**🔹 Phase 1 – MVP**

**📱 Mobile App**

**1. User Registration & Login**

Enable users to create secure accounts using email/password, with future support for social login (e.g., Google, Apple). Include email verification on sign-up and secure password reset. The user is required to log in to book Masses or access booking history.

* Email format and password complexity validation (min 8 characters, must include number or symbol).
* Verification link via SendGrid (or Amazon SES).
* Token-based session management stored securely in the device (using SecureStore).
* Graceful login failure handling with user feedback.

**2. Mass Search and Booking Engine**

Allows users to search for available Masses using multiple filters and book by submitting intentions. Results dynamically adjust based on user location or manually selected diocese/parish.

* Search filters: Date range, time of day, Mass type (e.g., Requiem, Thanksgiving), language, diocese/parish, and geolocation (default 50 km radius).
* Results include: Parish name, Mass time, priest availability, language, booking status, and donation amount.
* Supports single or bulk booking (multiple intentions in one flow).
* Enforces one intention per Mass slot (editable by admin).
* Booking requires login to track, receive confirmations, and manage requests.

**3. Mass Intention Form**

Users can submit intentions during booking, for themselves or others. Options include standard intention categories and custom messages (subject to review for appropriateness).

* Intention categories: Healing, Repose of Souls, Thanksgiving, Vocations, Special Intentions, Monthly Mass, Novena.
* Custom message: Optional text input with profanity filtering and review flag.
* Intentions stored with user account, linked to Mass ID and payment record.

**4. Stripe & PayPal Integration**

Handles secure payment for each Mass booking. Stripe is the primary gateway; PayPal provides alternative support. Users pay before booking is confirmed.

* Fixed, region-specific donation minimums (e.g., $10 US, ₹100 INR).
* Optional extra donation field (“Add More to Support the Church”).
* Payment completion triggers booking confirmation email and receipt.
* Payment failure cancels booking and notifies user with retry option.
* Receipts include Mass details, donor name, amount, parish, and transaction ID.

**5. Booking Confirmation and History**

Users receive confirmation instantly upon payment and can view current and past bookings within the app.

* Confirmation sent via email and shown in-app.
* Booking history includes Mass date, time, intention, payment status, and parish.
* Filter past bookings by date or status (e.g., Upcoming, Completed, Cancelled).

**6. Basic Email Notifications**

Automated system emails to confirm actions or remind users.

* Confirmation of Mass booking with full details.
* Reminder email 24 hours before Mass.
* Email customization per language and timezone.
* Email deliverability via SendGrid with retry and bounce tracking.

**7. User Profile Management**

Allow users to manage their account information and preferences.

* Update name, password, preferred language.
* View email address (non-editable in MVP; change via support).
* Future support for notification settings.

**🛠 Admin Portal**

**1. Parish Account Creation**

RGK Admin manually creates parish profiles with detailed information linked to dioceses. Accounts are inactive until verified and approved.

* Required fields: Parish name, diocese (validated), address (with geolocation), contact person (e.g., parish priest), email, phone, preferred language(s).
* Diocesan validation ensures no duplicate or rogue entries.
* MFA enforced for all admin accounts to secure access.

**2. Mass Availability Upload**

RGK Admin uploads a parish’s available Masses weekly via CSV. Each slot includes time, date, type, and status.

* Format supports timezone-aware entries, language, and Mass type.
* Validations prevent duplicates, overlaps, and errors (e.g., Good Friday block).
* Uploads can be per parish or bulk (10,000+ entries optimized with PostgreSQL indexing).
* Availability marked as Available, Booked, or Blocked.

**3. Mass Booking Dashboard**

Admin dashboard to view all bookings system-wide, filterable by parish, date, or Mass type.

* View booking details: User, intention, donation amount, Mass status.
* Export filtered results to CSV/Excel.
* Admin override option to reassign bookings (for urgent cases).

**4. Manual Refund Handling**

Admin can manually refund a booking via Stripe or PayPal dashboard and mark the status within the admin panel.

* Statuses: Refunded, In Progress, Completed.
* Reason field for audit trail.
* User receives email confirmation of refund.

**5. Finance Dashboard (Basic)**

Provides initial visibility into donations and booking volume across parishes.

* Filters: Date range, parish, Mass type.
* Totals: Amount collected, number of Masses, payment failures.
* Export to CSV for reconciliation.
* Forwarding status field: Paid, Pending, Forwarded.

**6. Email Template Management**

Admins can edit and localize standard email templates sent to users, priests, and parishes.

