

Buildo - Product Requirements Document (PRD)

Version: 1.0

Date: October 26, 2025

Owner: Product Management

Status: Draft for Review

1. Overview

Buildo is a location-based mobile application that transforms how people discover and engage with architectural heritage around them. By combining interactive maps with curated historical and architectural information, Buildo enables users to explore nearby landmarks, understand their cultural significance, and access rich visual content—all within a single, intuitive interface. The app addresses the fragmentation of architectural knowledge by bringing scattered information together into one accessible platform, making cultural heritage exploration engaging for both residents and visitors. In an era where people seek meaningful, place-based experiences, Buildo bridges the gap between physical spaces and their hidden stories, turning every neighborhood into a living museum.

2. Problem Statement

Cultural and architectural heritage information is currently fragmented across unreliable sources—Wikipedia articles, outdated tourism websites, scattered blog posts, and specialized books that most people don't access. Users face several pain points:

- **Discovery Gap:** People walk past historically significant buildings daily without knowing their stories or architectural importance
- **Information Fragmentation:** Reliable details about landmarks are scattered across multiple platforms, requiring extensive research
- **Lack of Context:** Tourism apps focus on major attractions, ignoring the rich architectural fabric of everyday neighborhoods
- **Unreliable Sources:** User-generated content platforms contain inconsistent quality and accuracy
- **Low Engagement:** Static tourist guides fail to create engaging, curiosity-driven exploration experiences

This creates a barrier to cultural literacy and prevents both tourists and locals from developing deeper connections with their built environment. There's currently no dedicated

tool that combines location awareness, curated architectural information, and engaging discovery mechanics in one seamless experience.

3. Goal & Success Metrics

Primary Goal

Launch an MVP that demonstrates product-market fit by enabling users to discover and learn about architectural landmarks through an intuitive, location-based experience.

Success Metrics (3-Month Post-Launch)

Engagement Metrics:

- **Buildings Viewed:** Average 8+ unique buildings viewed per active user per month
- **Session Duration:** Average 5+ minutes per session
- **Session Frequency:** 40% of users return within 7 days of first visit

Retention Metrics:

- **Day 7 Retention:** 25% of new users return within one week
- **Day 30 Retention:** 15% of new users remain active after one month

Discovery Metrics:

- **Map Exploration Radius:** Users explore buildings within a 2km+ radius of their starting location
- **Search Usage:** 30% of sessions include at least one search query

Content Engagement:

- **Read Depth:** 60% of users who open a building page scroll past 50% of content
- **Favorites Adoption:** 20% of active users save at least one building to favorites

Growth Indicators:

- **Organic Downloads:** 10,000+ downloads in first 3 months
 - **Rating:** Maintain 4.2+ star rating on app stores
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4. Target Users & Personas

User Segments

1. **Cultural Tourists** (Primary): Visitors exploring a new city seeking authentic, off-the-beaten-path experiences
2. **Curious Locals** (Primary): Residents interested in discovering hidden history in familiar neighborhoods
3. **Architecture Enthusiasts** (Secondary): Students, professionals, or hobbyists passionate about architectural styles and urban design
4. **Educators & Students** (Secondary): Teachers and learners using real-world examples for architectural or historical education

Personas

Persona 1: Maya, The Curious Tourist

- **Age:** 32
- **Location:** Visiting Istanbul for 5 days
- **Background:** Marketing professional who prefers cultural experiences over standard tourist attractions
- **Motivations:** Wants to explore neighborhoods authentically, discover hidden gems, and understand the stories behind buildings she encounters
- **Pain Points:** Guidebooks are generic; doesn't want to rely on expensive guided tours; wants flexibility to explore at her own pace
- **Primary Use Case:** Opens Buildo while wandering Karaköy, discovers a 19th-century warehouse converted to cultural center, reads its history, and adds several nearby buildings to explore next

Persona 2: Emre, The Local History Buff

- **Age:** 45
- **Location:** Lives in Istanbul's Kadıköy district
- **Background:** High school history teacher who walks his neighborhood daily
- **Motivations:** Wants to deepen knowledge of his own city, discover architectural details he's overlooked, and share interesting facts with students and family
- **Pain Points:** Information about neighborhood buildings is hard to find; Wikipedia lacks local context; walking past historically significant sites without knowing their importance
- **Primary Use Case:** Uses Buildo during weekend walks to identify Ottoman-era fountains and Art Nouveau apartment buildings, saving favorites to create a custom walking route for his class

