Volere Template

The Wedding Planning System

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Project Drivers

1. The Purpose of the Project

1a. The User Business or Background of the Project Effort

This project originates from the business domain of **wedding planning in Egypt**, where brides traditionally manage a wide range of preparation tasks leading up to the wedding day. A critical cultural element is the preparation of the **"Gehaz"**, which refers to a set of essential household and personal items that the bride must collect before marriage — a responsibility that adds significant pressure.

The main problem driving this project is that wedding planning is **stressful, time-consuming, and fragmented**. Brides must coordinate with multiple vendors, track guest lists, manage budgets, and organize their gehaz items using various unconnected tools such as WhatsApp chats, paper checklists, offline notes, or spreadsheets. This lack of a unified and systematic approach leads to confusion, missed deadlines, and communication issues.

Ayza Atgawez is a **web-based wedding planning hub** tailored specifically for **brides**. It centralizes and simplifies essential planning activities including:

- Booking and managing meetings with key wedding vendors (e.g., venues, makeup artists, caterers)
- Organizing gehaz items and tracking progress
- Maintaining guest lists and invitations, including RSVP monitoring
- Viewing personal reminders, timelines, and planning checklists

Vendors will also benefit by showcasing their services in a digital marketplace, managing availability calendars, receiving booking requests, and communicating efficiently with brides from a single platform.

By bringing these features into one place, the system **reduces stress**, supports better organization, and improves communication and decision-making during the lengthy preparation period.

1b. Goals of the Project

Goal Type	Purpose	Advantage	Measurement (Fit Criterion)
Service Efficiency	To simplify and centralize wedding planning tasks into one web platform.	Brides can efficiently organize vendor bookings, guest information, and gehaz progress in one place instead of multiple apps.	Reduce the average number of communication platforms used for planning from 5+ to **1–2**, measured via onboarding survey after 30 days of use.
Stress Reduction	To support brides in overcoming the stress and confusion typical of wedding preparations.	Smart reminders, dashboards, and checklists ensure brides stay informed and on track.	At least **80% satisfaction score** in a post-usage stress reduction survey conducted after 30 days.
Cultural Relevance	To tailor the platform to Egyptian wedding traditions by enabling gehaz planning.	Maintain accurate tracking of culturally significant tasks.	At least **70% of brides** actively engage with the Gehaz tracking feature during the first month.
Vendor Enablement	To offer a strong online presence and simplified booking operations for wedding vendors.	Increased visibility and better client communication.	Achieve a **minimum of 20% growth per month** in verified vendor registrations during the launch phase.
Process Improvement	To replace fragmented manual planning tools.	Reduced errors and duplicate communications.	Decrease manual tracking of gehaz items from categories "11–30" or "30+" to **10 or fewer**, based on monthly feedback surveys.

2. The Stakeholders

2a. The Client (Sponsor)

The sponsors of the project are the Founders of the Ayza Atgawez platform. They provide investment, product direction, and final approval.

Item	Description
Sponsor Identification	Judy Elsheikh, Mariam Ahmad, Rokaya Alsakka, and Nour Hossam
Responsibilities	Define business goals, approve features, validate alignment with Egyptian wedding market needs
Decision Authority	Final sign-off on requirements, budget, and feature roadmap
Limits of Authority	UI design decisions delegated to UX Lead; technical architecture decisions delegated to IT Lead
Contact Point for Requirement Changes	Lead Founder assigned as Product Owner

2b. The Customer

Core paying/adopting customers:

Customer Group	Status	Business Value
Brides (Primary)	Main buyers and target users	Rely on the platform to plan their wedding efficiently and reduce stress
Vendors	Monetized segment	Pay for visibility and booking services to attract customers

2c. Other Stakeholders

Stakeholder Role	Internal / External	Responsibilities & Interests	Required Input / Knowledge
Project Manager	Internal	Oversees project execution, schedule, scope	Feature priorities, release planning
Developers / IT Team	Internal	Implement, test, deploy the system	Technical feasibility inputs
DevOps / Infrastructure Engineer	Internal	Manages hosting, uptime, deployments	Uptime standards, backup & recovery strategies
Database Administrator	Internal	Data integrity, backups, recovery	Database schema, security protocols
Vendor Verification Team	Internal	Validate vendor identity & business docs	Document review guidelines
Customer Support Staff	Internal	Help users resolve platform issues	Access to logs, account records
Finance Manager	Internal	Track vendor payments & platform revenue	Payment data, booking summaries
Marketing Team	Internal	Drives user acquisition & vendor growth	Analytics and conversion insights
Investors (if any)	External	Return on investment	
Legal Advisor	External	Reviews vendor contracts, privacy & compliance	Local regulations, service agreements

Hosting / Infrastructure Provider (AWS or equivalent)	External	Provides servers, deployment environment	System resource needs, scalability plan

2d. Hands-On Users of the Product

User Category	Role	Subject Matter Experience	Technical Experience	Characteristics / Attitude	Priority Level
Bride	Primary wedding planner	Moderate (knows what she needs but overwhelmed)	Moderate–High (smartphone & social media user)	Needs simplicity, reassurance, reminders	**Priority 1**
Vendor	Service provider managing bookings	High industry knowledge	Low–Moderate	Needs visibility & efficiency	**Priority 1**
Guest	RSVP responder	Low	Low	Needs quick, no-login RSVP interface	**Priority 2**
Customer Support Staff	Troubleshooter	Moderate	High	Needs quick user data access	**Priority 2**
Vendor Verification Team	Profile Approvers	Moderate	Moderate	Needs clear approval interface	**Priority 2**

2e. Persona

Persona: "Rana the Bride"

- **Age:** 22–35
- **Location:** Egypt
- **Language:** Arabic (Primary), English (optional UI toggle)
- **Wedding Size:** ~200 guests
- **Digital Behavior:** Heavy smartphone user, relies on social media for browsing vendors
- **Pain Points:**
  - o Hard to track commitments across WhatsApp, notebooks, spreadsheets
  - o Fear of missing a vendor payment or deadline
  - o Gehaz shopping is exhausting and culturally pressured
- **Success Definition:**
  - o Everything in one place, clear progress indicators, reminders
- **Emotional Goal:**
  - o Feel in-control and confident, not anxious or behind

This persona will be used during usability testing and requirement validation.

2f. Priorities Assigned to Users

Priority Level	Users Included	Reasoning
1 — Critical	Brides, Vendors	They drive product usage and revenue
2 — Supporting	Guests, Customer Support, Vendor Verification Team	Indirect value; system depends on them but not primary

2g. User Participation

User Group	Required Participation	Estimated Involvement	Testing Method
Brides	Validate workflows (guest list, reminders, vendor booking)	High	Prototype testing, Surveys

| Vendors | Validate booking and profile flows | Medium | Interviews, Pilot program trials |
| Internal Stakeholders | Approvals, technical feedback | Continuous | Sprint review meetings |

2h. Maintenance Users and Service Technicians

Role	Responsibility	Related Requirements
Developers	Maintain and enhance features	Maintainability, modifiability
DevOps Engineer	Deployment, uptime, scaling	Performance & availability requirements
Database Administrator	Backups, recovery, data security	Integrity, disaster recovery
IT Security Analyst *(optional future role)*	Monitor vulnerabilities and compliance	Security requirements

Project Constraints

3. Mandated Constraints

3a. Solution Constraints

Constraint Description	Rationale	Fit Criterion
The product shall operate exclusively as a web-based platform accessible via modern browsers.	Defines the chosen foundational platform and removes ambiguity about native app development.	All core features must run smoothly on current desktop & mobile browsers (Chrome, Safari, Firefox) with progressive enhancement and responsive design validated via UI testing.
The product shall operate as a single, unified digital platform.	Prevents fragmentation and confusion caused by offline/manual tools and multiple apps.	All functional requirements (FR1.x, FR2.x...) must be executed solely through the Ayza Atgawez web interface.
The system must store and secure all planning and booking data in a centralized database.	Ensures integrity and confidentiality of personal and business data.	Passes database security validation including **OWASP Top-10 mitigations** and enforced **TLS/SSL** data encryption.
The system shall support two distinct authenticated roles (Bride/Couple and Vendor).	Needed for a two-sided marketplace with separate UX flows.	Registration, login, dashboards, and access permissions must function separately for both user roles and be tested via role-based access scenarios.

3b. Implementation Environment of the Current System

- Fully web-based operational environment
- Accessible from home and mobile contexts
- Secure internal access for Support + Vendor Verification teams

3c. Partner or Collaborative Applications

Application	Purpose	Interface Requirement
Email / Notification Service	Sends booking alerts, approvals, reminders	Automated email dispatch must trigger for booking state changes and scheduled reminders
Project Management Tools (Admin only)	Monitor tasks and development progress	Ability to export status reports for PM review

3d. Off-the-Shelf Software

- No mandatory commercial components for final delivery specified at this time

3e. Anticipated Workplace Environment

Constraint Description	Rationale	Fit Criterion
Mandatory Responsive & Accessible Design	Brides/Vendors frequently use smartphones while planning	Must meet accessibility best practices and responsive behavior checked on common mobile resolutions

3f. Schedule Constraints

- No external regulatory deadlines — timelines driven internally by Founders/Project Manager

3g. Budget Constraints

- Project must operate within internal funding limits — no paid enterprise integrations unless approved by Founders

3h. Enterprise, Legal & Cultural Constraints

Constraint Description	Rationale	Fit Criterion
Mandatory Vendor Verification	Maintains quality of listed services and prevents fraud	All Vendors must be **Approved** before appearing in search; verification must include **Gov. business license + portfolio** review
Data Privacy & Security Compliance	Sensitive guest and vendor data must be protected	Compliance with Egyptian data protection expectations and signed vendor agreements; security audit must show mitigation of major risks (per OWASP Top-10)
Legal Business Compliance	Ensures lawful operation of vendors and platform	Vendor profiles must submit required legal documentation for business legitimacy in Egypt
Cultural Content Standards	Wedding industry audience may include conservative users	No offensive themes; images displayed must follow Egyptian cultural norms and be reviewed during design QA
Consistent Branding	Maintain a unified market identity	"Ayza Atgawez" must appear in UI, documentation, and marketing assets

4. Naming Conventions and Terminology (Glossary)

Purpose:
To establish consistent terminology across all documentation and communication, reducing ambiguity and ensuring shared understanding between stakeholders.

This glossary includes system-related terms, business domain vocabulary, and abbreviations.
Arabic terminology is included in parentheses where commonly used.

Term	Definition	Context/Source
Ayza Atgawez	Official name of the Wedding Planning System website/platform.	System Vision Document
Bride / Couple	The primary end-user responsible for planning and managing the wedding.	Stakeholder ID
Groom	Secondary user who may assist the Bride in planning or approving selections.	Stakeholder ID
Vendor (Moward مورد)	A service/provider such as Venue, Photographer, Caterer, DJ, etc.	Functional Requirements
Vendor Verification Team	Internal staff responsible for reviewing and approving vendor registrations.	Business Rules
Admin Panel	Internal dashboard for managing vendors, analytics, and user support.	System Architecture
Gehaz Item (جهاز)	Personal household item purchased for the wedding e.g., towels, sheets.	Bride Checklist Feature
Gehaz Checklist	Tool used by the Bride to monitor item acquisition progress before marriage.	Functional Requirements
Guest	Invited attendee whose RSVP must be tracked.	Guest List Module
Guest List Manager	Feature enabling adding, deleting, and tracking guest RSVP status.	Functional Requirements
RSVP	Confirmation of attendance: *Attending / Not Attending / Pending*.	Data Model
Wedding Budget Planner	Tool used by the Bride to define and track overall wedding spending.	Functional Requirements
Booking Request	A reservation request sent to a Vendor for a specific service/date.	Booking Workflow
Pending Verification	Vendor status during review before approval.	Activity Diagrams
Booking Expiration Timer	System mechanism that automatically cancels inactive booking requests after a set time.	Business Rules
Activity Summary Dashboard	Weekly report on vendor performance for Admins/Founders.	Temporal Events
SLA (Service Level Agreement)	Agreed response time for booking approval or vendor onboarding.	Vendor Policy
Notification Service	Automated alerts via email/SMS for RSVP updates, booking status, reminders.	System Integration
Wishlist	Feature where the Bride can bookmark preferred vendors before booking.	Non-Mandatory Requirements
Account Tier	Level granted to Vendor: *Pending → Approved → Featured Vendor*.	Business Rule & Pricing Model
Data Privacy Policy	Internal security guideline ensuring protection of user data.	Compliance Requirements

5. Relevant Facts and Assumptions

Purpose:
To establish environmental constraints, factual domain conditions, and assumptions necessary for system success. These guide requirement decisions and risk assessments.

5a. Relevant Facts

Fact	Justification/Impact
F1: Wedding planning in Egypt traditionally involves tracking many vendors and items manually (calls, messages, visits).	Supports system need for vendor centralization + automation.
F2: Most brides begin preparation 6–12 months before the wedding.	Drives timeline-based features like reminders & booking deadlines.
F3: Sunday–Thursday are peak vendor communication days.	Influences vendor availability scheduling.
F4: Admins rely on weekly activity performance reports.	Requires automated analytics generation.
F5: There are no existing integrated digital solutions covering **Venue + Gehaz + Guest List + Budget** in one platform regionally.	Competitive advantage and unique selling point.

