

STAR Community App - Application Flow Document

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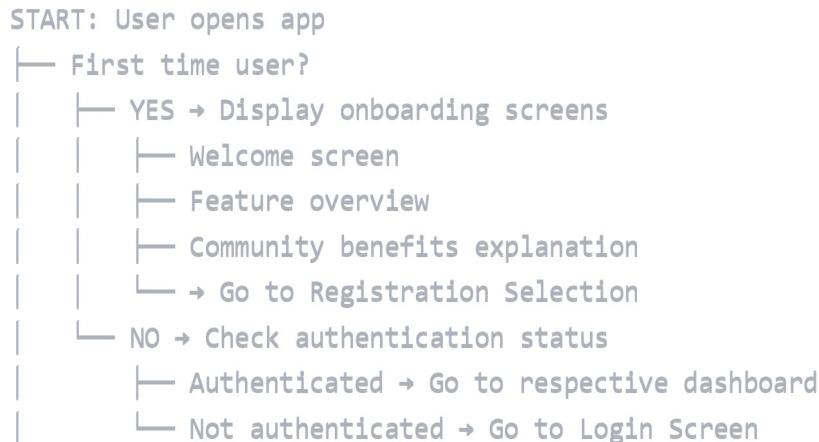
Overview

The STAR Community app serves four primary user types:

- **Residents:** Community members seeking services
 - **Service Providers (SPs):** Local businesses/individuals offering services
 - **Agents:** Platform promoters and community liaisons
 - **Administrators:** System managers and Cause Champions
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User Registration & Authentication Flows

1.1 Initial App Launch Flow



1.2 Registration Selection Flow

Registration Selection Screen

- "I'm a Resident" → Resident Registration Flow
- "I'm a Service Provider" → SP Registration Flow
- "I'm an Agent" → Agent Registration Flow
- "Already have account" → Login Flow

1.3 Resident Registration Flow

Resident Registration

- Step 1: Basic Information
 - Input: Full Name, Phone Number, Email
 - Validation: Phone format, email format
 - Error: Invalid format → Show error message, stay on form
 - Success → Next Step
- Step 2: Location & Verification
 - Input: Address, Area/Community selection
 - Action: Send SMS OTP to phone
 - Error: SMS delivery failed → Retry option or alternative verification
 - Success → Next Step
- Step 3: OTP Verification
 - Input: 6-digit OTP code
 - Validation: Code match and expiry check
 - Error: Invalid/expired OTP → Resend option
 - Success → Next Step
- Step 4: Profile Setup
 - Input: Profile photo (optional), preferences
 - Action: Accept terms and conditions
 - Success → Account created
- Completion:
 - Welcome message
 - Initial token bonus (if applicable)
 - → Go to Resident Dashboard

1.4 Service Provider Registration Flow

SP Registration

- Step 1: Business Information
 - Input: Business name, owner name, contact details
 - Validation: Required fields, format validation
 - Success → Next Step
- Step 2: Service Categories
 - Action: Select service categories offered
 - Input: Specific services within categories
 - Success → Next Step
- Step 3: Verification Documents
 - Input: ID document upload
 - Input: Business registration (optional)
 - Input: Professional certifications (optional)
 - Validation: File format and size checks
 - Success → Next Step
- Step 4: Location & Availability
 - Input: Service area, operating hours
 - Action: Set up initial calendar availability
 - Success → Next Step
- Step 5: Profile & Portfolio
 - Input: Business description, portfolio images
 - Input: Pricing information
 - Success → Account created (pending review)
- Completion:
 - Account under review message
 - Estimated review time
 - → Email notification when approved

1.5 Agent Registration Flow

Agent Registration

- Step 1: Personal Information
 - Input: Full name, contact details, location
 - Success → Next Step
- Step 2: Agent Application
 - Input: Experience, motivation, availability
 - Input: Social media profiles (optional)
 - Success → Next Step
- Step 3: Background Verification
 - Input: References, ID verification
 - Action: Admin review process
 - Success → Pending approval status
- Completion:
 - Application submitted message
 - Review timeline information
 - → Notification when approved/rejected

1.6 Login Flow

Login Screen

- Input: Phone number/Email + Password
 - Action: Submit credentials
 - Validation: Credential verification
 - Success → Determine user type
 - | — Resident → Resident Dashboard
 - | — SP → SP Dashboard
 - | — Agent → Agent Dashboard
 - | — Admin → Admin Dashboard
 - Error: Invalid credentials
 - | — Show error message
 - | — Increment failed attempt counter
 - | — After 3 attempts → Account temporarily locked
 - Forgot Password → Password Reset Flow
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Resident User Flows

2.1 Main Resident Dashboard Flow

Resident Dashboard

- Top Section: Token balance, location, notifications
- Quick Actions:
 - | — "Find Services" → Service Discovery Flow
 - | — "My Bookings" → Booking Management Flow
 - | — "STAR Projects" → Community Projects Flow
 - | — "STAR Causes" → Community Causes Flow
- Recent Activity Feed
- Featured Services
- Community Updates

