



4PILLARGLOBAL TECHNOLOGY PVT. LTD.

Solution Overview, Features, Scope Definition and Delivery Plan

Prepared for

EYE Publishing House

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1. Preface

This document presents a comprehensive overview of the proposed digital publication and learning platform for EYE Publishing House, combining the product vision with the defined functional scope and delivery approach for Phase 1.

At a strategic level, the document outlines the overall vision, key system areas, architectural direction, and anticipated business benefits of the platform. It is intended to establish a shared understanding among stakeholders regarding the direction, objectives, and long-term readiness of the solution, without delving into low-level technical implementation details.

At an execution level, the document defines the detailed functional scope, feature-level deliverables, and sprint-wise delivery plan for Phase 1. It clearly specifies what is included in the scope of work, how the platform will be delivered, and the sequence in which features will be implemented. This section serves as the primary reference for scope control, delivery planning, and acceptance alignment.

All features, workflows, and deliverables explicitly described in this document are considered in scope unless stated otherwise. Any functionality, enhancement, or requirement not mentioned herein shall be treated as out of scope and subject to a separate change request and approval process.

While references to technology, architecture, and platform capabilities are included, they are indicative and may evolve based on further analysis, stakeholder feedback, and project planning. This document does not finalize commercial terms beyond the defined scope, nor does it represent a commitment to specific implementation details outside what is explicitly stated.

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Overall, this document serves as both a foundational reference and an actionable delivery guide—bridging the high-level solution vision with clearly defined, measurable deliverables to support structured execution and informed decision-making in subsequent project phases.

2. Executive Summary

The EYE Publishing House Platform is envisioned as a secure, scalable, and future-ready digital learning and publication ecosystem designed to connect verified teachers with students through high-quality digital content such as Flip-Books, Online Assessments, and Value Added services to facilitate students and faculty in the form bulletin board services (BBS).

The platform is designed with a headless, API-first architecture, including expansion into mobile applications, third-party integrations, and advanced analytics, while maintaining strong standards for security, performance, and scalability.

3. Problem Statement

Traditional publication and digital learning platforms face several limitations, including:

- Weak control over digital content protection.
- Limited scalability for media-heavy workloads.
- Rigid role-based access models lacking flexibility.
- Poor discover-ability of educational content.
- Insufficient analytics to support business decisions.
- These challenges restrict growth, reduce trust, and limit the ability of publishing houses to adapt to evolving educational and commercial models.

4. Proposed Solution Overview

The proposed solution for EYE Publishing House is a modern, headless web and mobile platform that enables verified teachers and students to use/access educational content, while allowing students to securely access learning materials through subscriptions or one-time purchases.

The solution is designed to be modular, secure, and scalable, supporting long-term business growth without architectural rework.

5. User Types (Logical Classification)

The platform will support the following logical user types. Actual access rights are governed by the ACL system, not only by role labels alone.

- Platform Administrator.
- Publisher.
- Teachers.
- Students.
- Institutes (Bulk Licensing).
- Support / Operations User.

6. Features

Product features are divided into Functional and Non-Functional Requirements.

6.1. Functional Requirements

6.1.1. User Authentication & Access Management

- Users can register using email and password.
- Secure login and logout functionality.
- Password reset and account recovery.
- Session and token-based authentication.
- User profile view and update.

6.1.2. Teacher Registration & Verification

- Teachers can register through the web and mobile app interface.
- Teachers can create and maintain a detailed profile.
- Teachers must submit required verification documents.
- Teacher accounts remain in “Pending Verification” state until approved.
- Only verified teachers can access content and management features.
- Administrators can approve or reject verification requests.
- Verification status changes are logged for audit purposes.

6.1.3. Student Access & Entitlement

- Students can register and maintain their profiles.
- Students can browse publicly visible content.
- Access to full content is restricted based on entitlement.
- Students can access content through:
 - Active subscription.
 - One-time purchase.
- Entitlement checks are enforced at API level.

6.1.4. Flip-Books

- Books will be available in the form of Flip-Book.

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- Readers can read the book like Kindle style.
- Flip-Books can be paid or free.
- Paid books will have the preview option, that enables partial read
- Books can belong to one or more categories.

6.1.5. Flip-Book Versioning & Auto-Upgrade Access

The platform shall support multiple versions of the same Flip-Book under a single product identity.