* Templates include dynamic placeholders (e.g., [User Name], [Mass Date]).
* Admin preview and test-send before publishing changes.
* Version control for templates.

**7. User Roles & Permissions**

RBAC (Role-Based Access Control) allows distinct access for RGK Admin, Diocese Admin, Parish Admin, and Staff.

* RGK Admin: Full access across all entities.
* Diocese Admin: Read-only/report access to parishes in their diocese.
* Parish Admin: Edit their own availability and view bookings.
* Staff: View-only access, e.g., front-desk operators.

**⚙️ API Services**

**1. User Authentication API**

Secure endpoints for login, signup, and token refresh with email verification flows.

* OAuth 2.0 support (Google, Apple in future).
* JWT-based session tokens.
* Password hashing with bcrypt.

**2. Mass Search & Booking APIs**

Endpoints to fetch available Masses, filter by parameters, and submit booking requests.

* Filters: location, time, language, type, parish.
* Booking endpoint with validation: limit per priest/day, no double-booking.
* Return error messages clearly for invalid selections.

**3. Stripe & PayPal Webhooks**

APIs to handle payment confirmation, failures, and refunds from payment providers.

* Validate transaction and update booking status.
* Retry mechanism for delayed webhooks.
* Audit logging and fraud detection (Stripe Radar rules).

**4. Mass Upload APIs (CSV/JSON)**

Allows uploading Mass availability via file or structured data.

* Endpoint validates each record before inserting.
* Duplicate prevention logic.
* Performance optimized for bulk uploads.

**5. Email Notification API**

Triggers transactional emails for booking confirmations, reminders, and cancellations.

* Works with SendGrid and supports template parameters.
* Logs sent/delivery/open status.

**6. Security APIs**

Role-based access middleware and encryption layers.

* Enforce route protection based on user role.
* Encrypt PII using AES-256.
* MFA endpoints for admin login.

**🔷 Phase 2 – Parish & Diocese Empowerment (Advanced Operations & Recurring Features)**

**📱 Mobile App**

**1. Recurring Mass Booking – 20 hrs**

Enable users to schedule Masses on a recurring basis — ideal for monthly anniversaries or ongoing intentions.

* Recurrence patterns: Weekly, Monthly, Annually.
* End conditions: After N times, or until specific date.
* Booking auto-populates future slots (visible in user history).
* User cannot cancel once booked, but can **pause/skip** future recurrences (see next feature).
* Tied to Stripe/PayPal subscription billing.

**2. Manage Recurring Bookings (Pause/Skip/Reschedule) – 10 hrs**

Allow users to manage existing recurring bookings through their dashboard.

* Actions: Pause (temporarily halt), Skip (omit next instance), Reschedule (choose another date).
* Rules: Changes must be made **minimum 1 month in advance**.
* System sends a **reminder 45 days before** each upcoming recurring Mass via email/push.

**3. Subscription Billing with Stripe – 15 hrs**

Connect recurring bookings with auto-renewing payments using Stripe Subscriptions.

* Automatically charges user on a schedule.
* Invoices stored in user account.
* Retry logic for failed payments with user notifications.
* Option to add voluntary donation amounts on top of base.

**4. Enhanced User Dashboard – 15 hrs**

Expand user dashboard to manage upcoming Masses, view subscriptions, and download invoices.

* Show active vs past recurring requests.
* Monthly donation summaries.
* Export options: PDF or email receipt archive.

**5. Localization (Multi-Language Support) – 20 hrs**

Introduce internationalization (i18n) with RTL support for languages like Arabic or Hebrew.

* Initial languages: English, Spanish, French, Portuguese, Italian, Mandarin.
* User can switch language in settings.
* UI adjusts for RTL formatting and local text direction.
* Localized intent categories and priest bios.

**🛠 Admin Portal**

**1. Parish Portal Login (Self-Service) – 25 hrs**

Enable parishes to log in and manage their bookings and Mass availability directly.

* Secure login via email/password, with role-based views.
* Multiple users per parish with roles (Admin, Staff).
* View booking list, confirm/cancel upcoming Masses.
* Track manual entries (e.g., phone bookings).

**2. Mass Availability Calendar UI – 20 hrs**

Allow parishes to manage Mass schedules using a visual calendar interface.

* Drag-and-drop or tap to add/edit Masses.
* Recurring Mass slot setup (e.g., Daily 7 AM Mass).
* Status: Available, Booked, Blocked.
* Inline validations to prevent overlaps.