5. User Stories

Core Discovery:

- As a **tourist**, I want to see nearby historical buildings on a map, so that I can discover interesting sites within walking distance without pre-planning my route

Information Access:

- As a **local resident**, I want to read detailed information about a building's history and architectural style, so that I can understand the significance of structures I pass daily

Personalization:

- As an **architecture enthusiast**, I want to save buildings to a favorites list, so that I can revisit their details later and plan future visits

Targeted Search:

- As a **cultural tourist**, I want to search for buildings by name or neighborhood, so that I can quickly find specific landmarks mentioned in articles or recommendations

Contextual Filtering:

- As a **history student**, I want to filter buildings by era or architectural style, so that I can focus my exploration on periods relevant to my studies

Return Engagement:

- As a **returning user**, I want to see which buildings I've already viewed, so that I can track my exploration progress and discover new sites systematically
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6. Feature Scope

In Scope (MVP)

Map & Discovery:

- Interactive map view with building pins showing landmark locations
- Automatic user location detection and centering
- Pin clustering at high zoom levels for visual clarity
- Tap-to-preview: quick info card on pin tap with building name and image thumbnail
- Distance indicator showing proximity from user's current location

Building Information Pages:

- High-quality hero image
- Building name, address, and year of construction
- Architectural style and period classification
- 200-500 word curated historical description
- Cultural significance and notable features
- Image gallery (3-8 additional photos)
- Map snippet showing exact location

Search & Filters:

- Text search by building name, architect name, or neighborhood
- Filter by architectural style (e.g., Ottoman, Art Nouveau, Modernist, Byzantine)
- Filter by era/period (e.g., Medieval, 19th Century, Contemporary)
- Filter by building type (e.g., religious, residential, commercial, civic)
- Clear active filters indicator

Favorites & History:

- Add/remove buildings from favorites with heart icon
- Dedicated Favorites tab showing saved buildings
- Auto-saved viewing history (last 50 buildings viewed)
- Quick access to recently viewed buildings

User Onboarding:

- Location permission request with clear value proposition
- Brief 3-screen onboarding explaining core features
- Skip option for returning or impatient users

Out of Scope (Future Versions)

- Augmented Reality (AR) navigation or on-device camera identification
 - User-generated content, reviews, or ratings
 - Ticketing or booking integration for museum sites
 - Guided audio tours or narrative walking routes
 - Social features (sharing, user profiles, check-ins)
 - Offline map downloads (beyond basic caching)
 - Integration with third-party tourism platforms
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7. User Flow

Primary User Journey: Discovery to Engagement

1. App Launch

- User opens Buildo app
- If first time: 3-screen onboarding with skip option
- Location permission prompt with rationale: "Find historical buildings near you"

2. Map Exploration

- App loads map centered on user's current location
- Building pins populate within viewable area (with loading indicator)
- User sees pin density and clusters at zoomed-out view

- User pans and zooms to explore different areas

3. Building Selection

- User taps on a building pin
- Quick preview card slides up from bottom showing:
 - Building thumbnail image
 - Name and architectural style
 - Distance from user
 - "View Details" button

4. Information Consumption

- User taps "View Details"
- Full building page loads showing:
 - Hero image at top
 - Name, year, and style
 - Full historical description
 - Image gallery (swipeable)
 - Location map snippet
 - "Add to Favorites" heart icon (top-right)

5. Engagement Actions

- User scrolls through content and views images
- User taps heart icon to save to Favorites
- User taps map snippet to return to map view at that location
- User uses back button to return to map

6. Return & Discovery

- User accesses Favorites tab to review saved buildings
- User applies filters to discover buildings by style or era
- User searches for specific building or neighborhood
- Cycle repeats with new discoveries

Alternative Flows

Search-First Flow:

- User taps search bar on map screen
- Types building name or neighborhood
- Views search results list with thumbnails
- Taps result to view building details
- Returns to map or continues searching

Filter-Based Exploration:

- User taps filter icon on map
- Selects architectural style or era

- Map updates to show only matching buildings
 - User explores filtered results
 - Clears filters to see full dataset
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8. Acceptance Criteria

Map Functionality

- Map loads within 2 seconds on standard 4G connection
- User location determined within 5 seconds with accuracy ≤ 50 meters
- Building pins load progressively as user pans (visible within 1 second of stopping)
- Pin clustering activates at zoom levels < 14 and accurately represents building count
- Tapping a pin triggers preview card within 300ms