- Each Flip-Book will maintain:
 - Version number (v1, v2, v3...).
 - Upload date.
 - Change notes (optional, admin facing).
- Single URL & Entitlement Rule:
 - Students who have purchased or subscribed to a Flip-Book will automatically gain access to the latest published version without requiring re-purchase.
 - The content URL remains unchanged across versions.
- Admin capabilities:
 - Upload new versions without breaking existing entitlements.
 - Mark a version as “Latest / Active”.
 - Roll back to a previous version if required.

6.1.6. Category Management

A robust category management at admin level, which provides:

- User friendly category add/edit/delete/list/search operations.

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- Assign one or more categories to a book.
- View assigned books to a category or vice-versa.

6.1.7. Book Management

Admin will be able to manage:

- Book price.
- Paid/Free status.
- Upload cover page.
- Upload partial preview.
- Manage other important attributes.
- Manage online links for buying hard copies.

6.1.8. Event Management

Events are considered as external events which may be any job openings, important exams, campus placement drives, seminars or any activities.

- Event Categories.
- Event Title, Description.
- Event Date/Time.
- Upload event banner image (Optional).
- Redirection link.
- Button/Link name.

6.1.9. Home Page

Home page will contains multiple user friendly and fully responsive UI sections, which are mentioned below but not limited to:

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- Common page header – contains logo, main navigation, and important links like account login/signup.
- Main navigation will provide quick access to category wise – like on university basis, education board basis – as well as other important links.
- Hero Banner – Fully dynamic from the admin panel.
- Banner will contain scheduled events, short description, link to detail page or link to external web page.
- Category section – Highlights the featured categories, available books under this category, add to cart option followed by purchase workflow.
- Featured Books – suggestions managed from admin panel settings.
- Testimonial section (optional, managed from back end).
- Common footer – contains all necessary links.

6.1.10. Other Pages

- About Us.
- Contact.
- Privacy Policy.
- Terms & Conditions.
- Cart.
- Checkout Flow.
- Wish list (Optional).
- Order history.

6.1.11. Bulk Licensing

The platform will support Bulk Licensing which enables :

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- Option to registration for institutes, organizations as well from backend admin panel too.
- Different Subscription plan (pricing) for bulk licensing.
- Institutes registered for bulk license, will be able to create multiple accounts according to their plan limit.
- We will also provide dedicated APIs for bulk license holders, so that they will have both options - use their dashboard or integrate our APIs in their system if exists.

6.1.12. Content Management

- Admin can upload Flip-Books (PDF / supported formats).
- Flip-books can be organized with metadata (title, category, description).
- Partial preview is supported (index + selected pages).
- Full content access is restricted to entitled users.
- Content updates follow version control rules.
- Flip-books can be unpublished or archived.

6.1.13. Online Assessments via Google Forms

- Teachers will be able to create and manage assessments by:
 - Adding a Google Form link.
 - Assigning the assessment to (optional):
 - A specific Flip-Book.
 - A category.
 - A class/group (logical mapping).
- Students will be able to:

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- View assigned assessments inside the platform.
- Access assessments securely via redirect to the Google Form.
- Access Control:
 - Only entitled students (subscription / purchase / bulk license) can view assessment links.
 - Assessment visibility respects ACL rules.
- Platform capabilities (Phase 1):
 - Store assessment metadata:
 - Title.
 - Description.
 - Linked content.
 - Teacher owner.
 - Google Form URL.
 - No form response storage or grading inside the platform.

6.1.14. Secure PPT Access for Students

Verified teachers can upload presentation files (PPT / PPTX / PDF).

- PPTs can be:
 - Linked to a Flip-Book
 - Assigned to a category or assessment
- Student Access:
 - PPTs are accessible only to entitled students.
 - Files are delivered via secure, non-downloadable viewer (where technically feasible).
 - No public sharing or direct file URLs.

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- Admin Controls:
 - Enable/disable PPT uploads via feature toggles.
 - Monitor PPT usage via analytics.
- PPT access follows:
 - ACL permissions.
 - Subscription / purchase entitlement.
 - Teacher ownership rules.

6.1.15. Search & Discovery (Advance Search)

- Full-text search across:
 - Flip-books.
 - Teacher profiles.
 - Filtered search by content type and category.
 - Search results respect access control rules.

6.1.16. Access Control & ACL System

- Permissions are defined in templates, containing logical layering.
- Permissions are synced to the database.
- Users are assigned explicit permissions at creation.
- Access checks are evaluated per request.
- No implicit access based solely on user type.

