

# **Technical overview of the project — Development of a comprehensive digital ecosystem**

## **1. Business context:**

We are a rapidly growing group operating several brands in the fields of fitness, wellness, high-end equipment, and technology services.

We are developing a comprehensive digital ecosystem consisting of several interconnected platforms to manage operations, customer experience, and business growth.

We are looking for a team capable of developing scalable, secure, and high-performance systems with a long-term vision.

## **2. Scope of the project**

The ecosystem comprises three main platforms:

- Gym management platform (web + mobile + internal tools)
- E-commerce platform (cosmetics and subscriptions)
- Technology equipment sales platform

All systems must be interconnected where necessary.

### **2.1. Platform 1 — Gym management system**

#### **2.1.a. Main features:**

- Customer account management
- Online and in-person registration
- Appointment booking

- Membership management
- Professional dashboard
- Administrator dashboard
- Payments
- Access control integration
- Video conferencing
- Content management
- Notifications
- Reports and statistics
- Body analyzer integration

### **2.1.b. Types of users**

② Client:

- Book appointments
- View training and nutrition plans
- Make payments
- Receive notifications
- Access educational content
- Track progress
- View body composition reports
- Professional application

② Coaches, Nutritionists, Therapists

- Confirm client attendance
- Track service hours
- Manage appointments
- Video conferencing

- Session tracking
- Administrator dashboard
- Complete system control
- Client and employee management
- Billing management
- Reports
- Video session monitoring

### **2.1.c. System configuration**

- Self-service kiosk integration
- Registration in less than 5 minutes
- Identity verification
- Package selection
- Document signing
- Payments and billing
- Stripe integration
- Recurring payments
- Invoice generation
- Automatic reminders
- Contract and waiver signing
- Access control
- Access via barcode or NFC
- Payment status validation
- Automatic blocking in case of non-payment
- Notification system
- Automatic reminders
- Motivational notifications
- Personalized messages
- Body analysis integration

- Device API connection
- Data history
- Health chart

### **2.1.d. Paid features**

- Video conferencing
- Integrated sessions
- Recording
- Secure storage
- Admin supervision

## **2.2. Platform 2 — E-commerce site**

### **2.2.a. Objective**

Create a high-end platform focused on customer conversion.

### **2.2.b. Features**

- Recurring subscriptions
- Automatic orders
- Influencer affiliate system
- Promotional codes
- International delivery
- Multilingual
- Multi-currency

### **2.2.c. Customer accounts**

- Abandoned cart recovery
- Integrations
- Payment gateway
- Email automation
- CRM
- Subscription management

## **2.3. Platform 3 — Sale of fitness equipment and technology**

### **2.3.a. Positioning**

Technology platform presenting advanced fitness equipment and body analysis technologies.

### **2.3.b. Features**

- Product catalog
- 3D visualization
- Interactive pages
- Financing integration
- Quotation system
- Sales representative tools
- Customer management
- Invoicing

### **2.3.c. Content**

- 3D scan integration
- Interactive media
- Technical documentation

## **3. Technical requirements**

### **3.1. Architecture**

- Scalable cloud architecture
- Modular design
- API-first approach
- Recommended microservices

### **3.2. Suggested technology stack**

#### **3.2.a. Backend**

- Node.js (NestJS)

#### **3.2.b. Web frontend**

- Next.js

### **3.2.c. Mobile application**

- React Native

### **3.2.d. Database**

- PostgreSQL

### **3.2.e. Real time**

- WebSockets

### **3.2.f. Cloud infrastructure**

- AWS

### **3.2.g. Storage**

- AWS S3

### **3.2.h. Authentication**

- OAuth2 / JWT / biometrics

### **3.2.i. Video**

- WebRTC

### **3.2.j. Payments**

- Stripe API

### **3.2.k. Notifications**

- AWS Amplify

### **3.2.l. Security**

- Data encryption
- Secure authentication
- Role management
- API protection
- Data protection compliance

### **3.2.m. Performance**

- High availability
- Low latency
- Scalability
- Query optimization
- CDN

### **3.2.n. Long-term requirements**

- Continuous deployment
- Modular updates
- Feature evolution
- Monitoring tools
- Analytics integration

## **4. Development approach**

- Phase 1 — Functional MVP
- Phase 2 — Advanced features
- Phase 3 — Optimization and scaling

### **4.1. Expected deliverables**

- Complete system architecture
- Backend development
- Frontend interfaces
- Mobile applications
- Dashboards
- API documentation
- Deployment pipeline
- Maintenance plan

### **4.2. Ultimate goal**

Create a comprehensive, scalable, and high-performance digital ecosystem to support the growth of a high-end technology and fitness company.