Building Information

- Each building page displays all required fields (name, year, description, style, images)
- Description text is 200-500 words and factually accurate based on source data
- Hero image loads within 1 second; full page interactive within 2 seconds
- Image gallery supports swipe gestures with smooth transitions
- All external links (if included) open correctly in appropriate browser

Search & Filters

- Search returns results within 1 second of query submission
- Search matches partial strings in building names, architect names, and neighborhoods
- At least 3 style filters and 3 era filters available
- Filter application updates map within 1 second
- Active filters display clearly with count of filtered results shown

Favorites & History

- Tapping favorite icon immediately updates state with visual confirmation
- Favorites tab displays all saved buildings with thumbnail images
- Favorites persist across app sessions
- History automatically records viewed buildings
- History displays in reverse chronological order (most recent first)

Performance

- App launches to usable state within 3 seconds on mid-range devices (e.g., iPhone 13, Samsung Galaxy S21)
- Smooth scrolling (60fps) on building information pages

- No crashes or freezes during normal usage patterns over 30-minute sessions
- App remains responsive during background data syncing

Accessibility

- All interactive elements have minimum 44x44pt touch targets
 - Sufficient color contrast (WCAG AA minimum) for all text
 - Map zoom supports pinch gestures and accessibility zoom
 - Screen reader support for all critical UI elements
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9. Dependencies & Risks

External Dependencies

Mapping Infrastructure:

- **Dependency:** Google Maps SDK (iOS/Android) or Mapbox SDK
- **Mitigation:** Choose provider with reliable SLA; implement caching for previously viewed map tiles
- **Decision Point:** Mapbox offers more styling flexibility; Google Maps has broader user familiarity

Building Data Sources:

- **Dependency:** Cultural heritage databases, municipal open data portals, architectural archives
- **Mitigation:** Partner with 2-3 reliable sources per city; implement manual QA process for data accuracy
- **Decision Point:** Need to verify licensing terms for commercial use of heritage data

Content Creation:

- **Dependency:** Architectural historians, content writers, professional photographers
- **Mitigation:** Build relationships with local universities and cultural institutions; budget for freelance content creation
- **Risk:** Content creation is time-intensive; may limit initial city coverage

Backend Infrastructure:

- **Dependency:** Cloud hosting (AWS, Google Cloud) for API and database
- **Mitigation:** Start with managed services (Firebase, Supabase) to reduce DevOps complexity
- **Decision Point:** Must support geospatial queries efficiently

Key Risks

Risk: Data Accuracy & Liability

- **Description:** Incorrect historical information could damage credibility or create legal issues
- **Probability:** Medium
- **Impact:** High
- **Mitigation:** Implement multi-source verification; cite all sources; include disclaimers; establish content review process with subject matter experts

Risk: Limited Initial Coverage

- **Description:** Users may open app in cities without data, leading to poor first experience
- **Probability:** High (outside launch cities)
- **Impact:** High (retention killer)
- **Mitigation:** Clearly communicate available cities on app store page; implement geo-fence check that shows "coming soon" message outside coverage areas; prioritize 3-5 major tourist cities for launch

Risk: Location Permission Denial

- **Description:** Users denying location access breaks core discovery experience
- **Probability:** Medium (15-25% of users)
- **Impact:** High
- **Mitigation:** Implement manual city selection as fallback; allow address/zip code entry; clearly explain value of location access in permission prompt

Risk: Scalability of Manual Curation

- **Description:** Hand-curating building information doesn't scale to hundreds of cities
- **Probability:** High (long-term)
- **Impact:** Medium
- **Mitigation:** Phase 2 plan includes semi-automated content generation using AI with human review; establish partnerships with tourism boards who can contribute localized content

Risk: Map API Costs

- **Description:** Map API usage costs scale unpredictably with user growth
- **Probability:** Medium
- **Impact:** Medium
- **Mitigation:** Implement aggressive caching; optimize API calls; set monthly usage budgets with alerts; have backup provider negotiated

Risk: Competitive Landscape

- **Description:** Google Maps or tourism apps add similar architectural info features
- **Probability:** Low (12-18 month window)
- **Impact:** High

- **Mitigation:** Focus on superior content quality and curation; build engaged community early; develop unique features (architectural style filters) that commoditized platforms won't prioritize
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10. Analytics & Tracking Plan

Implementation Approach

- Use Amplitude or Mixpanel for event tracking
- Implement Firebase Analytics for basic mobile app analytics
- Set up custom dashboards for key metrics monitoring
- Weekly metric reviews; monthly deep-dive analyses