**3. Manual Booking Entry (Phone Requests) – 10 hrs**

Let parishes manually enter bookings received by phone or walk-in.

* Basic form mimicking the app booking flow.
* Fields auto-fill from past data (e.g., returning donor).
* Visible in admin dashboard with flag “manual booking”.

**4. Forwarding Excess Masses (Diocese Admin) – 15 hrs**

Diocese Admins can view unfulfilled bookings and reassign them to available parishes or priests.

* “Mass Overflow Queue” lists pending or unbookable requests.
* Forwarding with comments and optional approval.
* RGK Admin oversight for international routing (e.g., to mission territories).
* Action is logged for transparency and future auditing.

**5. CRM Tools (Donor/Booking/Communication Log) – 20 hrs**

Introduce basic Customer Relationship Management features in the admin panel.

* Donor profiles: Name, email, past donations, intention types.
* Mass history tied to donor records.
* Communication log: Date, type (email/call), notes.

**6. Accounting Reports & Export Tools – 15 hrs**

Enhance financial transparency by allowing admins to generate finance reports per parish or diocese.

* Filters: Date, donation amount, parish, Mass type.
* Formats: CSV, Excel.
* Charts: Income trend over time.
* Use case: Diocese financial auditing, RGK monthly reporting.

**7. Diocese Admin Dashboard – 15 hrs**

Provide Diocese Admins with oversight tools to manage their region.

* Overview of all linked parishes.
* Parish activity: Bookings, active priests, income summary.
* Ability to approve/reject parish onboarding.
* Role-based access (view-only or with approval rights).

**⚙️ API Services**

**1. Recurring Booking Engine (Scheduling Logic) – 15 hrs**

Back-end support for creating and managing recurring Mass requests.

* Generate future Mass slots based on recurrence settings.
* Conflict resolution (e.g., skip holidays or unavailable dates).
* Associate each instance with user and payment ID.

**2. Subscription & Billing APIs (Stripe) – 15 hrs**

Endpoints to manage Stripe Subscriptions for recurring Mass payments.

* Create plan based on user-selected frequency.
* Manage billing cycle, retries, failed payments.
* Webhooks update booking statuses and user records.

**3. Parish Mass Management API (Availability Control) – 15 hrs**

Allow parishes to create, edit, and delete Mass availability through their portal or mobile.

* Secure access with parish-specific token.
* Conflict detection logic (time overlaps).
* Supports single or bulk creation with recurrence options.

**4. CRM APIs (Donor & Mass History) – 10 hrs**

APIs to expose CRM data to admin dashboards.

* Fetch donor record by email or ID.
* List past Masses per donor, with filters.
* Log interaction or admin notes (future extension).

**5. Localization & Translation APIs – 10 hrs**

Serve translated UI strings based on user language preference.

* i18n-ready API responses (error messages, field names).
* RTL-compatible flag for layout changes.
* Used by both mobile and portal interfaces.

**6. Role-based Access Control (Diocese/Parish/Staff) – 10 hrs**

Ensure API endpoints are accessible only to authorized roles.

* Middleware to enforce roles and scopes.
* RBAC mapping: who can view/edit what data.
* Future support for temporary permissions (e.g., auditors).

**🔶 Phase 3 – Advanced Integrations, Messaging, and Intelligence**

**📱 Mobile App**

**1. Push Notifications (Firebase) – 10 hrs**

Enable real-time push notifications to engage users and ensure reminders reach them even when the app is closed.

* Events triggered: Booking confirmations, Mass reminders (48 & 1 hour prior), subscription payment issues, Mass completion.
* Firebase integration with role-based segmentation (user vs admin).
* Respect user preferences and GDPR/CCPA opt-outs.

**2. Notification Preferences Panel – 10 hrs**

Allow users to manage their communication preferences for push, email, and SMS notifications.

* Options: Enable/disable notification types (e.g., “Remind me 1 hour before Mass”).
* Channel-specific settings (e.g., only email for confirmations).
* Stored in user profile, applied across delivery services.

**3. Donor Wall with Gamification – 15 hrs**

Recognize top donors in a visually appealing way, encouraging generosity through community acknowledgment and gamified tiers.

* Visibility Settings: Public, Parish-only, Anonymous.
* Tiers: Bronze, Silver, Gold, Platinum based on cumulative donation or frequency.
* Milestones: Digital badges (e.g., “100 Masses Sponsored”, “Supporter Since 2025”).
* Option to display in-app, on parish pages, or donor profile.

**4. Mass Service Feedback System – 10 hrs**

Collect user feedback after each Mass for quality tracking and donor satisfaction.