5b. Business Rules

Business Rule	Source / Authority	Trigger	System Enforcement
BR1: Vendors must be **Approved** before profile becomes visible to Brides.	Founders / Verification Team	Vendor submits registration	Hide vendor until status=Approved
BR2: A pending booking request expires after **48 hours** without vendor response.	System Automation Policy	Timer expiration	Auto-reject booking + notify Bride
BR3: Guests with no RSVP must receive **automated reminders** 7 days before deadline.	Bride Preferences	RSVP deadline approaching	Trigger email/SMS
BR4: Gehaz items must be categorized (Bedroom–Kitchen–Bathroom).	Business Requirement	Item creation	Enforce category selection
BR5: Featured Vendors must maintain minimum rating (e.g., 4★).	Business Strategy	Rating drop event	Auto-demotion to Approved tier

5c. Assumptions

Assumption	Justification	Impact if False
A1: Users have moderate digital literacy and internet access.	Platform requires navigation of multiple features.	Limit system adoption → must simplify UX + reduce scope.
A2: Integration with email/SMS providers will be stable.	Automated notifications are core functionality.	Manual communication → increases Bride workload.
A3: Vendor Verification Team can review new profiles within 48 hours.	Ensures healthy vendor growth.	Vendor churn + low marketplace supply.
A4: Vendors keep availability calendars accurately updated.	Needed for real-time booking.	Double-booking risk → system reputation damage.
A5: Founders will invest in marketing to onboard critical mass of users.	Marketplace success requires both sides (Bride/Vendors).	Low engagement → business failure risk.

5d. Related Risks & Mitigations

Risk	Root Issue	Mitigation Strategy
R1: Low Vendor activity	Long verification queues	SLA tracking + workflow automation
R2: Guests ignore automated messages	Dependence on email/SMS only	Multi-channel: WhatsApp integration
R3: Brides overwhelmed by complex UI	Too many features at launch	Progressive feature rollout (MVP phased)
R4: Data privacy concerns	Sensitive personal contacts stored	GDPR-like policy, encryption, role-based access

Functional Requirements

6. The Scope of the Work

6a. The Current Situation

Content

Currently, brides in Egypt plan their weddings manually through a mixture of:

- WhatsApp messages with dozens of vendors

- Paper notes and checklists for the Gehaz items

- Offline notebooks or spreadsheets for guest lists

- Manual vendor appointment scheduling

- Personal reminders and calendar apps that are not connected

- Manual tracking of RSVPs

- Visiting vendors physically to check availability

There is **no centralized digital platform** that integrates Vendor Booking, Guest List & RSVP tracking, Gehaz progress, reminders, and schedules in one place.

Because the process is fragmented, brides often:

- Miss deadlines

- Double-book or miscommunicate with vendors

- Forget Gehaz items

- Lose track of expenses

- Send reminders manually

- Cannot monitor progress in one dashboard

Vendors also rely heavily on manual communication, lack availability calendars, and face booking conflicts.

This current situation contains many manual and error-prone processes that the new product intends to automate, unify, and simplify.

Motivation

Understanding the current situation allows the team to evaluate:

- Which manual processes must be replaced

- Where automation creates value (notifications, reminders, appointments)

- Which business rules already exist culturally (e.g., Gehaz categories)

- Which vendor workflows need improvement (verification, scheduling)

- How guest lists and RSVP tracking can be better digitized

This understanding ensures the platform is designed to seamlessly fit into the real-life workflow of brides and vendors.

Form

Business process descriptions include:

- Guest List creation and RSVP monitoring

- Vendor registration and manual verification

- Vendor availability management

- Appointment request and response workflow

- Gehaz checklist monitoring

- Dashboard updates

- Notifications (reminders, changes, rejections)

Activity diagrams, use case scenarios, and sequence diagrams from previous sections complement this analysis.

6b. The Context of the Work (Work Context Diagram)

Content

The work context defines the **boundary of the entire wedding planning work** that the Ayza Atgawez product will support.

Adjacent systems include:

- **Email/SMS Notification Service** (for sending invitations, booking responses, reminders)

- **Guests** (respond RSVP)

- **Vendors** (send availability, booking replies)

- **Vendor Verification Team** (inputs approval/rejection data)

- **Calendar/Date-Time System** (system time triggers reminders, deactivation, deadlines)

- **External Image Hosting/CDN** (for vendor gallery images)

- **Mapping/Location Services (optional)**

Inputs and outputs represent **data flows** into and out of the work boundary.

Motivation

To define the exact boundaries of:

- What the product will do

- What comes from outside the product

- What information must be exchanged

Without a clear boundary, requirements cannot be complete or testable.

Form — Work Context Table

Adjacent System	Inputs to the Work	Outputs from the Work
Bride	Guest details, booking requests, Gehaz updates, budget inputs	Guest list dashboard, booking confirmations, reminders, Gehaz progress
Vendor	Availability updates, booking responses (Accept/Reject/Reschedule)	Booking requests, notifications
Guest	RSVP responses	RSVP status updates to Bride
Vendor Verification Team	Verification decisions, rejection reasons	Vendor approval status notifications
Notification Service	—	Emails/SMS for reminders, RSVP invitations, booking updates
System Time / Scheduler	Time triggers (reminder events, deactivation timers)	Automated reminders, auto-deactivation
Image Hosting/CDN	Vendor images	—

All input/output names exactly match Section 7 Data Dictionary terms.

6c. Work Partitioning (Business Event List)

Below is the **Business Event List**, following the same form and level of detail as the Weather Station example.

Each event has:

- Event Name

- Input (triggering data)

- Output(s)

- One-sentence Summary of the Business Use Case (BUC)

Business Event List

#	Event Name	Input (from Adjacent System)	Output(s)	BUC Summary
1	Bride adds/updates a Guest	Guest Details (in)	Updated Guest List (out)	Record the new or updated guest and attach it to the Bride's wedding.
2	Bride sends RSVP Invitations	Guest List (in)	RSVP Invitations (out)	Generate unique RSVP links and send invitation messages to Guests.

3	Guest submits RSVP Response	RSVP Response (in)	Updated RSVP Status (out)	Record the guest's RSVP (Attending/Declined) and update bride's dashboard.
4	Bride adds or updates a Gehaz Item	Gehaz Item Details (in)	Updated Gehaz Checklist (out)	Record the details/status of the Gehaz item and recalculate progress.
5	Bride views Gehaz Progress	View Request (in)	Progress Report (out)	Display completion percentage, spending summary, and recommendations.
6	Bride sends Meeting Request	Booking Request Data (in)	Notification to Vendor (out)	Save booking request and notify the vendor to respond.
7	Vendor responds to Booking Request	Vendor Response (in)	Updated Appointment Status (out)	Record acceptance, rejection, or reschedule proposal and notify Bride.
8	Bride responds to Reschedule Proposal	Bride Response (in)	Finalized Appointment Status (out)	Accept or decline the reschedule, updating both calendars.
9	Vendor updates Availability Calendar	Availability Data (in)	Updated Calendar (out)	Save vendor availability to the system.
10	Vendor submits Registration	Vendor Registration Data (in)	Verification Request (out)	Store registration and notify Verification Team.
11	Verification Team approves/rejects Vendor	Verification Decision (in)	Vendor Status Update (out)	Record approval or rejection and notify vendor.
12	Time triggers Guest Reminder	Time Event (in)	RSVP Reminder to Guest (out)	System detects pending guests and sends reminder notifications.
13	Time triggers Vendor Auto-Deactivation	Time Event + Vendor Activity Log (in)	Auto-Deactivation Notice (out)	Mark inactive vendors as deactivated and notify them.
14	Bride views Dashboard	Dashboard Request (in)	Consolidated Overview (out)	Compile booking status, Gehaz progress, and guest list updates.

These events partition the work into clean, separable units that directly map to your BUCs and use cases.

6d. Specifying a Business Use Case (BUC)

Below is one **sample BUC** written in the exact style the Volere example uses.

BUC–7: Vendor Responds to Booking Request

Triggering Event

Vendor submits a response to a pending booking request.

Input

Vendor Response Dataflow (Accept / Reject / Reschedule + optional ProposedNewDate)

Outputs

- Updated Appointment Status

- Notification to Bride

- Updated Vendor Calendar (if approved or rescheduled)

Summary

The system receives the vendor's booking decision, updates the appointment record, adjusts availability if needed, and notifies the bride.

BUC Scenario (Business Response)

1. The system checks that the booking exists and is still in "Pending" status.

2. If the vendor's response is **Accept**, the system:

    o Marks the appointment as *Confirmed*

    o Adds the date to both calendars

    o Sends a confirmation notification to the Bride

3. If the vendor's response is **Reject**, the system:

    o Marks the request as *Rejected*

    o Notifies the Bride

4. If the vendor sends **Reschedule**, the system:

    o Stores the proposed new date

    o Marks appointment as *Reschedule Proposed*

    o Notifies the Bride to accept/decline

5. All actions are logged for auditing.

Considerations

- If additional outputs appear (e.g., payment triggers), the event and context diagram must be updated accordingly.

- The inputs/outputs must exactly match those defined in Section 7 for traceability.

7. Business Data Model & Data Dictionary

7a. Business Data Model

Content

The Business Data Model identifies the essential business objects (entities and classes) that make up the core subject matter of the Ayza Atgawez wedding-planning system.

This model represents all business data that is created, referenced, updated, or deleted by the system's processes and is directly related to the scope of the product.

The model is represented using a UML class diagram structure, showing the classes, their attributes, and the relationships between them.
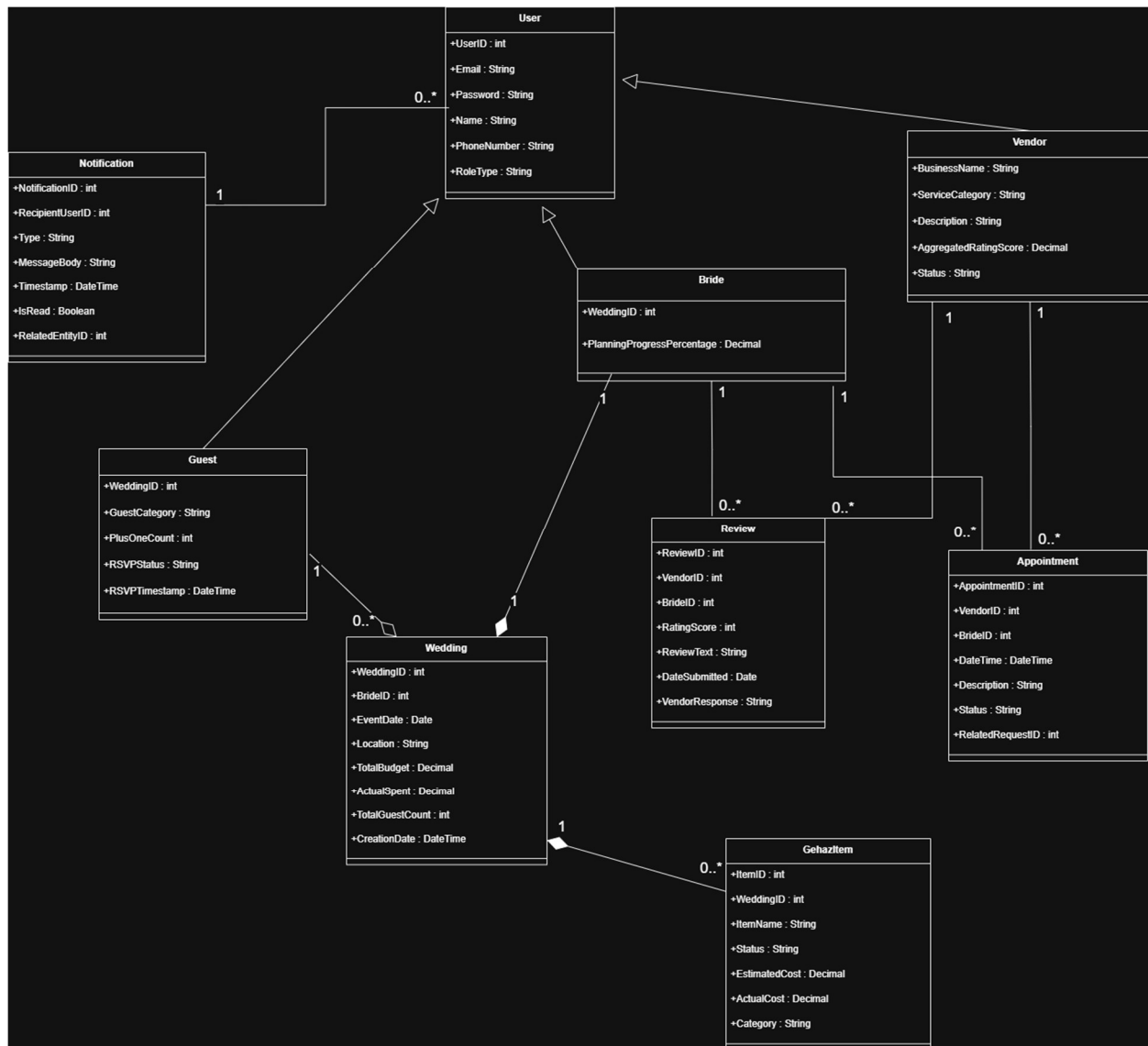
The essential classes identified in this domain are:

- Bride

- Wedding

- Guest

- Vendor

- Appointment (Booking Request)

- Gehaz Item

- Review

- Notification

Motivation

The purpose of this Business Data Model is:

- To clarify the domain and ensure that all relevant wedding-planning information is represented.

- To trigger discovery of missing requirements by cross-checking the model with CRUD operations.

- To ensure the system handles all required business data

Examples

Considerations

Are there any data or object models for similar or overlapping systems that might be a useful starting point?