6.1.17. Payments Framework

- Support for subscription-based access.
- Support for one-time purchases.
- Support for bulk license purchases.
- Payment provider integration readiness.

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6.1.18. Data Encryption

- Secures data during transmission and storage.
- Protects all uploaded content.
- Supports organizational security and privacy requirements.

6.1.19. Admin dashboard

- Provides a centralized interface for all master data, transactional data and reports.
- Allows configuration of permissions, and settings.
- Simplifies day-to-day administration.

6.1.20. Usage analytics

- Tracks all necessary user activity.
- Helps understand platform adoption and usage patterns.
- Supports data-driven operational decisions.

6.1.21. Reporting & Analytics

- Admin-level dashboards.
- Reports on:
 - User registrations.
 - Content usage.
 - Teacher activity.
 - Student engagement.
- Exportable report formats (where applicable).

6.1.22. Audit Logs

- Records user and system activities for traceability.
- Supports security reviews and compliance needs.
- Enables investigation of issues or unusual behavior.

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6.1.23. Feature Toggles

- Allows administrators to enable or disable specific features.
- Supports organization-wide policy enforcement.
- Helps tailor the platform to business needs.

6.2. Non-Functional Requirements

6.2.1. Security & Compliance

6.2.1.1. Identity & Access Security

- Ensures only authorized users can access the platform and its features.
- Enforces strict permissions across the application and administration.
- Supports secure authentication mechanisms and session control.
- Prevents unauthorized access through policy-driven controls.

6.2.1.2. Data Protection & Encryption

- Protects data during transmission and while stored in the system.
- Applies encryption standards to media uploads, documents, and where-as applicable.
- Ensures sensitive information is not exposed or tampered.
- Supports secure storage and controlled data access.

6.2.1.3. Content Security

- Controls access to meetings through permissions (ACL).
- Prevents unauthorized content sharing.
- Ensures secure handling of shared screens, files, and messages.
- Maintains privacy for both internal and external participants.

6.2.1.4. Auditing, Compliance & Governance

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- Maintains detailed audit logs of user and system activities.
- Supports traceability for security reviews and investigations.
- Enables alignment with organizational and regulatory requirements.
- Provides configurable policies for data retention and compliance needs.

6.2.2. Quality & Performance

6.2.2.1. Network Adaptability

- Handles variable network bandwidth and latency conditions.
- Adjusts media streams dynamically to prevent disruptions.
- Supports smooth participation from low or unstable networks.
- Minimizes packet loss and connection drops.

6.2.2.2. System Performance & Responsiveness

- Ensures low latency for real-time interactions.
- Maintains fully responsive user actions.
- Scales performance as concurrent users increase.
- Prevents performance degradation under load.

6.2.2.3. Monitoring & Optimization

- Continuously monitors quality and performance metrics.
- Identifies issues affecting user experience.
- Supports proactive troubleshooting and optimization.
- Enables ongoing improvements through measurable insights.

6.2.3. Scalability & Infrastructure

6.2.3.1. Large traffic support

- Allows traffic with a large number of users.
- Maintains stable page speed as users increase.

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- Suitable for large scale systems.

6.2.3.2. Load balancing

- Distributes traffic across servers to optimize performance.
- Prevents overload during peak usage times.
- Improves reliability and system responsiveness.

6.2.3.3. Fault tolerance

- Handles network drops and service interruptions.
- Supports reconnection without losing request.
- Minimizes disruption during temporary failures.

6.2.3.4. Cloud deployment

- Deployed on scalable cloud infrastructure.
- Allows resources to scale up or down based on demand.
- Supports high availability and global access.

7. Scope Definition (Phase 1)

7.1. In-Scope

The following are included in Phase 1 of the project:

- Web and Mobile applications (Android & IOS).
- Headless back-end architecture (API-first).
- Teacher registration, profile management, and verification.
- Student registration and access management.
- Content management for Flip-Books.
- Partial Flip-Book preview functionality.
- Subscription-ready and one-time purchase-ready access model.

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- Advanced content search using OpenSearch.
- Secure content delivery.
- Administrative dashboards and reports.
- Fine-grained ACL-based access control.
- Cloud-ready deployment architecture.

7.2. Out-of-Scope (Explicit)

The following items are explicitly excluded from Phase 1:

Offline content downloads.

- AI-based content generation or grading.
- Any Third-party (LMS, ERP, or CRM) integrations.
- Content migration from legacy systems.
- Automated grading, In-platform quiz builder, Result analytics and scorecards (Online Assessments via Google Forms).
- Multi-tenant white-label deployments.
- Government or regulatory certifications.

