

Project Pitch: Bibliosphere

First Thoughts.

Growing up, I really loved books, and the thoughts of bookstores and libraries excited me. I fell in love with e-books even more, but I'd always loved the smell of books in a bookstore and the community that could discuss them. Many book lovers enjoy both physical books and digital ones. However, the market makes you choose between the two, forcing you to buy a physical copy or an eBook from different sellers (like a local bookstore or Amazon). This can be frustrating because if you start reading in a café, you can't easily continue with your device without buying a second copy. Independent bookstores struggle to compete with online retailers' fast service and large selections. Their strength lies in providing community-focused experiences, but they lack an easy way to sell digital content that complements their physical books. This limits their ability to attract customers and increase sales.

The primary issue is that physical and digital reading experiences are distinct, which hinders both readers and local bookstores. The core problem is the disconnect.

Bibliosphere is a platform that seamlessly merges the physical and digital book experience within the sanctuary of a local bookstore. It consists of two parts:

- **A Store System:** A tablet/terminal and QR code system installed in the bookstore.
- **A Reader App:** A companion mobile app for customers

A sample for the pitch I explored with the LLM: “Write a project pitch for a hybrid bookstore where customers use an app to scan QR codes on books to read the eBook for free while in the store, with the option to buy a digital or physical copy.”

Stakeholders

- **Primary Customers:** Readers of all ages who value both physical and digital books, including families, students, and book club members.
- **Bookstore Owners/Staff:** Key partners who will use the system to increase foot traffic, sales, and customer loyalty.
- **Publishers:** Entities that benefit from new sales channels and reader engagement data.
- **Community Groups:** Local book clubs and event organisers who use the space for activities.

Scope

In-Scope: Mobile app (QR scanner, in-app e-reader, Wi-Fi geofencing, in-app purchases), bookstore web dashboard (inventory, QR management, analytics), backend API.

- A mobile app with QR scanning, in-app eBook reading, and geofenced access (via Wi-Fi) for in-store borrowing.
- A web portal for bookstore inventory management, QR generation, and basic analytics.
- Backend services for user authentication, book metadata, session management, and payment processing.
- Deployment in one pilot bookstore with QR codes on 50-100 books.

Out-of-Scope: AR/Meta glasses integration, POS system integration, and advanced social features.

- **Augmented Reality (AR)/Meta Glasses Integration:** This is a high-complexity feature that requires specialised hardware and development. It is a future vision, not an MVA starting point.
- **"Phygital" Bundle Purchases at Register:** Integrating with Point-of-Sale (POS) systems is complex and varies by bookstore.
- **Advanced Social Features:** In-app book clubs, user reviews, and complex digital annotations.
- **A Custom e-Reader Ecosystem:** The MVA will use a simple, open-source reader component; building a best-in-class reader is a massive undertaking. Custom e-reader development beyond basic functionality.

Success Metrics

- **Adoption Rate:** >25% of daily visitors download the app.
- **Engagement Rate:** >60% of app users scan QR codes and borrow books.
- **Conversion Rate:** >15% of borrowers lead to a purchase (digital or physical).
- **Customer Satisfaction:** >4.5/5 app store rating with positive feedback.
- **Partner Retention:** Pilot bookstore renews after trial period.

Minimal Viable Artifact (MVA)

The MVA comprises three deliverables: (1) a mobile app with a QR scanner and a basic in-app e-reader, (2) a Wi-Fi-based geofencing system that unlocks full eBook access only within the bookstore, and (3) a web dashboard for the bookstore to manage its book inventory and view scan analytics. This configuration is intentionally modest to validate the core experience of in-store digital sampling while enabling future expansion.

Iterative Design Approach

The use of an Agile methodology with two-week sprints for development will proceed in cycles of planning, design, implementation, testing, and review. This approach combines elements of SDLC and requirement engineering through iterative cycles.

System Sketch

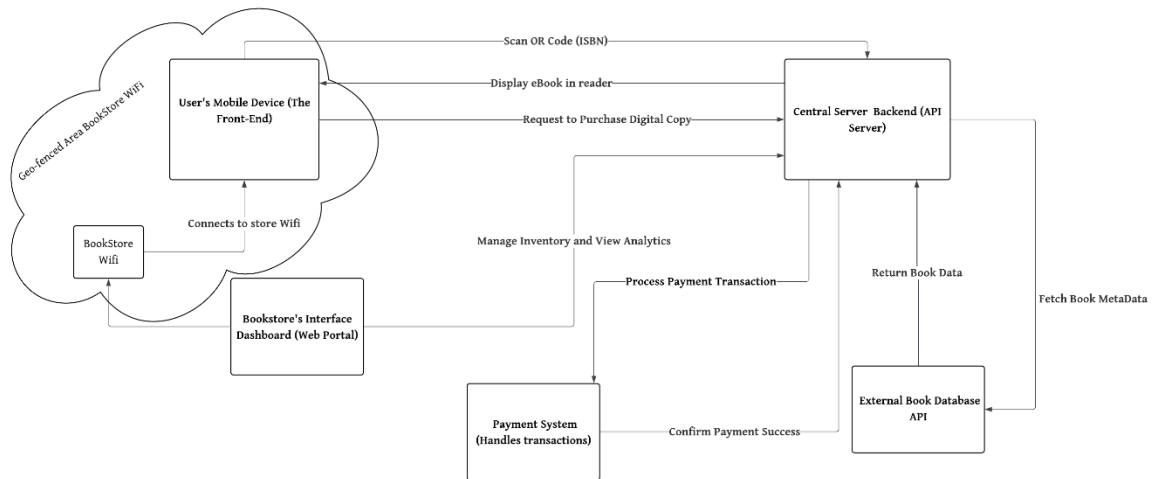


Figure 1: System Sketch

Evidence Base

1. *ABA Annual Report 2023*. (n.d.). The American Booksellers Association.
<https://www.bookweb.org/aba-annual-report-2023>
2. Micheal, D. (2025). Privacy-Preserving Geofencing Protocols for IoT Applications.
3. Orzaru, M., Constantinescu, M., & Apostol, A. (2022). *Understanding the consumer of books in the digital era*. <http://www.etimm.ase.ro/?p=873>

Risk Register

Risk	Impact	Likelihood	Mitigation
Unreliable WiFi-based Geofencing	High	Medium	Start with a simple "connect to WiFi SSID" trigger. Use a strong, store-wide network. Have a manual "Check-In" button in the app as a fallback.
Pilot Bookstore Partner Backs Out	High	Low	Have a backup partner identified. Build the dashboard to be self-service for easy onboarding. Clearly define a trial period with no long-term commitment.
App Adds Friction, Not Magic	Medium	High	This is critical. The UI must be incredibly simple and fast. Prioritize the speed of scan-to-book time. Use the iterative process to test and refine with real users in the store environment.
Low User Adoption	Medium	High	Promote the app in-store with signs; offer incentives (e.g., discounts).