- Existing wedding-planning platforms (e.g., Zafaf.net) can offer partial models, but none fully match the required integrated features (Gehaz, RSVP, reminders).

Is there a domain model for the subject matter dealt with by this system?

- This Business Data Model reflects all business data relevant to the scope of the work and will be expanded as more detailed requirements appear.

Form

The data model follows UML Class Modeling notation. This representation is compatible with later detailed class diagrams and database models and supports CRUD validation.

7b. Data Dictionary

A.Classes (Business Entities)

Name	Attributes
Bride	BrideID + Name + Email + Phone + WeddingDate + PlanningProgress
Wedding	WeddingID + BrideID + Theme + Budget + ProgressStatus
Guest	GuestID + WeddingID + Name + Category + Phone + RSVPStatus
Vendor	VendorID + Name + Category + Location + PriceRange + RatingAverage + AvailabilityCalendar
Appointment	AppointmentID + BrideID + VendorID + DateTime + Status + ProposedNewDate
GehazItem	ItemID + WeddingID + ItemName + Quantity + PurchaseStatus
Review	ReviewID + BrideID + VendorID + Rating + Comment + DateSubmitted
Notification	NotificationID + RecipientID + Message + Type + Timestamp + ReadStatus

B.Dataflows (Inputs/Outputs in System Processes)

Name	Content
Booking Request Dataflow	BrideID + VendorID + PreferredDate + Notes
Vendor Response Dataflow	AppointmentID + ResponseType + ProposedNewDate
Guest RSVP Response	GuestID + RSVPStatus
Notification Dataflow	RecipientID + Message + Type
Verification Submission	VendorID + Documents
Review Submission	BrideID + VendorID + Rating + Comment
Gehaz Item Update Flow	ItemID + PurchaseStatus + Quantity

C. Attributes

Name	Definition / Meaning
BrideID	Unique identifier for a bride
Name (Bride/Vendor/Guest)	Real-world name used to identify the person
Email	Contact email for account communication

Phone	Bride's or guest's phone number
WeddingDate	Set wedding date selected by the bride
PlanningProgress	Percentage of wedding planning completed
WeddingID	Unique identifier for a wedding entry
Theme	Bride's chosen wedding theme (e.g., classic, beach)
Budget	Total spending limit planned by the bride
ProgressStatus	Indicator of completion level for the wedding
GuestID	Identifier allocated to each guest
Category	Guest class: Family, Friend, Work, VIP
RSVPStatus	Guest response (Yes / No / Pending)
VendorID	Unique vendor identifier
Vendor Category	Vendor type: Photographer, Caterer, Venue
Location	Vendor's address or service area
PriceRange	Vendor's pricing category
RatingAverage	Average review score for this vendor
AvailabilityCalendar	Vendor's available dates/times
VerificationID	Unique ID for verification record
Documents	Files submitted for vendor verification
Status (Verification)	Pending / Approved / Rejected
AdminNotes	Comments added by verification admin
AppointmentID	Unique booking identifier
DateTime	Appointment scheduled date/time
ProposedNewDate	Vendor's suggested reschedule date
ItemID	Identifier for Gehaz item
ItemName	Name of Gehaz item (e.g., bedsheets)
Quantity	Number of units needed
PurchaseStatus	Pending / Purchased
ReviewID	Unique review identifier
Rating	Score from 1 to 5
Comment	Bride's written feedback

DateSubmitted	When review was created
NotificationID	Unique notification identifier
Message	Notification content
Type	Reminder / Alert / RSVP / Booking Update
Timestamp	Date/time notification was sent
ReadStatus	Read / Unread

Motivation

The data dictionary ensures:

- **Complete understanding** of all business information processed in the system.

- Accurate definitions for all **inputs and outputs** described in the scope diagrams.

- Consistency between data definitions and the **CRUD tables, use cases, and class diagram**.

- A unified vocabulary across analysts, designers, and developers.

- Clear mapping of data to atomic requirements.

Considerations

- As the system evolves, additional attributes or relationships may be added.

- System implementers will extend this dictionary with:

  o   Data types

  o   Field lengths

  o   Storage constraints

  o   Database table mappings

- Any terminology originally placed in the glossary that later becomes structured data should be moved into this section.

Form

This data dictionary may be maintained in:

- Word/PDF document

- Modeling tools (draw.io, lucidchart)

- Requirements management tools

The key is to ensure easy cross-referencing between:

- Requirements

- Use cases

- Diagrams

- Class models

8. The Scope of the Product

8a. Product Boundary

This section identifies the boundary between the *Ayza Atgawez* product and the external actors who interact with it. The boundary was established by evaluating each business use case and determining which activities must be automated by the product to support the work and which activities remain manually performed by the actors. This decision considers user abilities, project constraints, and the desired improvements to the current wedding-planning workflow.

The actors who interact with the product are the **Bride**, **Vendor**, **Guest**, and **Verification Team**, all of whom exist outside the product boundary. Inside the boundary are the **Product Use Cases (PUCs)**—the operations that the system performs to support wedding planning activities. Each PUC has been derived from a corresponding Business Use Case in the Business Event List (Section 7), ensuring traceability.
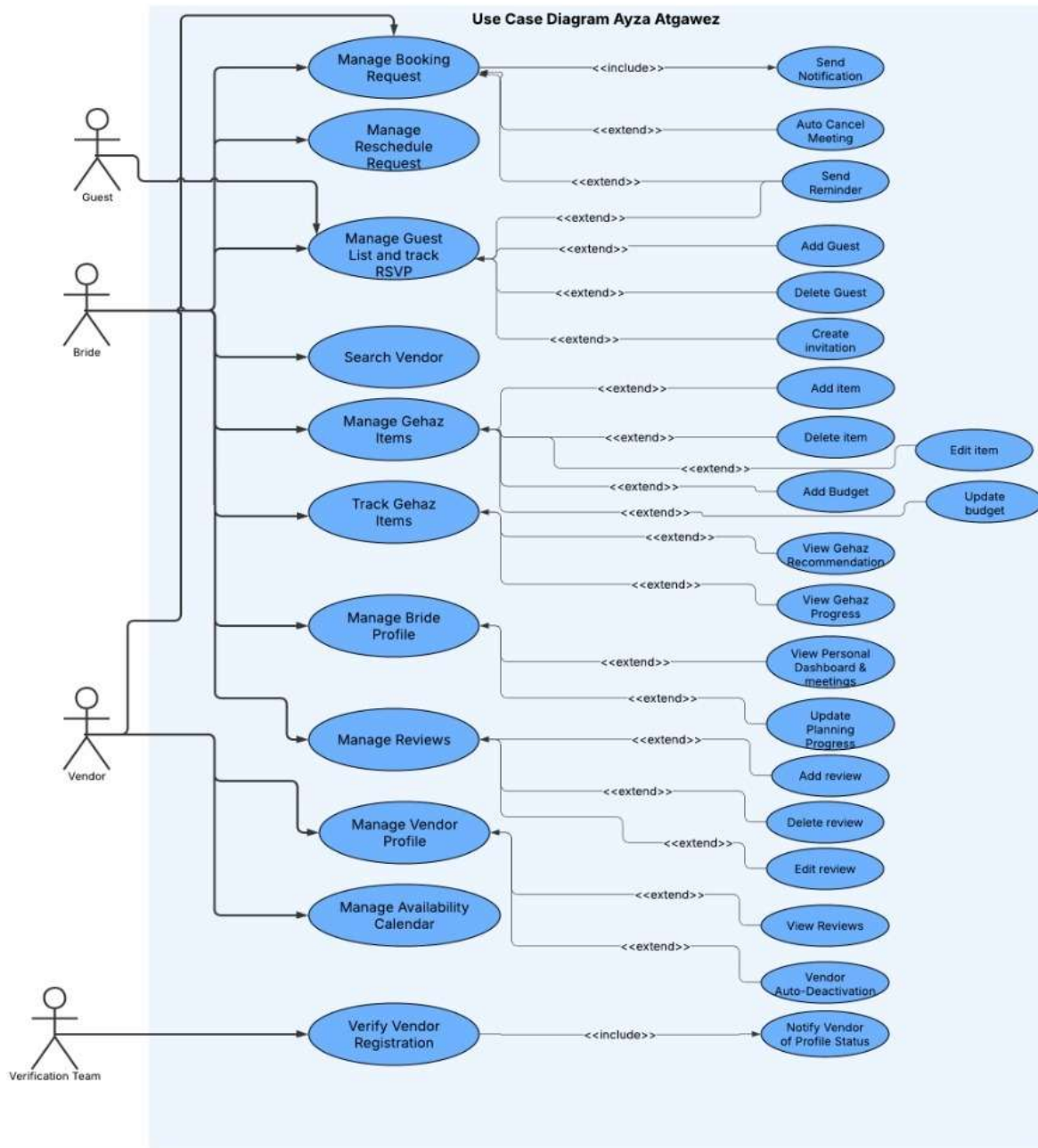
The product includes automated support for managing bookings, handling vendor reschedules, processing guest RSVPs, tracking Gehaz items, sending reminders and notifications, maintaining vendor availability calendars, supporting vendor profile updates, and performing automated vendor deactivation. Optional or dependent behaviors are represented through <<extend>> relationships, while shared system functionality—such as sending notifications—is modeled with <<include>> relationships.

The product boundary ensures that all essential data processing, scheduling, workflow management, and reminder logic is handled by the system, while personal decision-making, communication outside the platform, and real-world actions remain with the actors. Each interaction between the actors and the product is represented through dataflows that are consistent with the naming in the data dictionary.

The resulting Product Use Case Diagram presents the product as a single boundary containing all PUCs, with actors surrounding it and interacting with the system through labeled inputs and outputs. This diagram summarizes how the product fits into the larger wedding-planning environment and defines the scope of what the system will automate.

Form
A product use case diagram illustrating the system boundary and all Product Use Cases, supported by a Product Use Case Table that specifies the inputs and outputs of each PUC.

Use Case Diagram Ayza Atgawez

8b. Product Use Case Table

The Product Use Case Table identifies the complete set of Product Use Cases that fall within the product boundary. Each PUC represents a specific interaction between an actor and the product. The table also identifies the dataflows that define these interactions.

Product Use Case (PUC) Summary Table

PUC No.	Product Use Case Name	Actor(s)	Input & Output
1	Manage Booking Request	Bride, Vendor	Booking Request (in), Booking Notification (out)
2	Manage Reschedule Request	Bride, Vendor	Reschedule Proposal (in), Updated Meeting Time (out)
3	Auto Cancel Meeting <<extend>>	System Time	Time Trigger (in), Cancellation Notice (out)
4	Send Notification <<include>>	System	Trigger Event (in), Notification Message (out)
5	Send Reminder	Bride	Reminder Request (in), Reminder Message (out)
6	Manage Guest List & Track RSVP	Bride, Guest	Guest Details / RSVP Response (in), Updated Guest List (out)
7	Add Guest <<extend>>	Bride	Guest Information (in), Guest Added (out)
8	Delete Guest <<extend>>	Bride	Guest ID (in), Guest Deleted (out)
9	Create Invitation	Bride	Guest List (in), Invitation Sent (out)
10	Search Vendor	Bride	Search Query (in), Vendor Results (out)
11	Manage Gehaz Items	Bride	Item Data (in), Updated Gehaz List (out)
12	Add Item <<extend>>	Bride	Item Information (in), Item Added (out)
13	Edit Item <<extend>>	Bride	Updated Item Data (in), Item Updated (out)
14	Delete Item <<extend>>	Bride	Item ID (in), Item Deleted (out)
15	Add Budget	Bride	Budget Amount (in), Budget Recorded (out)
16	Update Budget <<extend>>	Bride	New Budget Values (in), Updated Budget (out)
17	Track Gehaz Items	Bride	Tracking Request (in), Item Status (out)
18	View Gehaz Progress	Bride	View Request (in), Progress Report (out)
19	View Gehaz Recommendation	Bride	Category Data (in), Recommended Items (out)
20	Manage Bride Profile	Bride	Profile Update (in), Updated Profile (out)
21	View Personal Dashboard & Meetings	Bride	Dashboard Request (in), Dashboard Data (out)
22	Update Planning Progress	Bride	Progress Update (in), Updated Planning Progress (out)
23	Manage Vendor Profile	Vendor	Profile Data (in), Updated Vendor Profile (out)
24	Manage Availability Calendar	Vendor	Calendar Data (in), Updated Availability (out)
25	Manage Reviews	Vendor, Bride	Review Request (in), Review List (out)
26	Add Review <<extend>>	Vendor	Review Content (in), Review Added (out)
27	Edit Review <<extend>>	Vendor	Updated Review Content (in), Review Edited (out)
28	Delete Review <<extend>>	Vendor	Review ID (in), Review Deleted (out)
29	View Reviews	Vendor, Bride	View Request (in), Displayed Reviews (out)
30	Verify Vendor Registration	Verification Team	Verification Decision (in), Verification Status (out)
31	Notify Vendor of Profile Status <<include>>	System	Verification Outcome (in), Status Notification (out)
32	Vendor Auto-Deactivation	System Time	Activity Logs / Time Trigger (in), Deactivation Notice (out)
33	Guest RSVP Response	Guest	RSVP Submission (in), Updated RSVP Status (out)

8c. Individual Product Use Cases (PUCs)

This section describes the detailed behavior and system response for each Product Use Case defined in the Product Use Case Table.

PUC 1 — Manage Booking Request

Primary Actor: Bride
Supporting Actor: Vendor
Trigger: Bride submits a meeting request for a vendor.
Preconditions: Bride is logged in; vendor profile is active.
Postconditions: Booking request stored; vendor notified.

