, encryption, and audit trail approach
- **Documentation Standards Commitment:** Description of code documentation, API spec, and handover processes

Proposal Submission Guidelines

01

Download & Review Full RFP

Review all technical requirements, scope boundaries, and evaluation criteria in detail before preparing your submission.

02

Prepare Your Technical Submission

Structure your proposal around the six evaluation dimensions. Attach portfolio evidence and team CVs as appendices.

03

Submit via Official Channel

Deliver your complete proposal package by the stated submission deadline. Late or incomplete submissions will not be evaluated.

04

Technical Interview (Shortlist)

Shortlisted candidates will be notified within 5 business days of the submission deadline for scheduling a technical review session.

📌 This RFP is exclusively for Phase 1 (MVP) scope. Teams demonstrating a clear strategic understanding of the full six-phase roadmap and the long-term SaaS vision will receive preferential consideration in the evaluation process.