* Prompt sent 24 hours post-Mass via app & email.
* 5-star rating system with optional comments (moderated for abuse).
* Anonymous by default, with option to reveal name to parish/priest.
* Data used to generate “Parish Quality Score” (admin-only).

**5. Offline Mode with Sync Queue – 20 hrs**

Support low-connectivity regions (e.g., mission territories) by enabling offline Mass request submission.

* Actions like booking and intention entry are cached locally.
* On reconnect, queued actions are automatically synced.
* UI alerts users of pending syncs.
* Critical for global accessibility and missionary engagement.

**6. Personalization & Theme Settings – 15 hrs**

Enhance user experience through UI customization and preference storage.

* Themes: Light, Dark, Liturgical (purple for Lent, etc.).
* Save favorite parishes, preferred language, and default Mass type.
* Profile-based experience that persists across devices.

**🛠 Admin Portal**

**1. Third-Party CRM/Accounting Integrations – 25 hrs**

Integrate with tools like **Salesforce, QuickBooks, Xero** to streamline donor management and financial reporting.

* OAuth-based connection with secure token handling.
* Sync contacts, donations, and invoices periodically.
* Manual and automated sync triggers with status logs.

**2. Advanced Analytics Dashboard – 20 hrs**

Provide comprehensive insights into booking trends, donations, regional activity, and donor behavior.

* Visualizations: Heatmaps, line/bar charts, pie charts (e.g., Masses by type or location).
* Export as CSV or PDF for Diocese Admins.
* Predictive insights: Anticipate surges (e.g., All Souls' Day).
* Built using Power BI or Tableau integration.

**3. Mass Assignment Pool (RGK Admin Panel) – 15 hrs**

Allow RGK Admins to manually assign overflow or special intention Masses to a vetted pool of priests.

* Queue system for unfulfilled or delayed requests.
* Filters: Language, rite, availability, region.
* Assign button with confirmation and audit trail.
* Supports international forwarding to mission territories.

**4. Audit Trail & Transparency Tools – 10 hrs**

Track changes made by admins, Diocese Admins, or parish staff to ensure accountability.

* Logged actions: Availability changes, refunds, forwarding, deletions.
* Date/time/user recorded.
* Visible via admin panel and exportable.

**5. Legacy Donor Recognition – 10 hrs**

Showcase major contributors or endowment supporters in a special “Legacy Wall.”

* Designated section within Donor Wall.
* Optional story or memorial entry (e.g., “In memory of Fr. Joseph”).
* Parish or diocesan-level display.

**6. Parish Quality Score & Feedback Analytics – 10 hrs**

Generate internal quality rankings for parishes based on user feedback, completion rates, and activity.

* Weighted score (e.g., 60% user feedback, 30% Mass fulfillment, 10% manual intervention rate).
* Used for training or support outreach.
* Hidden from public users; visible to RGK/Diocese Admins.

**⚙️ API Services**

**1. SMS Integration (Twilio) – 10 hrs**

Send SMS for critical updates such as booking confirmation, Mass reminders, or payment issues.

* Configurable per user preferences.
* Language-aware and cost-efficient.
* Logs for delivery success/failure.

**2. WhatsApp Messaging APIs – 10 hrs**

Send WhatsApp notifications for high-engagement communications.

* Booking confirmations and Mass completion messages.
* Template-based messaging approved by WhatsApp Business.
* Delivered via Twilio or direct Meta integration.

**3. BI Tool Integration APIs (Power BI/Tableau) – 10 hrs**

Enable embedding or syncing of analytics data with business intelligence platforms.

* Export endpoints for bookings, donations, user activity.
* Secure tokenized access for Diocese Admin dashboards.
* Configurable refresh frequency.

**4. Manual Assignment & Overflow Routing APIs – 15 hrs**

Support manual and semi-automated request routing to vetted priest pools.

* Endpoint to fetch eligible priests by language/region.
* POST assignment with Mass ID and priest ID.
* Update Mass slot and notify assignee.

**5. AI-Powered Suggestions & Forecasting – 20 hrs**

Use machine learning to improve user and admin experience.

* Recommend parishes or time slots based on past user preferences.
* Predict peak booking periods and suggest alternatives.
* Optimize priest assignment suggestions.

**6. GDPR/CCPA Compliance APIs – 10 hrs**

Provide features for legal data access, anonymization, and deletion.

* Export user data request endpoint.
* Anonymize donor records in analytics.
* Right-to-be-forgotten support.

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