Normal Flow

1. Bride selects a vendor.

2. Bride chooses a preferred meeting date and time.

3. System validates the date against vendor availability.

4. System records the booking request.

5. System sends a notification to the vendor.

Alternative Flows

- **1A:** Selected date not available → System displays unavailable message.

- **1B:** Vendor is inactive → System prevents booking.

PUC 2 — Manage Reschedule Request

Primary Actor: Vendor
Supporting Actor: Bride
Trigger: Vendor proposes a new date/time for an existing booking.
Preconditions: A pending booking request exists.
Postconditions: New date stored or request remains unchanged.

Normal Flow

1. Vendor selects the booking request.

2. Vendor proposes a new meeting date/time.

3. System stores reschedule proposal.

4. System notifies the Bride.

Alternative Flows

- **2A:** Bride rejects reschedule → Meeting remains pending.

- **2B:** New date conflicts with existing booking → System rejects change.

PUC 3 — Auto Cancel Meeting

Primary Actor: System Time
Trigger: System detects expiration of a pending or unconfirmed meeting.
Preconditions: Booking has exceeded allowed time window without action.
Postconditions: Meeting marked "Cancelled."

Normal Flow

1. System checks pending meeting timestamps.

2. System identifies overdue or inactive requests.

3. System cancels the meeting automatically.

4. System notifies both Bride and Vendor.

PUC 4 — Send Notification

Primary Actor: System
Trigger: Any triggering event from other PUCs requiring communication.
Preconditions: A notification trigger exists.
Postconditions: Notification sent.

Normal Flow

1. System receives trigger event.

2. System formats notification message.

3. Notification sent to appropriate actor(s).

PUC 5 — Send Reminder

Primary Actor: Bride
Trigger: Bride chooses to remind guests or vendors.
Preconditions: Relevant pending invitations or meetings exist.
Postconditions: Reminder notification delivered.

Normal Flow

1. Bride selects reminder target.

2. System retrieves pending items.

3. System sends reminder.

PUC 6 — Manage Guest List & Track RSVP

Primary Actor: Bride
Supporting Actor: Guest
Trigger: Bride opens guest list or guest submits RSVP.
Preconditions: Bride has a wedding profile.
Postconditions: Guest list updated.

Normal Flow

1. Bride views guest list.

2. System displays guests and statuses.

3. Guest submits RSVP through link.

4. System updates RSVP status.

Alternative Flows

- **6A:** Invalid RSVP link → System displays error.

PUC 7 — Add Guest

Primary Actor: Bride
Trigger: Bride adds a guest.
Preconditions: Bride is authenticated.
Postconditions: Guest created.

Normal Flow

1. Bride enters guest details.

2. System validates input.

3. System adds guest and updates list.

PUC 8 — Delete Guest

Primary Actor: Bride
Trigger: Bride chooses to delete a guest.
Preconditions: Guest exists.
Postconditions: Guest removed.

Normal Flow

1. Bride selects a guest.

2. System deletes the guest.

3. Guest list updated.

PUC 9 — Create Invitation

Primary Actor: Bride
Trigger: Bride generates invitations for guests.
Preconditions: Guests exist.
Postconditions: Invitation links created and sent.

Normal Flow

1. Bride selects guests.

2.   System creates invitation links.

3.   System delivers invitations.

PUC 10 — Search Vendor

Primary Actor: Bride
Trigger: Bride searches for vendors.
Preconditions: Vendor database exists.
Postconditions: List of matching vendors displayed.

Normal Flow

1.   Bride enters search criteria.

2.   System filters vendors.

3.   System displays results.

PUC 11 — Manage Gehaz Items

Primary Actor: Bride
Trigger: Bride views or edits Gehaz items.
Preconditions: Bride has a Gehaz list.
Postconditions: Gehaz data updated.

Normal Flow

1.   Bride opens Gehaz page.

2.   System loads all items.

3.   Bride performs add/edit/delete operations.

4.   System saves changes.

PUC 12 — Add Item

Primary Actor: Bride
Trigger: Bride adds an item.
Preconditions: Valid category exists.
Postconditions: Item created.

Normal Flow

1.   Bride enters item data.

2.   System validates it.

3.   Item is added.

PUC 13 — Edit Item

Primary Actor: Bride
Trigger: Bride updates item details.
Preconditions: Item exists.
Postconditions: Item updated.

Normal Flow

1. Bride selects item.

2. Bride enters new details.

3. System updates item.

PUC 14 — Delete Item

Primary Actor: Bride
Trigger: Bride removes an item.
Preconditions: Item exists.
Postconditions: Item deleted.

PUC 15 — Add Budget

Primary Actor: Bride
Trigger: Bride sets Gehaz or wedding budget.
Preconditions: Bride profile exists.
Postconditions: Budget stored.

PUC 16 — Update Budget

Primary Actor: Bride
Trigger: Bride edits budget.
Preconditions: Budget record exists.
Postconditions: Budget updated.

PUC 17 — Track Gehaz Items

Primary Actor: Bride
Trigger: Bride views item purchase status.
Preconditions: Items exist.
Postconditions: System displays tracking information.

PUC 18 — View Gehaz Progress

Primary Actor: Bride
Trigger: Bride requests progress overview.

Preconditions: At least one item exists.
Postconditions: Progress percentage displayed.

PUC 19 — View Gehaz Recommendation

Primary Actor: Bride
Trigger: Bride views suggestions for missing items.
Preconditions: Incomplete Gehaz list.
Postconditions: Recommendations displayed.

PUC 20 — Manage Bride Profile

Primary Actor: Bride
Trigger: Bride updates her profile.
Preconditions: Bride is authenticated.
Postconditions: Profile updated.

PUC 21 — View Personal Dashboard & Meetings

Primary Actor: Bride
Trigger: Bride views dashboard.
Preconditions: Bride has data in system.
Postconditions: Dashboard displayed.

PUC 22 — Update Planning Progress

Primary Actor: Bride
Trigger: Bride updates planning steps.
Preconditions: Tasks exist.
Postconditions: Planning status updated.

PUC 23 — Manage Vendor Profile

Primary Actor: Vendor
Trigger: Vendor updates profile information.
Preconditions: Vendor is authenticated.
Postconditions: Updated profile stored.

PUC 24 — Manage Availability Calendar

Primary Actor: Vendor
Trigger: Vendor adds or edits availability.
Preconditions: Vendor calendar exists.
Postconditions: Calendar updated.

PUC 25 — Manage Reviews

Primary Actor: Vendor, Bride
Trigger: Vendor views reviews; Bride views vendor feedback.
Preconditions: Reviews exist.
Postconditions: Review list displayed.

PUC 26 — Add Review

Primary Actor: Vendor
Trigger: Vendor submits new review.
Preconditions: Vendor interacted with bride.
Postconditions: Review added.

PUC 27 — Edit Review

Primary Actor: Vendor
Trigger: Vendor edits an existing review.
Preconditions: Review exists.
Postconditions: Review updated.

PUC 28 — Delete Review

Primary Actor: Vendor
Trigger: Vendor deletes review.
Preconditions: Review exists.
Postconditions: Review removed.

PUC 29 — View Reviews

Primary Actor: Vendor, Bride
Trigger: Actor views the list of reviews.
Preconditions: Reviews exist.
Postconditions: Reviews displayed.

PUC 30 — Verify Vendor Registration

Primary Actor: Verification Team
Trigger: Admin verifies vendor documents.
Preconditions: Vendor submitted registration.
Postconditions: Vendor marked Approved or Rejected.

PUC 31 — Notify Vendor of Profile Status

Primary Actor: System
Trigger: Verification decision is recorded.
Preconditions: A verification result exists.
Postconditions: Vendor receives notification.

PUC 32 — Vendor Auto-Deactivation

Primary Actor: System Time
Trigger: Vendor exceeds inactivity threshold.
Preconditions: Vendor inactive for defined duration.
Postconditions: Vendor set to Deactivated.

PUC 33 — Guest RSVP Response

Primary Actor: Guest
Trigger: Guest clicks RSVP link.
Preconditions: Guest invitation exists.
Postconditions: RSVP status updated.

9. Functional Requirements

9a.1 Requirements for the Bride Role

FR1.1 – Browse Vendor Directory

Requirement #: FR1.1
Description:
The product shall allow the Bride to browse all vendors listed in the vendor directory.

Rationale:
To enable the Bride to discover available venues, MUAs, caterers, and other wedding service providers.

Originator:
Bride Use Case – Vendor Browsing

Fit Criterion:
The Bride can open the Vendor Directory screen and view at least 90% of registered vendors within 3 seconds per page.

Requirement Type: Functional

Customer Satisfaction: High
Customer Dissatisfaction: High (If not implemented, system loses core value.)

Dependencies: Vendor registration completed; vendor profile created (FR2.1).
Conflicts: None.
Supporting Materials: Use Case PUC-01 Browse Vendors.
History: Created Jan 2025.

FR1.2 – Search Vendors by Category

Requirement #: FR1.2
Description:
The system shall allow the Bride to search for vendors by category (e.g., venue, MUA, photographer, caterer, DJ).

Rationale:
To support fast vendor discovery based on the type of wedding service.

Originator: Bride Use Case – Vendor Filtering

Fit Criterion:
When a category is selected, only vendors belonging to that category should appear, with at least 95% accuracy.

Requirement Type: Functional

Customer Satisfaction: High
Customer Dissatisfaction: Medium

Dependencies: FR1.1 Vendor Directory
Supporting Materials: Glossary → Vendor Categories

FR1.3 – View Vendor Profiles

Requirement #: FR1.3
Description:
The product shall display each vendor's profile, including business description, photos, services, packages, pricing ranges, and reviews.

Rationale:
The Bride needs complete information before making a booking request.

Fit Criterion:
Vendor profile loads within 5 seconds including photo gallery.

Dependencies: Vendor uploads info (FR2.1).

FR1.4 – Submit Meeting/Booking Request

Requirement #: FR1.4
Description:
The Bride shall be able to submit a meeting request or booking request to any available vendor.

Rationale:
Booking is a core component of wedding planning.

Fit Criterion:
Bride can send a request and vendor receives it within 10 seconds (notification/alert triggered).

Dependencies:
Vendor availability calendar (FR2.3).
Bride login (FR3.1).

FR1.5 – Respond to Vendor Proposed Rescheduled Dates

Requirement #: FR1.5
Description:
The Bride shall be able to accept, reject, or propose an alternative date when a vendor suggests a reschedule.

Rationale:
Wedding planning requires ongoing coordination.

Fit Criterion:
Bride actions update status in the database within 2 seconds and notify the vendor immediately.

FR1.6 – Personalized Dashboard

Requirement #: FR1.6
Description:
The system shall provide a personalized dashboard summarizing booking status, appointment schedule, guest updates, and task progress.

Rationale:
Brides need a centralized overview to track progress.

Fit Criterion:
Dashboard shows correct summary metrics reflecting 100% of the bride's current data.

FR1.7 – Wedding Schedule Management

Requirement #: FR1.7
Description:
The Bride shall maintain a personal wedding schedule listing all appointments, reminders, and deadlines.

Rationale:
Scheduling is essential for organizing the wedding timeline.

Fit Criterion:
System stores and displays appointments accurately and triggers reminders as configured.

FR1.8 – Guest List Management

Requirement #: FR1.8
Description:
The Bride shall be able to add, delete, and modify guest entries, categorize guests (family, friends, coworkers), and record contact details.

Fit Criterion:
All CRUD operations completed without data loss; list reflects changes instantly.

FR1.9 – RSVP Tracking

Requirement #: FR1.9
Description:
The Bride shall update and track RSVP status for each guest.

Fit Criterion:
RSVP statistics update correctly in the dashboard and guest table.

FR1.10 – Gehaz (جهاز) Item Tracking Tool

Requirement #: FR1.10
Description:
The system shall provide a dedicated tool allowing the Bride to add purchased items, track pending items, attach receipts/photos, and mark completion.

Fit Criterion:
At least 95% accuracy between saved items and displayed checklist.

FR1.11 – Budget Tracking (Added)

Brides often require a budgeting feature.

Description:
The system shall allow the Bride to assign estimated and actual costs for vendors, kehaz items, and tasks.

Fit Criterion:
Difference between estimated and actual calculations must be correct within ±1 EGP.

FR1.12 – Reminder & Notification Preferences (Added)

Description:
The Bride can enable/disable specific notifications such as appointment reminders or payment deadlines.

FR1.13 – Export/Print Guest List (Added)

Description:
The system shall allow exporting guest lists to PDF or Excel.

FR1.14 – Vendor Comparison Tool (Added)

Description:
Bride can compare two or more vendors side-by-side.

SECTION 9a.2 — Requirements for the Vendor Role

FR2.1 – Manage Business Profile

Requirement #: FR2.1
Description:
The product shall allow the Vendor to create and update their business profile, including business description, service packages, pricing information, and photo galleries.

Rationale:
Vendors must maintain accurate and appealing information to attract Brides.

Originator:
Vendor Use Case — Manage Profile

Fit Criterion:
Any change made by the vendor must appear in the system and be reflected in the Bride's search results within **30 seconds**.

Requirement Type: Functional
Customer Satisfaction: High
Customer Dissatisfaction: High

Dependencies:
FR3.1 User Login & Authentication
Vendor verification (FR2.6)

Conflicts: None
Supporting Materials: Vendor Profile data model
History: Created Jan 2025

FR2.2 – Review Management

Requirement #: FR2.2
Description:
The system shall allow Vendors to view all received reviews and respond publicly to them.

Rationale:
Vendors must be able to address Bride feedback, improve reputation, and maintain transparency.