These items may be considered for future phases.

8. Delivery Plan

8.1. Sprint 0 – Project Foundation & Architecture Setup

Objective: Establish technical, security, and delivery foundations.

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Key Deliverables :

- Finalized functional scope confirmation (Phase 1).
- High-level system architecture & component diagram.
- Headless API architecture setup.
- Environment setup (Development, Staging).
- Cloud infrastructure baseline (scalable & secure).
- Authentication strategy definition (JWT / token-based).
- Database schema (initial core entities).
- Logging, monitoring, and audit framework baseline.
- Coding standards & branching strategy.

Acceptance Criteria :

- Environments accessible.
- APIs deployable.
- Architecture approved.
- Sprint velocity baseline established.

8.2. Sprint 1 - User Authentication & Core Access Control

Objective: Enable secure access and identity management.

Features Delivered :

- User registration (email/password).
- Secure login & logout.
- Password reset & account recovery.

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- Session & token-based authentication.
- User profile view & update.
- Core ACL framework:
 - Permission templates.
 - Permission assignment at user creation.
 - API-level permission checks.
- Basic audit logs for authentication events.

Acceptance Criteria :

- Users can securely authenticate.
- ACL enforced at API level.
- Unauthorized access is blocked.

8.3. Sprint 2 - Teacher Registration & Verification Workflow

Objective: Enable controlled onboarding of content creators.

Features Delivered :

- Teacher registration flow.
- Teacher profile creation & management.
- Document upload for verification.
- Teacher account states:
 - Pending Verification.
 - Approved.
 - Rejected.
- Admin verification dashboard:

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- Approve / Reject teachers.
- Status change audit logs.
- Access restriction for unverified teachers.

Acceptance Criteria :

- Only verified teachers can access content.
- Verification actions are logged.
- Admins control on-boarding.

8.4. Sprint 3 - Student Access & Content Discovery

Objective: Enable learners to discover and preview content securely.

Features Delivered :

- Student registration & profile management.
- Public content listing.
- Partial Flip-Book preview (index + selected pages).
- Advanced search using OpenSearch:
 - Flip-Books.
 - Teachers.
- Filtered search (category, type).
- Search results respect ACL & entitlements.

Acceptance Criteria :

- Students can browse and preview content.
- Full content remains protected.

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- Search accuracy and performance validated.

8.5. Sprint 4 - Content Management & Secure Delivery

Objective: Enable content creation, protection, and controlled access.

Features Delivered :

- Flip-book upload (PDF & supported formats).
- Content metadata management.
- Versioning & update rules.
- Publish / unpublish / archive content.
- Secure document delivery.
- Video content upload & streaming readiness.
- Encryption for stored and transmitted content.
- Versioning & Update Rules.

Acceptance Criteria :

- Only entitled users access full content.
- Content updates follow version control.
- Secure delivery validated.

8.6. Sprint 5 - Payments Readiness & Entitlement Enforcement

Objective: Prepare monetization models with pricing logic.

Features Delivered :

- Subscription-based access framework.

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- One-time purchase access framework.
- Bulk license support (institutes).
- Entitlement engine:
 - Subscription validation.
 - Purchase validation.
- API-level entitlement enforcement.
- Payment provider integration readiness (placeholders).

Acceptance Criteria :

- Access granted only with valid entitlement.
- Multiple access models supported.
- No hard-coded pricing logic.

8.7. Sprint 6 - Admin Dashboard, Analytics & Reporting

Objective: Provide operational visibility and control.

Features Delivered :

- Admin dashboard:
 - User management.
 - Content oversight.
 - System configuration.
- Feature toggles (enable/disable features).
- Usage analytics:
 - User activity.
 - Content usage.

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- Reporting:
 - User registrations.
 - Teacher activity.
 - Student engagement.
- Exportable reports (where applicable).
- Full audit log visibility.

Acceptance Criteria :

- Admins can manage and monitor the platform.
- Analytics support decision-making.
- Audit & compliance needs met.

8.8. Phase 1 Completion Output

By the end of Sprint 6, EYE Publishing House will have:

- A secure, scalable, headless digital publishing platform.
- Verified teacher onboarding.
- Protected Flip-Book & video content delivery.
- Subscription & purchase-ready access.
- Advanced search & discovery.
- Full administrative control & analytics.
- Cloud-ready production deployment.