Critical Events to Track

Discovery & Engagement:

- **app_opened** - App launch with source attribution (organic, push notification, deep link)
- **map_loaded** - Successful map render with load time parameter
- **map_panned** - User manually pans map (track distance from origin)
- **map_zoomed** - User zooms in/out (track zoom level changes)
- **pin_tapped** - User taps building pin (include building_id, distance_from_user)
- **building_viewed** - Full building page opened (include building_id, architectural_style, era)
- **content_scrolled** - User scrolls on building page (track scroll_depth percentage)
- **image_gallery_opened** - User interacts with image gallery
- **image_viewed** - Specific images viewed in gallery

Search & Filtering:

- **search_initiated** - User taps search bar
- **search_query_submitted** - Search executed (include query_text, results_count)
- **search_result_clicked** - User selects search result (include result_position)
- **filter_applied** - Filter activated (include filter_type, filter_value)
- **filter_cleared** - User removes active filters

Favorites & Retention:

- **building_favorited** - Building added to favorites (include building_id)
- **building_unfavorited** - Building removed from favorites
- **favorites_tab_viewed** - User opens Favorites section
- **history_tab_viewed** - User accesses History section

Session Metrics:

- `session_duration` - Total time spent in app per session
- `buildings_per_session` - Count of unique buildings viewed
- `session_depth` - Number of screens/interactions per session

Key Metrics Dashboard

Daily Active Users (DAU) / Monthly Active Users (MAU):

- Track DAU/MAU ratio (target: >20% indicates strong habit formation)

Engagement Funnel:

- App Opens → Map Loads → Pin Taps → Building Views → Favorites Added
- Track conversion at each stage; identify drop-off points

Content Performance:

- Most viewed buildings (by `building_id`)
- Average scroll depth by `architectural_style`
- Image engagement rates
- Identify which content types drive highest engagement

Search & Discovery:

- Top search queries (identify user intent and content gaps)
- Filter usage patterns (which styles/eras are most popular)
- Geospatial heat map of exploration patterns

Retention Cohorts:

- D1, D7, D30 retention by acquisition channel
- Buildings viewed before churning (identify engagement threshold)
- Favorites correlation with retention (hypothesis: users with 3+ favorites have higher retention)

A/B Testing Framework

Planned Tests:

- Onboarding variations (3 screens vs. 1 screen vs. none)
 - Pin design and clustering thresholds
 - Building page layout variations
 - Default map zoom level
 - Filter UI placement (bottom sheet vs. sidebar)
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11. Non-Functional Requirements

Performance

Response Times:

- App cold start: <3 seconds to interactive state
- Map initial load: <2 seconds on 4G connection
- Building page load: <1.5 seconds
- Search query response: <1 second
- API response times: p95 <500ms, p99 <1000ms

Resource Usage:

- App size: <50MB initial download
- Memory footprint: <150MB during active use
- Battery impact: <5% drain per 30-minute session
- Network data: <2MB per 10-minute exploration session (excluding images)

Accessibility

WCAG 2.1 Level AA Compliance:

- Minimum contrast ratio 4.5:1 for standard text
- All interactive elements minimum 44x44pt touch target
- VoiceOver (iOS) and TalkBack (Android) full support
- Dynamic Type support for text scaling
- Alternative text for all images
- Keyboard navigation support (where applicable)
- Color not used as sole method of conveying information

Device Support

iOS:

- Minimum: iOS 15.0
- Target devices: iPhone 8 and newer
- Optimized for iPhone 13/14/15 series
- iPad support (scaled layout acceptable for MVP)

Android:

- Minimum: Android 8.0 (API level 26)
- Target devices: Released within last 4 years
- Responsive layout for varying screen sizes (5" to 6.7")

Security & Privacy

Data Protection:

- All API communication over HTTPS/TLS 1.3
- User location data encrypted at rest and in transit
- No personally identifiable information (PII) collected beyond anonymous device ID
- Compliance with GDPR and CCPA requirements
- Clear privacy policy accessible from settings

Permissions:

- Location: Request "While Using App" only
- Photos: Only if user uploads content (out of scope for MVP)
- Notifications: Optional, for future feature enablement

Offline Support

MVP Level (Basic):

- App remains functional without connection (doesn't crash)
- Previously viewed buildings cached for offline viewing
- Favorites list accessible offline
- Graceful degradation with clear "No connection" messaging

Future Enhancement:

- Selective map region downloads for offline use
- Ability to download building content packages by city

Localization

MVP Launch:

- English (primary language)
- Turkish (secondary, given initial Istanbul focus)

Localization Infrastructure:

- All strings externalized for translation
- Date/time formatting respects locale
- Right-to-left (RTL) layout support prepared for Arabic expansion

Future Languages:

- French, Spanish, German, Italian (prioritized by user demand)

Responsive Design

Orientation:

- Portrait mode (primary)

- Landscape mode (functional but not optimized for MVP)

Screen Sizes:

- Small phones (4.7" - 5.5")
- Standard phones (6.0" - 6.5")
- Large phones (6.6"+)
- Tablets (iPad-sized, scaled interface acceptable)

Platform-Specific Considerations

iOS:

- Follow Apple Human Interface Guidelines
- Dark mode support (system setting auto-detection)
- Haptic feedback for key interactions

Android:

- Follow Material Design 3 guidelines
 - Dark mode support (system setting auto-detection)
 - Back button navigation properly implemented
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12. Future Opportunities

Near-Term Enhancements (6-12 Months)

Guided Walking Tours:

- Curated routes connecting multiple buildings thematically (e.g., "Art Nouveau in Karaköy")
- Turn-by-turn navigation between points
- Estimated time and distance for each route
- Audio narration option (partnership opportunity with local historians)

Social Sharing:

- Share favorite buildings via standard mobile share sheet
- Generate attractive share cards with building image and key facts
- "My Architectural Journey" shareable map showing buildings explored

User Contributions:

- Allow users to submit photos of buildings (with moderation)
- "Suggest an Addition" feature for missing landmarks
- Community voting on building quality/interest

Enhanced Filters & Discovery:

- "Near Me Right Now" quick filter
- "Hidden Gems" category (lower foot traffic buildings)
- "Architect Spotlight" collections
- Time-based filters (e.g., "Open to Public Today")

Medium-Term Expansion (12-24 Months)

Augmented Reality (AR) Features:

- Point camera at building to identify it and overlay information
- "Then & Now" AR overlays showing historical building appearance
- Directional AR arrows guiding users to nearby points of interest
- Requires robust computer vision model and significant UX testing

Multi-Language Content:

- Expand to 10+ languages covering major tourism markets
- Partner with cultural institutions for accurate translations
- Language auto-detection based on device settings

Institutional Partnerships:

- Integration with museum ticketing systems
- Collaboration with universities for student-generated content
- Tourism board partnerships for official destination content
- UNESCO World Heritage Site official data integration

Gamification:

- Achievement badges for exploration milestones (e.g., "Visited 10 Ottoman buildings")
- City completion percentage
- Architectural style specialist badges
- Leaderboards (optional, privacy-respectful)

Long-Term Vision (24+ Months)

Architectural Time Travel:

- 3D reconstructions of buildings in different historical periods
- Interactive timelines showing building evolution
- Historical photo overlays on current street view

Expert-Led Experiences:

- Live virtual tours with architectural historians
- Video content series featuring local experts
- Q&A sessions with preservation specialists
- Premium subscription tier for exclusive content

Global Expansion:

- Scale to 100+ cities worldwide
- Region-specific architectural style taxonomies
- Partnership model allowing cities to sponsor their content
- Crowdsourced translation community

Advanced Personalization:

- ML-powered recommendations based on viewing history
- "People who liked this also explored..." suggestions
- Personalized discovery feed highlighting relevant new content
- Custom notifications for new buildings added in favorite areas

API & Platform:

- Public API for third-party integrations
 - White-label solution for cultural institutions
 - Educational partnerships with schools and universities
 - Integration with travel planning platforms (TripAdvisor, Google Travel)
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Appendix

Stakeholder Approval

Role	Name	Signature	Date
Product Management			
Engineering Lead			
Design Lead			
Content Strategy			

Revision History

Version	Date	Author	Changes
1.0	Oct 26, 2025	Product Team	Initial draft for review

Related Documents

- Technical Architecture Specification (TBD)

- Design System & UI Guidelines (TBD)
 - Content Style Guide (TBD)
 - Go-to-Market Strategy (TBD)
 - Data Partnership Agreements (TBD)
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Next Steps:

1. Design team to create wireframes and visual design system
2. Engineering team to provide technical feasibility assessment and timeline estimates
3. Content team to develop pilot content for 3 launch cities
4. Legal review of data licensing and privacy compliance
5. Stakeholder review meeting scheduled for [Date TBD]