Fit Criterion:
Vendor responses appear under the review section within **5 seconds** of submission.

Dependencies:
Bride review system (FR1.x)
User Authentication (FR3.1)

FR2.3 – Availability Calendar

Requirement #: FR2.3
Description:
The product shall allow Vendors to maintain and modify their availability calendar, including available dates, blocked dates, and booking capacity.

Rationale:
The availability calendar drives the meeting request and appointment scheduling system.

Fit Criterion:
Calendar prevents overlapping or double-booked slots with an accuracy of **>99%**.

Dependencies:
Meeting request system (FR2.5, FR1.4)

FR2.4 – Notification of New Meeting Requests

Requirement #: FR2.4
Description:
The system shall notify Vendors (via dashboard alert or email) when a Bride submits a new meeting or booking request.

Rationale:
Timely response prevents miscommunication and improves booking efficiency.

Fit Criterion:
A notification must be delivered within **10 seconds** of the Bride submitting a request.

Dependencies:
Bride meeting request submission (FR1.4)
Notification system (FR3.2)

FR2.5 – Respond to Meeting Requests

Requirement #: FR2.5
Description:
Vendors shall be able to accept, reject, or propose rescheduled dates in response to incoming meeting or booking requests.

Rationale:
Vendors must manage their schedules flexibly to coordinate with Brides.

Fit Criterion:
Vendor response updates the request status immediately and notifies the Bride within **10 seconds**.

Dependencies:
FR2.3 Availability Calendar
FR3.2 Notification System

FR2.6 – Vendor Verification

Requirement #: FR2.6
Description:
Vendor accounts must be reviewed and approved by an Admin before they become visible to Brides.

Rationale:
Ensures only legitimate, trustworthy vendors appear in the directory.

Fit Criterion:
An unverified vendor must never appear in search results.

Dependencies:
Admin panel functionality (FR3.7)

FR2.7 – Auto-Deactivation for Inactive Vendors

Requirement #: FR2.7
Description:
The product shall automatically hide Vendor profiles that have been inactive for more than **90 days**.

Rationale:
Inactive vendors reduce system reliability and user trust.

Fit Criterion:
Profiles inactive for 90+ days become hidden and do not appear in Bride search results.

Dependencies:
Vendor login tracking
Search engine (FR3.5)

FR2.8 – Vendor Dashboard

Requirement #: FR2.8
Description:
The system shall provide Vendors with analytics including number of booking requests, accepted requests, rejected requests.

Rationale:
Vendors need insights to improve their service and performance.

Fit Criterion:
Dashboard must accurately display data from the last 30 days with **100% correctness**.

Dependencies:
Booking data (FR1.4, FR2.5)
Review system (FR2.2)

SECTION 9a.3 — General System Requirements (Platform)

FR3.1 – User Registration & Login

Requirement #: FR3.1
Description:
The system shall provide registration and authentication for Brides, Vendors, and Admins.

Rationale:
Secure, role-based access is necessary for system operation.

Fit Criterion:
Users must be able to log in successfully with valid credentials and denied access with invalid credentials 100% of the time.

Dependencies:
FR3.6 Role-Based Access Control

FR3.2 – Notifications & Alerts

Requirement #: FR3.2
Description:
The system shall generate notifications for scheduling changes, meeting requests, reminders, and vendor responses.

Rationale:
Notifications ensure timely communication.

Fit Criterion:
Notifications delivered within **10 seconds** of event triggering.

Dependencies:
All scheduling and booking functions.

FR3.3 – Bride–Vendor Data Coordination

Requirement #: FR3.3
Description:
The product shall maintain complete synchronization between Bride planning tools and Vendor booking tools.

Rationale:
To ensure consistent booking status, appointment times, and availability across all displays.

Fit Criterion:
Any scheduling update must propagate to both parties within **5 seconds**.

Dependencies:
FR1.7, FR2.3, FR2.5

FR3.4 – Database Storage

Requirement #: FR3.4
Description:
The system shall store all vendor details, appointments, guest lists, reviews, and gehaz items in a secure, backed-up database.

Rationale:
Central data storage is essential for system reliability.

Fit Criterion:
No stored data may be lost or corrupted during normal system use.

FR3.5 – Search Engine

Requirement #: FR3.5
Description:
The system shall provide a powerful search engine that supports filtering, sorting, keyword search, and category search for vendors.

Rationale:
Brides must locate vendors efficiently.

Fit Criterion:
Search results must return relevant vendors within **2 seconds** for 95% of queries.

FR3.6 – Role-Based Access Control

Requirement #: FR3.6
Description:
System features shall be accessible based on user role (Bride, Vendor, Admin), ensuring users cannot access unauthorized functionality.

Rationale:
Prevents data leaks and enforces business logic.

Fit Criterion:
Unauthorized access attempts must fail 100% of the time.

FR3.8 – Backup & Recovery

Requirement #: FR3.8
Description:
The system shall automatically back up all essential data once per day and allow restoration of full system state.

Rationale:
Ensures data protection and disaster recovery.

Fit Criterion:
Backups must contain at least 99.9% of the previous day's data.

FR3.9 – Audit Logging

Requirement #: FR3.9
Description:
The product shall log actions such as login, profile changes, bookings, cancellations, and data edits.

Rationale:
Audit logs support security, troubleshooting, and accountability.

Fit Criterion:
All relevant actions appear in the audit log within **5 seconds**.

FR3.10 – Multi-Language Support

Requirement #: FR3.10
Description:
The system shall offer full UI support for Arabic and English, including all menus, labels, and content.

Rationale:
System must be usable by Arabic-speaking Brides and Vendors in Egypt.

Fit Criterion:
Every screen and feature must be available in both languages with correct translation.

Non-functional Requirements

10. Look and Feel Requirements

10a. Appearance Requirements

Content

This section describes the visual appearance expectations for the Ayza Atgawez system.
It captures branding, colors, layout preferences, and overall visual consistency across the product.
No design is included here—only appearance requirements.

Appearance Requirements

LF-1. Modern, Elegant Wedding-Themed Interface

The product shall present a modern and elegant visual theme consistent with wedding planning systems.

Fit Criterion:
A panel of 10 representative brides must agree (rating ≥ 4/5) that the interface feels "modern" and "wedding-themed" after a 5-minute walkthrough.

LF-2. Consistent Branding Colors

The product shall use a consistent color palette dominated by soft wedding-related colors (white, blush pink or purple) across all screens.

Fit Criterion:
All UI screens shall be reviewed by the design team and approved by the branding reviewer as using the agreed color palette.

LF-3. Clear Typography

All text shall use clean, readable fonts suitable for mobile and web (e.g., Arial for body text, serif accents for headings if desired).

Fit Criterion:
Users must be able to read all text at 100% zoom on laptop and mobile without zooming in, verified through usability testing.

LF-4. Minimalistic and Uncluttered Layout

The product shall avoid clutter and use visual spacing, icons, and sectioning to maintain clarity.

Fit Criterion:
Participants in usability testing must complete navigation tasks with at least 90% success without asking for help.

LF-5. Vendor Profiles Must Include Photo Thumbnails

Vendor listings shall include images or logos to enhance visual recognition.

Fit Criterion:
Each vendor entry includes at least one displayed image in both list and profile views.

Motivation

The appearance must attract users (brides, vendors, guests), align with wedding aesthetics, and appear professional to support trust and engagement.

Considerations

These appearance requirements guide the designers to create the intended visual experience.
Prototypes may be used later to validate compliance but must not replace the requirements themselves.

10b. Style Requirements

Content

This section defines the style, personality, and emotional tone of the product.
It focuses on how users *feel* when interacting with the system and how much involvement or interaction is expected.

Style Requirements

LF-6. Friendly and Supportive Tone

The system shall communicate using a friendly, supportive tone suitable for brides planning a wedding.

Fit Criterion:
In a user study, at least 75% of participants describe the system's tone as "friendly" or "supportive."

LF-7. High Emotional Comfort

Since wedding planning can be stressful, the system shall present notifications, reminders, and errors in a calm and encouraging manner.

Fit Criterion:
At least 70% of surveyed brides report low stress or neutral feelings when interacting with the system's alerts and messages.

LF-8. Simple and Intuitive Flow

The system shall support quick, intuitive interactions requiring minimal learning effort.

Fit Criterion:
New users must be able to complete basic tasks (e.g., managing guest list, booking a vendor) within 5 minutes of first use, with no training.

LF-9. Mobile-First Interaction Style

The interface shall be optimized for mobile-first usage, supporting touch interactions and single-handed navigation.

Fit Criterion:
The system must pass mobile usability testing with ≥ 85% task success rate.

LF-10. Professional Yet Warm Vendor Interface

Vendor views shall appear more professional while still maintaining the warm aesthetic of the wedding theme.

Fit Criterion:
At least 80% of vendors agree that the interface feels "professional" and "clear."

Motivation

Style requirements ensure the system communicates the correct mood and emotional experience to users.
After functional requirements, style significantly influences adoption and satisfaction.

Considerations

Although style may initially appear subjective, fit criteria convert the expectations into measurable outcomes.
These requirements guide designers in producing the exact emotional experience the client wants.

11. Usability and Humanity Requirements

11a. Ease of Use Requirements

Content

These requirements describe how easy it should be for brides, vendors, and guests to operate the Ayza Atgawez system.
Usability must account for the limited technical experience of many users and the emotional nature of wedding planning.

Ease of Use Requirements

U-1. Quick Task Completion

The product shall allow common tasks (adding guests, booking vendors, reviewing appointments) to be performed quickly and with minimal steps.

Fit Criterion:
80% of test users must complete core tasks in less than 3 minutes without assistance.

U-2. Low Error Rate

The system shall minimize user mistakes by using confirmations, clear messages, and input validation.

Fit Criterion:
During usability testing, the error rate must be < 3% across 50 transactions.

U-3. Easy to Remember After Breaks

Casual users (like guests and brides) shall be able to return after long periods and still understand how to use the system.

Fit Criterion:
After two weeks of non-use, 70% of test users must perform login and main tasks without needing help.

U-4. Strong Feedback

The product shall provide clear feedback for every action (e.g., "Guest Added," "Booking Sent," "Payment Confirmed").

Fit Criterion:
Users must rate system feedback clarity ≥ 4/5 in usability surveys.

Motivation

Most users (brides, guests) have little technical background and may be stressed during planning. The system must be simple, comforting, and error-reducing for all actor types.

Considerations

Ensure every actor's perspective is covered: brides, vendors, guests, verification team, and support staff.
Additional usability testing may be needed to tailor the system to novice and non-technical users.

11b. Personalization and Internationalization Requirements

Content

These requirements specify how users can customize their experience and adjust language, preferences, and settings.

Personalization Requirements

U-5. Language Selection

The system shall allow users to switch between Arabic and English.

Fit Criterion:
100% of screens must support bilingual content with no text overflow or missing translations.

U-6. Currency Localization

Prices must appear in the local Egyptian currency by default but allow future extension to multi-currency if expanding to other regions.

Fit Criterion:
All monetary fields must display currency symbols consistently across the system.

Motivation

Weddings involve cultural and personal preferences. Users expect the interface to match their language and allow personal adjustments to create comfort and ease.

Considerations

Consider users from different cultural backgrounds and future international expansion. Personalization increases user engagement and satisfaction.

11c. Learning Requirements

Content

These requirements describe how much training users need before being productive.

Learning Requirements

U-7. Zero Training for Brides and Guests

Brides and guests shall be able to understand the system without training or manuals.

Fit Criterion:
80% of new users must complete primary tasks within 5 minutes of first use.

U-8. Minimal Training for Vendors

Vendors shall require at most 30 minutes of guided onboarding to learn profile management, availability settings, and booking handling.

Fit Criterion:
During onboarding tests, vendors must perform all core vendor tasks after 30 minutes or less.

U-9. Admin Training Requirement

Verification team staff shall require up to 1 hour of training to use the admin validation tools.

Fit Criterion:
Admins must achieve at least 85% accuracy in vendor approval tasks after training.

Motivation

Most actors are not technical users so the system must be simple enough to learn quickly, guiding users through onboarding where necessary.

Considerations

Ensure the learning curve is appropriate for each actor type.
The product may require walkthrough screens, tooltips, or guided tours for beginners.

11d. Understandability and Politeness Requirements

Content

These requirements ensure the system uses intuitive concepts and does not confuse users. Understandability focuses on how naturally the system aligns with users' mental models.

Understandability Requirements

U-10. Familiar Wedding Terminology

The system shall use familiar terms such as "Guest List," "Booking," "RSVP," "Gehaz Checklist," rather than technical terms.

Fit Criterion:
At least 90% of users must correctly interpret terminology without needing help.

U-11. No Redundant Input

The product shall not ask users for information it already has (e.g., entering phone numbers again, retyping vendor data).

Fit Criterion:
During usability testing, the number of repeated-input complaints must be < 5%.

U-12. Polite and Respectful Tone

System messages, errors, and reminders shall be phrased politely and supportively.

Fit Criterion:
At least 85% of surveyed users must rate message tone as "polite and respectful."

Motivation

Brides and guests are easily stressed. The system must feel polite, approachable, and avoid technical jargon.

Considerations

Align system terminology with the mental models of each actor group. Systems that use intuitive metaphors reduce cognitive load and increase satisfaction.

11e. Accessibility Requirements

Content

These requirements specify how accessible the system must be to users with disabilities.

Accessibility Requirements

U-13. Color-Blind Friendly Design

The interface shall not rely solely on red/green color differences.

Fit Criterion:
All critical indicators must pass accessibility contrast testing.

U-14. Scalable Text Size

Users shall be able to enlarge text on mobile or browser without breaking the layout.

Fit Criterion:
At 150% zoom, no interface element may overlap or break.

Motivation

Accessibility ensures inclusiveness and meets basic usability expectations. It also expands the potential user base and avoids excluding users with partial disabilities.

Considerations

Keep in mind color-blind users and users with motor or cognitive challenges. Accessibility must extend across all system features, especially mobile.

12. Performance Requirements

12a. Speed and Latency Requirements

Content

This section specifies the required speed and response times of the Ayza Atgawez system, ensuring the platform performs smoothly for brides, vendors, guests, and administrators.

Performance Requirements

P-1. User Interface Response Time

Any interface between a user and the system shall respond quickly enough to avoid interrupting the user's thought flow.

Fit Criterion:
90% of user-triggered actions (buttons, navigation, form submissions) must respond in under **1.5 seconds**, and no response may exceed **3 seconds**.

P-2. Booking Request Processing Speed

The system shall process and store booking requests instantly to avoid delays in vendor communication.

Fit Criterion:
A booking request must be registered in the database within **1 second** in 95% of cases.

P-3. Search and Filtering Response Time

Vendor search results (by category, budget, or availability) shall load quickly.

Fit Criterion:
Search results shall load within **2 seconds** for a dataset of at least 10,000 vendors.

Motivation

Brides often multitask while planning, and vendors handle many requests simultaneously. Delays risk user frustration and loss of trust, making speed crucial for engagement and workflow efficiency.

Considerations

Speed requirements are important for real-time user interactions (booking, searching, notifications). Background tasks (reports, analytics) may support longer processing times. Performance expectations may increase as the system scales with user growth.

12b. Safety-Critical Requirements

Content

Even though Ayza Atgawez is not a safety-critical system (no physical harm involved), there are still data and privacy safety considerations.

Safety Requirements

P-4. User Data Protection

The product shall prevent unauthorized access to personal data, including bride contact information, guest emails, and vendor documents.

Fit Criterion:
The system must comply with data protection regulations (local privacy laws, basic GDPR principles for international users).

P-5. Secure Payment Handling

The system shall ensure all payment-related interactions meet financial safety standards.

Fit Criterion:
Payments must comply with PCI DSS guidelines (or equivalent local financial security regulation).

Motivation

Weddings involve sensitive personal and financial data. Failure to protect this information may result in privacy breaches and legal consequences.

Considerations

Although this is not a medical or aviation product, data misuse can still cause reputational harm or financial loss. Laws differ by country; if Ayza Atgawez expands globally, additional compliance may be needed.

12c. Precision or Accuracy Requirements

Content

These requirements define how accurate system data must be.

Accuracy Requirements

P-6. Monetary Accuracy

All displayed prices, vendor fees, and payment records shall be accurate to **two decimal places**.

Fit Criterion:
All financial calculations must round to two decimals using standard rounding conventions.

P-7. Date and Time Accuracy

Booking dates, notifications, reminders, and appointment reminders must display correct timestamps.

Fit Criterion:
System time must synchronize with an online time server every 10 minutes.

Motivation

Wedding planning requires precise date and cost information. Incorrect calculations or date shifts can lead to conflicts and errors.

Considerations

Accuracy also depends on international formats if the system expands. Time zone handling may become relevant if cross-regional weddings are supported.

12d. Reliability and Availability Requirements

Content

This section quantifies how often the system must be available and how often failures can occur.

Reliability Requirements

P-8. System Uptime

The product shall be available 24/7 except for scheduled maintenance.

Fit Criterion:
The product must achieve **99% uptime** availability per month.

P-9. Error Recovery

If a failure occurs, the system shall recover gracefully without losing user data.

Fit Criterion:
Recovery time after minor system outages shall not exceed **5 minutes**.

Motivation

Brides and vendors may use the system at any time of day, especially outside working hours. High uptime is essential to avoid scheduling and booking issues.

Considerations

High reliability may have cost implications. Determine whether continuous uptime or scheduled downtime is more appropriate for the business plan.

12e. Robustness / Fault-Tolerance Requirements

Content

These requirements specify how the system should behave under abnormal conditions.

Robustness Requirements

P-10. Offline Mode Gracefulness

If the system temporarily loses server connection, it shall notify the user and preserve their ongoing work without data loss.

Fit Criterion:
Form data must be cached and retried automatically every 30 seconds until the connection is restored.

P-11. Backup During Failures

The system shall perform automatic backups to prevent data loss.

Fit Criterion:
Backups must occur every **12 hours**, and restore operations must fully recover user data.

Motivation

Unexpected failures (server downtime, network issues) are normal events. Robustness ensures the system continues to function without losing important planning data.

Considerations

Consider disaster recovery procedures, database replication strategy, and handling partial failures where some services are down while others remain operational.

12f. Capacity Requirements

Content

Defines the volume of users and data the system must support.

Capacity Requirements

P-12. Concurrent Users

The system shall support up to **500 simultaneous users**, including brides, vendors, and guests.

Fit Criterion:
Stress testing must show stable performance at 500 concurrent sessions.

P-13. Data Storage

The system shall store:

- Up to 100,000 vendor profiles

- Up to 1,000,000 guest records

- Up to 500,000 bookings

Fit Criterion:
Database storage must scale to 25 GB minimum.

Motivation

Weddings are high-volume, and vendors may have many clients. The system must sustain large usage loads as the platform grows.

Considerations

Capacity planning must also consider future regional expansion and peak wedding seasons.

12g. Scalability / Extensibility Requirements

Content

These requirements ensure the system can grow in size, usage, and services.

Scalability Requirements

P-14. User Growth

The product shall scale to support up to **five times** the initial user load within three years.

Fit Criterion:
System architecture must support horizontal scaling for application servers and database sharding.

P-15. Feature Extension

The system shall allow additional modules such as event budgeting or AI recommendations

Fit Criterion:
New modules must integrate without requiring major architectural redesign.

Motivation

Wedding platforms tend to grow rapidly. Scalability ensures long-term sustainability.

Considerations

Cloud hosting solutions (AWS, Azure, Google Cloud) may support scaling needs.

12h. Longevity Requirements

Content

Specifies the expected operational lifetime of the system.

Longevity Requirement

The system shall be designed to remain operational and maintainable for at least **five years** with regular updates.

Fit Criterion:
The product must operate within acceptable performance, security, and maintenance budgets during this 5-year period.

Motivation

Developing such a platform requires investment; longevity ensures financial return and long-term user adoption.

13. Operational and Environmental Requirements

13a. Expected Physical Environment

Content
This section specifies the physical environment in which the product will operate. The "Ayza Atgawez" system is a web-based and mobile-accessible application, intended to be used by brides, vendors, and guests in normal indoor environments using personal devices.

Motivation
To highlight any environmental conditions that influence usability, device compatibility, or performance expectations.

Examples

- The product shall be usable on mobile phones, tablets, and laptops in typical indoor lighting.

- The product shall function under typical home Wi-Fi and mobile data connections.

- The interface shall remain readable on screens between 5 and 15 inches.

- The product shall be accessible outdoors as long as internet connectivity is available.

Considerations
The system is digital and not affected by temperature, sound, or weather. The primary environmental factor is network quality.

13b. Requirements for Interfacing with Adjacent Systems

Content
This section specifies the requirements for interfacing with external systems needed for the product to operate effectively.

Motivation
To avoid last-minute rework by identifying all required integrations early and ensuring compatibility with external systems.

Examples

- The product shall integrate with third-party payment gateways (Visa/Mastercard/Fawry).

- The system shall interface with an email/SMS notification service to deliver alerts to brides and vendors.

- The product shall retrieve vendor location data using Google Maps API.

- The system shall support sign-up using social login providers (optional).

Fit Criterion

For each interface, specify:

● The data content (booking details, payment status, location)

● The medium (API over HTTPS)

● Frequency (real-time)

● Volume (per user request)

● Trigger (booking submission, notification event)

● Standards/protocols (REST API, JSON)

Considerations

API rate limits, availability of external services, and compliance with external provider requirements must be considered.

13c. Productization Requirements

Content

Requirements needed to make the product ready for deployment, distribution, or installation. The system is a cloud-hosted web application requiring no installation for end users.

Motivation

To ensure that all deployment and delivery needs are included as requirements rather than left for later stages.

Examples

- The product shall be deployed as a web application accessible on any standard browser.

- The system shall be accessible without requiring installation on users' devices.

- The product shall restrict access only to authenticated brides, vendors, and admins.

Considerations

Deployment must include security configuration, hosting preparation, and database initialization.

13d. Release Requirements

Content

Specification of the planned release cycle, update frequency, and conditions for new versions of the product.

Motivation

To make the development team and stakeholders aware of release expectations and maintenance cycles.

Examples

- Bug-fix releases shall be provided every 3 months.

- Major feature releases shall be delivered annually.

- Each release shall maintain compatibility with existing user data.

- New releases shall not break existing core functionalities such as booking and vendor browsing.

Fit Criterion

Description of maintenance effort and schedule (e.g., quarterly updates requiring no more than 2 days downtime per year).

Considerations
Consider integration deadlines, academic project timelines, and stakeholder expectations.

14. Maintainability and Support Requirements

14a. Maintenance Requirements

Content
Defines the expected effort and time required to make changes to the product.

Motivation
To ensure the product is maintainable and that all stakeholders understand the expected update capabilities.

Examples

- Adding a new vendor category shall be possible within 3 working days.

- Modifying text or UI labels shall be possible within 24 hours.

- Fixing reported booking issues shall be completed within one working week.

- New reports for analytics shall be generated within 5 business days.

Considerations
The system should be modular and well-documented to support future developers who were not part of the original development team.

14b. Supportability Requirements

Content
Specifies the level of support required by the product, either through built-in help or external support.

Motivation
To ensure the product includes sufficient support mechanisms for users.

Examples

- The product shall include an FAQ section accessible to brides, vendors, and guests.

- No printed manual shall be required.

- The system shall include basic guides for managing bookings and vendor profiles.

Considerations
Support may be automated through chatbots or help pages. Human support may not be necessary for early versions.

14c. Adaptability Requirements

Content
Defines the platforms, environments, and future markets the product must be able to adapt to.

Motivation
To ensure the system is developed with portability and future expansion in mind.

Examples

- The product shall run on Windows, macOS, Android, and iOS browsers.

- The system shall support both Arabic and English language versions in future releases.

- The product may later be adapted to run as a native mobile app.

- The system shall support expansion to regional markets outside Egypt.

Fit Criterion
Specification of supported browsers and OS versions, plus time required for adaptation.

Considerations
Expectations from marketing and potential expansion should be captured early.

15. Security Requirements

15a. Access Requirements

Content
Specification of who is authorized to access which functions and data in the product.

Motivation
To ensure confidentiality and prevent unauthorized access to sensitive operations.

Examples

- Only brides can manage their wedding timeline, appointments, and gehaz items.

- Vendors can only modify their own profiles and offerings.

- Guests can only view wedding details shared with them.

- Admins can access all system data for moderation and troubleshooting.

Fit Criterion
Access roles: Admin, Bride, Vendor, Guest.

Considerations
Avoid specifying *how* the system handles access (e.g., passwords); focus only on the requirement.

15b. Integrity Requirements

Content
Specifications necessary to preserve the correctness and consistency of data.

Motivation
To ensure that system data is not corrupted, misused, or lost.

Examples

- The system shall validate all user input before saving.

- Duplicate bookings or vendor entries shall be prevented.

- The system shall log all changes to vendor information and bookings.

- The product shall protect itself from intentional data manipulation.

Considerations
Data integrity is crucial for building trust among brides and vendors.

15c. Privacy Requirements

Content
Specifications of what the product must do to uphold the privacy of individuals whose data it stores.

Motivation
To comply with privacy expectations and avoid exposure of personal information.

Examples

- The product shall not expose brides' phone numbers to guests.

- Vendors shall not see brides' private data except what is required for bookings.

- The system shall encrypt user passwords.

- The system shall inform users if privacy policies change.

Considerations
Legal constraints may apply depending on future deployment regions.

15d. Audit Requirements

Content
Requirements for logging and retaining records to support audit and traceability.

Motivation
To ensure accountability and provide evidence in case of disputes or errors.

Examples

- The system shall log all user login attempts.

- Booking cancellations and modifications shall be recorded.

- Audit logs shall be retained for 1 year.

- Admin actions shall be tracked for accountability.

Considerations
Consider potential legal or policy requirements for data retention.

15e. Immunity Requirements

Content
Requirements for protecting the product from malicious interference.

Motivation

To build a secure system resistant to attacks such as viruses, injections, or unauthorized scripts.

Examples

- The system shall sanitize all user input to prevent SQL injection.

- The system shall block users after repeated failed login attempts.

- All communication with the server shall be encrypted using HTTPS.

- Uploaded images shall be scanned or validated to prevent harmful files.

Considerations

Attacks are frequent and unpredictable; immunity must cover common web vulnerabilities (XSS, CSRF, SQL injection, brute force).

16. Cultural Requirements

16a. Cultural Requirements

CR1 – Respect for Egyptian Cultural Norms

Description:

The system shall ensure that all displayed content (vendor images, descriptions, reviews, and marketing material) aligns with Egyptian cultural values and avoids any offensive or inappropriate material.

Rationale:

Ayza Atgawez serves a culturally conservative market where inappropriate visuals or language may limit acceptance.

Fit Criterion:

No page or media may contain material that violates culturally accepted norms; reviewed and approved by the internal quality team.

CR2 – Support for Arabic as a Primary Language

Description:

Arabic (Egyptian dialect) shall be supported as a primary language for navigation, content, communication, and user interaction.

Rationale:

Most brides and vendors in Egypt prefer Arabic as the default language.

Fit Criterion:

All screens and messages must be fully usable in Arabic without placeholder English text.

CR3 – Respect for Religious Sensitivities

Description:

The product shall avoid any content, images, icons, or processes that may be offensive to any religious group.

Rationale:

Egypt has a diverse religious population; sensitivity is required.

Fit Criterion:

Compliance check by a cultural sensitivity reviewer confirms no religiously offensive material.

CR4 – Support for Local Wedding Traditions

Description:
Features such as the "Gehaz List," guest categorization, family involvement, and traditional vendor roles must reflect Egyptian wedding customs.

Rationale:
The system is designed for weddings in Egypt, where customs differ significantly from Western cultures.

Fit Criterion:
At least 80% of the features directly correspond to Egyptian wedding tasks (Gehaz, venues, zaffa, photography, MUA, etc.).

CR5 – Appropriate Color & Symbol Usage

Description:
The product shall avoid cultural misuse of colors or icons that may signal negative or inappropriate meanings (e.g., mourning colors used in celebratory interfaces).

Fit Criterion:
A design review ensures all icons and colors comply with culturally acceptable norms.

CR6 – Vendor Profiles Must Reflect Local Market

Description:
Vendor categories, pricing structures, and services must reflect Egyptian wedding industry standards (e.g., henna, zaffa shows, engagement-specific vendors, kahk, catering styles).

Fit Criterion:
Vendor category list must include at least 90% of locally expected categories.

17. Legal Requirements

17a. Legal / Compliance Requirements

LR1 – Compliance with Egyptian Data Privacy & Cyber Laws

Description:
The product shall comply with Egypt's Personal Data Protection Law (PDPL Law No. 151 of 2020) and its executive regulations.

Rationale:
To ensure legal handling of personal information (bride, vendor, guest data).

Fit Criterion:
A legal expert confirms the system complies with PDPL requirements on data storage, retention, consent, and access.

LR2 – Explicit User Consent for Data Collection

Description:
The system shall obtain explicit consent from users before collecting personal data, including names, emails, phone numbers, and wedding details.

Rationale:

Required to comply with Egyptian PDPL consent regulations.

Fit Criterion:

Consent checkbox must be logged with timestamp before account creation.

LR3 – Protection of User Images and Vendor Media

Description:

All uploaded photos (by brides or vendors) must be protected from unauthorized reuse, copying, or redistribution.

Rationale:

Wedding photos and vendor portfolios are copyrighted materials.

Fit Criterion:

Images stored securely with access controls; tested to prevent unauthorized downloads or direct URL access.

LR4 – Clear Terms of Service & Privacy Policy

Description:

The system shall provide clear, legally compliant Terms of Service and Privacy Policy accessible to all users.

Rationale:

To avoid disputes and ensure transparent liability boundaries between the platform, brides, and vendors.

Fit Criterion:

Both documents available from every page and reviewed by legal counsel.

LR5 – Protection of Vendor Business Information

Description:

Vendor pricing, packages, and proprietary content must not be used outside the system without vendor consent.

Rationale:

Vendors' business data constitutes intellectual property.

Fit Criterion:

Data cannot be exported or shown to unauthorized roles.

LR6 – Secure Handling of Reviews (Anti-Defamation)

Description:

The system shall include moderation tools to remove defamatory, harmful, or fake reviews that violate Egyptian commercial legal guidelines.

Rationale:

To prevent legal liability for hosting defamatory content.

Fit Criterion:

Admin can remove flagged reviews within 48 hours.

LR7 – Compliance with Electronic Transactions Law (E-Signatures)

Description:

If digital agreements (booking confirmations, contracts) are used, they must comply with Egyptian Electronic Signature Law No. 15 (2004).

Fit Criterion:
Digital confirmations include timestamp, user identity, and system signature.

17b. Standards Requirements

SR1 – Compliance with Security Best Practices

Description:
The system shall adhere to OWASP Top 10 security standards for web applications.

Rationale:
Prevents common security vulnerabilities.

Fit Criterion:
Security tests confirm no OWASP Top 10 vulnerabilities present before deployment.

SR2 – Industry UI/UX Standards

Description:
The product shall follow modern UX guidelines ensuring accessibility, responsiveness, and readability.

Fit Criterion:
All interfaces pass WCAG accessibility checks at AA level.

SR3 – Standardized Data Format for Vendor Listings

Description:
Vendor profiles must follow a consistent structure for name, address, pricing, categories, and media.

Rationale:
Ensures consistency across vendor entries.

Fit Criterion:
Vendor entries conform to the standard schema in 99% of cases.

SR4 – Standardized Backup & Recovery Protocol

Description:
Daily backups shall follow ISO/IEC 27001 data security guidelines.

Rationale:
Ensures reliable recovery and business continuity.

Fit Criterion:
Random recovery tests validate backup integrity monthly.

SR5 – Internal Coding & Development Standards

Description:
Developers shall follow standardized development practices (naming conventions, documentation, API guidelines).

Fit Criterion:
Code reviews confirm adherence in at least 90% of modules.

SR6 – Logging Standards

Description:
System logging must follow an internal logging framework defining log format, severity levels, error codes, and audit trails.

Fit Criterion:
Audit logs meet the defined schema across 100% of logged events.

Project Issues

18. Open Issues for The Wedding Planning System

- **18.1 Future Payment Integration:** The plan is to exclude payment functionality in the initial version, but the client intends to integrate a payment gateway later. The specific **local or international payment processor** and its technical API integration standard are currently undetermined.

- **18.2 Detailed Vendor Verification Policy:** The initial version relies on **manual approval** for vendors. However, the exact administrative process, required documentation (e.g., license confirmation), and rejection/re-application workflow for the **Verification Team** are not yet defined.

- **18.3 Guest List Data Ownership:** Clarification is needed on whether the system requires legal compliance for guest data collected (e.g., mailing address, RSVP status), particularly if the system is used across international jurisdictions (Cultural/Legal issues).

- **18.4 Mobile Responsiveness Scope:** The initial version is web-only. The precise **level of responsiveness** required on small mobile devices (e.g., functional vs. pixel-perfect) for the web application's dashboard and tools remains an open technical requirement.

Examples

The following are examples of outstanding factors that are uncertain and will influence the project's direction:

- **Gehaz Item Standardization:**

  - **Issue:** The system's **Gehaz tool** tracks items, but the definitive list of item categories and default statuses (e.g., 'Required' vs. 'Optional') is still being finalized by the Business Analyst.

  - **Effect:** This ambiguity impacts the development of the **Data Dictionary** (Section 7) and the user interface design for the Gehaz tool.

- **Rescheduling Policy Loop:**

  - **Issue:** The system handles reschedule requests. An explicit rule is needed for how many times the **Bride** or **Vendor** can propose an alternative date before the request is **automatically canceled** or defaults to **rejection**.

  - **Effect:** The lack of this rule creates a logic loop risk in the **Manage Reschedule Request** use case.

- **Data Archival Strategy:**

  - **Issue:** The system performs **Auto-Archive Completed Tasks** daily , but the policy on how long inactive **Vendor** profiles (after auto-deactivation) or historical **Guest Lists** must be retained for legal/audit purposes has not been determined.

  - **Effect:** This affects database architecture, storage costs, and **Legal Requirements** (Section 17).

- **Vendor Auto-Deactivation Criteria:**

  - **Issue:** The current rule is a simple 30-day inactivity trigger. The team needs to confirm with the client if **successful bookings** or **pending requests** within that 30-day window should override the inactivity rule to prevent deactivating an actively working vendor.

  - **Effect:** A change to this business rule could significantly alter the implementation of the **Vendor Auto-Deactivation** temporal event.

19. Off-the-Shelf Solutions

19a. Ready-Made Products

These are commercial software products or services that are mandated or highly recommended for use in the project.

- **Jira (Atlassian)**

  - **Applicability:** Mandated for **Project Management**. Used to plan, organize, and track the group's progress, define timelines, and assign tasks.

  - **Constraint Impact:** The project must utilize Jira's Project Management features (not Kanban/Scrum boards) for all task tracking and reporting.

- **GitHub**

  - **Applicability:** Mandated for **Collaborative Work** and **Version Control**. Used to store, version, and share all project materials (reports, UML files, etc.).

  - **Constraint Impact:** All files must be housed in a single GitHub repository, with mandatory regular commits and meaningful messages.

- **StarUML**

  - **Applicability:** Mandated for **UML Modeling**. Specifically required for designing and documenting **Activity Diagrams** of the two complex business processes.

  - **Constraint Impact:** Requires submission of StarUML project files (.mdj) and corresponding image exports.

19b. Reusable Components

- **Cloud-Based Notification Service (e.g., SendGrid, AWS SES)**

  - **Applicability:** To handle the system requirement for **limited notification types** (email or dashboard alerts only). This avoids building a complex in-house mail server infrastructure.

- **Third-Party Calendar Library (e.g., FullCalendar, React Big Calendar)**

  - **Applicability:** To provide the UI and functionality for the **Vendor Availability Calendar** and the **Bride's Personal Wedding Schedule**. This is more efficient than coding complex calendar rendering and logic manually.

- **Image Hosting/CDN Service (e.g., Cloudinary, Imgur API)**

- o **Applicability:** To efficiently manage the storage and retrieval of high-volume media, particularly for the **Vendor Profile photo galleries**.

19c. Products That Can Be Copied or Adapted

These are existing products whose proven workflows or structures can be legally adapted for **Ayza Atgawez** to improve usability and reduce design effort.

- **Existing Wedding Planning Platform Interfaces (e.g., The Knot, WeddingWire)**

  - o **Applicability:** The *design* and *workflow* of their **Guest List Manager** and **Gehaz tool** checklists should be studied.

  - o **Adaptation Goal:** To adopt industry-standard navigation and organization for planning tools, making the learning curve shallow for the Bride.

- **Standard RSVP Systems:**

  - o **Applicability:** The user flow for the **Guest RSVP** should mimic simple, widely-used confirmation forms to ensure ease of use for the **Guest** actor, who is only a casual user.

  - o **Adaptation Goal:** Ensure the RSVP interface is simple and personalized, requiring minimal identification details.

20. New Problems

20a. Effects on the Current Environment

This addresses changes the new product imposes on the organizational and operational setting.

- **Manual Verification Bottleneck:** Since **Vendor verification will rely on manual approval**, the system introduces a new administrative workload and potential bottleneck. If registration volume is high, the backlog of vendors waiting for verification could prevent the system from scaling effectively.

- **Vendor Training Requirement:** The system requires vendors to manage their own **Availability calendar and schedule editing**. This necessitates training for vendors, many of whom may be unfamiliar with digital tools, imposing an extra burden on the project team or support staff.

- **Project Tool Overhead:** The mandated use of **Jira** and **GitHub** for the development team requires time dedicated to learning, setup, and maintenance of these specific tools, which detracts from direct coding time.

20b. Effects on the Installed Systems

This addresses integration risks with existing or future systems.

- **Future Payment Integration Complexity:** The planned future integration of a payment gateway (excluded initially) will require extensive, stable interface design with the core booking system and could introduce significant integration problems if the payment API is not fully known in advance.

- **Notification Integration Risk:** Relying on **limited notification types (email or dashboard alerts only)** means the system must integrate successfully with an external email service. Any failure in this external interface could lead to booking confirmation failures and customer dissatisfaction.

20c. Potential User Problems

This identifies adverse reactions or difficulties that may be suffered by existing or new users.

- **Vendor Resistance:** Wedding vendors, particularly those accustomed to manual scheduling, may resist adopting the new platform due to the learning curve or the need to constantly maintain their **Availability calendar**.

- **Notification Overload/Fatigue:** If the system is not smart about consolidating **reminders** and alerts (e.g., from the personalized wedding schedule), users (Brides and Vendors) may experience alert fatigue and ignore critical system notifications, defeating the purpose of **Time-saving automation**.

- **Data Entry Fatigue:** Inputting all **guest list** details and **gehaz tool** items for a large wedding can be time-consuming and tedious, potentially leading to user dropout.

20d. Limitations in the Anticipated Implementation Environment

- **Web-Only Limitation Impact:** The **Mobile app version not covered in this phase (web only)** limitation means users accessing the system on the go will experience the web platform, which may not offer the smooth user experience of a native application, leading to perceived usability issues.

- **Scalability Risk:** If the **Vendor Profile** picture galleries are popular, the system will need robust and scalable image hosting/CDN integration to avoid slowing down the overall response time of the **View Vendor Profile** function.

20e. Follow-Up Problems

- **Demand Outpacing Vendor Capacity:** If the system is highly successful at attracting and engaging Brides, the platform may create a demand for service providers that **outstrips the capacity** of the currently registered Vendors, leading to unmet user demand and dissatisfaction.

- **Support System Overload:** The success of the core features (Booking, Scheduling) will likely generate a high volume of support inquiries (e.g., login issues, scheduling conflicts). Since the system only includes basic **Customer Support Staff** access, this minimal support infrastructure may be **overwhelmed** by high user traffic.

- **Legal/Tax Liability for Bookings:** As the system facilitates contracts and financial arrangements (even without processing payments), successful adoption may lead to legal questions regarding the platform's liability in booking disputes, contract breaches, or tax issues, which are not covered by current requirements.

- **Feature Creep Pressure:** Project success will inspire many "Ideas for Solutions" (Section 27) and new user stories for the **Waiting Room** (Section 26). Managing stakeholder expectations and prioritizing new features over maintenance and bug fixes could become a problem.

21. Tasks

This section highlights the effort required to build the **Ayza Atgawez** product, outlining the high-level steps needed to deliver the requirements and bring the product to reality.

21a. Project Planning

- **Approach & Life Cycle:** Given the clear division of features (Bride vs. Vendor) and the exclusion of complex features like Payments, an **Iterative and Incremental** approach will be used. This maximizes agility and allows core features like the Booking Workflow to be delivered and tested quickly.

- **Estimation:** Time and resource estimates for tasks will be attached to the identified **Product Use Cases (PUCs)** (Section 8) and **Functional Requirements** (Section 9) to ensure accuracy.

- **Tooling Constraint:** The project planning tool will be **Jira**, ensuring all task assignments, progress, and timelines are tracked centrally.

- **High-Level Tasks (Form):**

  - Setup & Configuration of mandated tools (**Jira** and **GitHub**).

  - Finalization of all **Open Issues** (Section 18), especially the **Vendor Verification Checklist** and **Gehaz Item Taxonomy**.

  - Development and QA of core **Vendor** features (**Manage Booking Request**, **Edit Availability Calendar**).

  - Development and QA of core **Bride** features (**Gehaz tool**, **Guest list manager**).

  - Preparation of **User Documentation** and **Vendor Training Materials** (Section 25).

  - Data conversion/collection for initial product launch (Section 22).

21b. Planning of the Development Phases

- **Phase 1: Foundation (MVP - Minimum Viable Product)**

  - **Value/Benefit:** Core functionality for vendors and basic planning tools for the bride.

  - **Functional Requirements (Partial): Vendor Profile Management** (basic) , **Search Vendor** , **View Personal Schedule** (read-only).

  - **Operating Environment Components:** Initial cloud hosting setup, database schema for core classes (**Bride**, **Vendor**, **Appointment**).

- **Phase 2: Core Coordination & Automation**

  - **Value/Benefit:** Enables smooth coordination and time-saving automation.

  - **Functional Requirements (Key):** Full **Manage Booking Request** workflow (Accept/Reject/Reschedule) , full **Edit Availability Calendar** , **Send Reminder Notification** (temporal events).

  - **Operating Environment Components:** Integration with external **Notification Service** (email alerts).

- **Phase 3: Planning Tools & Go-Live**

  - **Value/Benefit:** Comprehensive planning capabilities for the bride and completion of all core requirements.

  - **Functional Requirements (Final):** Full **Guest List Manager** with RSVP tracking , full **Gehaz Tool** , **Vendor Auto-Deactivation** (temporal event) , **Vendor Verification Registration** workflow.

  - **Non-Functional Requirements:** Full compliance with **Usability** and required **Performance** metrics.

22. Migration to the New Product

This section identifies the tasks necessary for the period of transition to the new product, ensuring a successful cutover to **Ayza Atgawez**. Since the system is new and does not replace existing automated software, the focus is on onboarding and data setup rather than data conversion.

- **Content:** A list of the conversion activities and a timetable for implementation. This defines the steps needed to successfully transition users to the new system.

- **Motivation:** To identify conversion tasks as input to the project planning process and ensure successful product adoption.

- **Initial Vendor Onboarding Campaign:** A dedicated effort must be made to attract and onboard the first wave of vendors, as the platform requires critical mass on the supply side (vendors) to attract the demand side (brides). This is a critical conversion activity.

- **Manual Data Collection (Master Data):** Tasks dedicated to populating the system with essential master data before launch. This includes gathering and inputting the full, finalized list of **Gehaz Item** categories (as per Issue 18.4 resolution) and populating the initial service **Category** list.

- **New Procedure Conversion:** Documentation and dissemination of the new operational procedures for **Customer Support Staff** and the **Verification Team** to handle scheduled and manual tasks on the **Ayza Atgawez** platform, replacing any old, disconnected manual processes.

- **Phased Implementation Strategy:** The product will be released incrementally in phases (as defined in Section 21b). Migration activities, such as user training and support documentation delivery, must be phased to align with the release schedule of core features.

- **Parallel Operation:** There is **no requirement** to run the new system in parallel with an existing automated product, as the new platform replaces manual, fragmented planning methods.

22b. Data That Has to Be Modified or Translated for the New System

- **Content:** A list of data translation tasks. Since there are no pre-existing automated systems being replaced, this focuses on **data creation and initial structure setup**.

- **Motivation:** To discover missing tasks that will affect the size and boundaries of the project and ensure the new system launches with the correct foundation data.

- **Vendor Profile Data Creation:** Requires gathering standardized and verified business data (as per Issue 18.2 resolution) to build the initial set of verified **Vendor Profiles** necessary for the core functionality.

- **Gehaz Taxonomy Translation:** The currently vague Gehaz requirements must be translated into the required data composition (e.g., specific database tables and fields) defined in the system's **Data Dictionary** (Section 7).

- **Initial User Data:** While the system won't import Bride data, provisions must be made to capture, store, and secure the new data for the initial users (e.g., registered emails and basic profile info) upon system launch.

23. Risks

- **Risk R 23.1: Vendor Adoption Failure**

  - **Summary:** Vendors resist using the platform effectively due to the complexity of the **Availability Calendar** or general resistance to digital scheduling. This is a critical risk, as it jeopardizes the core business model.

  - **Probability:** Medium

  - **Impact:** High (Loss of core value and potential revenue).

- **Contingency Plan:** Prioritize usability testing (Section 11) on the Vendor dashboard. Provide compulsory, clear video tutorials on calendar management during the onboarding phase (Section 25).

- **Risk R 23.2: Scope Creep (Payment/Chat)**

  - **Summary:** Stakeholders attempt to introduce the explicitly excluded features (**Payments** or **Chat**) mid-development, which are not currently architected.

  - **Probability:** Medium

  - **Impact:** High (Significant schedule and cost delays due to architectural rework).

  - **Contingency Plan:** Strictly enforce the **Limitations** agreed upon in the project scope. Utilize the **Waiting Room** (Section 26) for all out-of-scope requests and require formal, costed change requests with client sign-off.

- **Risk R 23.3: Manual Verification Bottleneck**

  - **Summary:** The process of **Manual Vendor Verification** becomes a severe bottleneck, delaying vendor activation and leading to frustration among new Vendors.

  - **Probability:** High

  - **Impact:** High (Vendor churn; slow platform growth).

  - **Contingency Plan:** Develop an automated pre-screening filter to handle basic data validation, minimizing the time spent by the human verifier (addressing Issue 18.2).

- **Risk R 23.4: Inaccurate Schedule/Cost Estimate**

  - **Summary:** Ambiguities from **Open Issues** (Section 18), such as the undefined **Mobile Responsiveness Standard**, lead to major underestimation of time and resources.

  - **Probability:** Medium

  - **Impact:** High (Excessive schedule pressure and budget overruns).

  - **Contingency Plan:** Resolve all major **Open Issues** (18.1, 18.2, 18.3) before the start of the design phase. Recalculate cost metrics (Section 24) upon resolution to ensure accuracy.

- **Risk R 23.5: Security/Data Breach (Guest List)**

  - **Summary:** Failure to adequately secure sensitive data collected by the **Guest List Manager** (contact info) leads to a breach or non-compliance with privacy laws.

  - **Probability:** Medium

  - **Impact:** Extreme (Legal action, brand damage, loss of trust).

  - **Contingency Plan:** Consult with legal experts (Section 17) early to define security standards. Focus extra Quality Assurance (QA) efforts specifically on data storage and access requirements for the **Guest List**.

24. Costs

Basis for Estimate

The cost estimate will be derived directly from the measurable requirements metrics specified within this documentation:

- **Number of Product Use Cases (PUCs):** Used to estimate development and testing effort for core features like **Vendor Booking** and **Guest List Management**.

- **Number of Functional Requirements (FRs):** Used to quantify the effort for all processing actions the system must perform.

- **Number of Non-Functional Requirements (NFRs):** Used to quantify the effort needed to ensure the product meets quality attributes like **Usability**, **Performance**, and **Security**.

- **Number of Requirements Constraints:** Used to estimate time spent on adhering to mandated technologies like **Jira** and **GitHub**.

Estimation Methodology

- The estimate will be expressed as a **range** rather than a single figure to reflect the current ambiguity in requirements, especially those tied to unresolved **Open Issues** (Section 18).

- Estimates will be based on determining the resources each specific type of deliverable (e.g., one PUC) will take to produce within the development environment.

Cost Components

The final cost estimate will include, but not be limited to:

- **Development Cost:** The primary cost, covering the time and resources required to implement all PUCs and satisfy the NFRs.

- **Tooling Cost:** Licensing fees (if applicable) for mandated off-the-shelf software (Jira, StarUML, image hosting services).

- **Operational Cost:** Initial estimate for cloud hosting and external notification service costs, which are required for the live system.

- **Contingency Cost:** A buffer to manage the impact of identified **Risks** (Section 23), especially those with a high probability or impact.

- **Ancillary Costs:** Estimates for user training and documentation production.

25. User Documentation and Training

This section specifies the user documentation and training required for the successful use and support of the **Ayza Atgawez** product, defining the client's expectations for manuals and support materials.

25a. User Documentation Requirements

The following documentation deliverables will be produced:

- **Vendor Management Guide:** A comprehensive guide detailing every aspect of a Vendor's profile, including how to set up **Service Packages**, upload photos, and manage the complex **Availability Calendar** and **Booking Request** workflows.

- **Bride Planning Guide (User Manual):** A guide covering all Bride-centric tools, including navigating the **Personalized Dashboard**, using the specialized **Gehaz Tool**, and managing the **Guest List Manager** with RSVP tracking.

- **Support & Troubleshooting FAQ:** A publicly accessible document containing resolutions for common user issues (e.g., login problems, notification errors).

- **Technical Interface Specification:** Internal documentation detailing API formats for notifications and calendar integration (e.g., iCalendar format) for the **Maintenance Users** and developers.

25b. Training Requirements

Training efforts will focus on minimizing the initial difficulty of the most complex features:

- **Vendor Onboarding Tutorials (Mandatory):** A set of short, high-priority video or in-app tutorials demonstrating the core, complex workflows, such as the process for **proposing an alternative rescheduled date** and setting up **Availability Calendar** rules.

- **Customer Support Staff Training:** Internal training sessions focused on utilizing the support interface (Admin Dashboard, if implemented) to access **Bride's account details and booking history** for efficient troubleshooting.

- **System Usage Scenarios:** Training materials will utilize the **Product Use Cases (PUCs)** and their scenarios (e.g., how a Bride uses the system to accept a rescheduled meeting) as the basis for training users on how to perform specific tasks.

- **Training Goal:** The training is designed to enable a new Vendor to efficiently manage their calendar and booking requests within a minimal amount of time post-onboarding.

26. Waiting Room

The following high-value features and requirements are formally placed in the Waiting Room, meaning they are excluded from the initial scope:

- **Payment Processing Integration:** The ability for Brides to securely process payments or deposits to Vendors directly through the platform. This is a critical future revenue and convenience feature.

- **Chat System / In-App Messaging:** Direct, real-time messaging functionality between Brides and Vendors to handle quick questions and confirmations.

- **Native Mobile Application:** Development of a dedicated iOS/Android mobile app for a smoother, on-the-go experience and reliable push notifications.

- **Advanced Analytics and Reporting:** Customizable monthly and quarterly reports for **Founders/Investors** (beyond the basic metrics). This includes metrics like vendor conversion rates and subscription trends.

- **Bi-Directional Calendar Synchronization:** Capability to automatically sync confirmed appointments between the platform and external calendar services (e.g., Google Calendar, Outlook).

- **Vendor Subscription/Tier Management:** Functionality allowing the system to manage different subscription levels or featured listing tiers for Vendors (relevant to the Business Partner user story).

27. Ideas for Solutions

Ideas for Enhancing Usability and Engagement

- **Progress Gamification:** Use visual elements, such as animated completion bars or celebratory icons, on the **Personalized Dashboard Overview** to encourage Brides to complete tasks in the **Gehaz Tool** and **Guest List Manager**.

- **Drag-and-Drop Scheduling:** Implement a highly intuitive drag-and-drop interface within the **Availability Calendar** to allow Vendors to block or open date/time slots quickly, reducing the effort required for calendar management.

- **Interactive Gehaz Templates:** Provide users with pre-filled, comprehensive **Gehaz** templates based on common local wedding traditions (e.g., "Full Bedroom Set") that Brides can quickly customize rather than building the list item-by-item.

Ideas for Automation and System Intelligence

- **Automated Vendor Suggestion Algorithm:** Implement a feature to automatically suggest suitable **Vendors** to Brides based on their current planning progress, wedding date, location, and preferred category, utilizing data points stored in the system.

- **Review Vetting Flagging:** Introduce an administrative rule that automatically flags a new **Review and Rating** for manual review by a support staff member if the rating is below a certain threshold (e.g., 2 stars) and contains specific negative keywords, ensuring fair vendor representation.

- **Reschedule AI:** When a Vendor proposes a new date/time, the system could automatically check the **Bride's Personal Schedule** for hard conflicts before sending the notification, proposing the next free slot if a conflict is found.

Ideas for Future System Structure

- **Modular Notifications:** Build the notification system (email/dashboard alerts) using a highly modular component that can easily accommodate future integrations, such as native push notifications, if the mobile app is developed later.

- **Unified Search API:** Design a single, powerful API endpoint for the **Search Vendor Directory** that can be extended to search other categories, like **Gehaz Items** or **Guest Records**, if the system requires a universal search capability in the future.