2.2 Service Discovery Flow

Service Discovery

- Entry Point: Search or browse categories
- Search Flow:
 - | — Input: Service type or keywords
 - | — Filters: Location, price range, rating, availability
 - | — Results: List of matching SPs
 - | — Sort: Price, rating, distance, availability
- Browse Categories Flow:
 - | — Display: Service categories grid
 - | — Select: Category → SPs in category
 - | — Filter/Sort: Same as search results
- SP Selection → SP Profile Flow

2.3 SP Profile & Booking Flow

SP Profile View

- Display: SP information, ratings, portfolio
- Actions Available:
 - "Message SP" → Chat Flow
 - "Book Service" → Booking Flow
 - "View Reviews" → Reviews Display
 - "Share Profile" → Social sharing
- Booking Flow:
 - Step 1: Service Selection
 - Display: Available services and pricing
 - Select: Specific service
 - Validation: Service availability
 - Step 2: Date/Time Selection
 - Display: SP's available calendar slots
 - Select: Preferred date/time
 - Validation: Slot still available
 - Error: Slot taken → Refresh calendar
 - Step 3: Booking Details
 - Input: Special requirements, address details
 - Display: Total cost in tokens
 - Validation: Sufficient token balance
 - Step 4: Payment Confirmation
 - Display: Booking summary
 - Action: Confirm booking
 - Process: Token deduction and escrow
 - Generate: Unique Service ID (SI)
 - Send: SMS with SI to resident
 - Completion:
 - Booking confirmation
 - SP notification sent
 - Calendar updated
 - → Booking Management

2.4 Service Request Creation Flow

Create Service Request

- Step 1: Service Details
 - | — Input: Service type, description, requirements
 - | — Input: Preferred budget range
 - | — Input: Timeline/deadline
- Step 2: Location & Contact
 - | — Input: Service location
 - | — Input: Contact preferences
 - | — Input: Additional notes
- Step 3: Request Configuration
 - | — Set: Bidding deadline
 - | — Set: Request visibility (public/private)
 - | — Review: Complete request details
- Step 4: Publish Request
 - | — Action: Submit request
 - | — Process: Notify relevant SPs
 - | — Status: Request active for bidding
- Management:
 - | — View: Incoming bids
 - | — Compare: SP proposals
 - | — Select: Preferred SP
 - | — Convert: To regular booking

2.5 Booking Management Flow

My Bookings Dashboard

Tabs:

- |- "Upcoming" → Future bookings
- |- "Active" → Current/in-progress services
- |- "Completed" → Past services
- |- "Cancelled" → Cancelled bookings

Booking Actions:

- |- Upcoming Bookings:
 - |- "Reschedule" → Reschedule Flow
 - |- "Cancel" → Cancellation Flow
 - |- "Message SP" → Chat Flow
 - |- "Get Directions" → Map integration
- |- Active Bookings:
 - |- "Message SP" → Chat Flow
 - |- "Track Status" → Status updates
 - |- "Complete Service" → Service Completion Flow
- |- Completed Bookings:
 - |- "Rate & Review" → Review Flow
 - |- "Rebook Service" → New booking with same SP
 - |- "View Invoice" → Transaction details
- |- Service Completion Flow:
 - |- Verification: SP requests SI
 - |- Action: Resident provides SI to SP
 - |- Confirmation: Service marked complete
 - |- Payment: Tokens released from escrow
 - |- Prompt: Rate and review service

2.6 Token Management Flow

Token Wallet

- Display: Current balance, transaction history
 - Purchase Tokens:
 - Options: Individual purchase or subscription
 - Individual Purchase:
 - Select: Token quantity
 - Calculate: Total cost
 - Payment: Via mobile payment/banking
 - Confirmation: Tokens added to wallet
 - Subscription Setup:
 - Select: Monthly package tier
 - Configure: Payment method
 - Confirm: Recurring subscription
 - Benefits: Bonus tokens, priority booking
 - Redeem Tokens:
 - Input: Quantity to redeem
 - Calculate: Cash value ($0.9 * \text{token cost}$)
 - Confirm: Bank account details
 - Process: Transfer to bank account
 - Transaction History:
 - Filter: By date, type, amount
 - Details: Transaction specifics
 - Export: Transaction report
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Service Provider (SP) Flows

3.1 SP Dashboard Flow

- SP Dashboard
 - Overview Section:
 - Today's bookings
 - Token earnings
 - Rating summary
 - Pending notifications
 - Quick Actions:
 - "Manage Calendar" → Calendar Management
 - "View Bookings" → Job Management
 - "Service Requests" → Browse/bid on SRs
 - "Profile Settings" → Profile Management
 - Performance Metrics:
 - Weekly/monthly earnings
 - Booking completion rate
 - Average rating
 - Response time statistics
 - Recent Activity Feed

3.2 Job Management Flow

Job Management Dashboard

Job Categories:

- └ "Pending" → Upcoming confirmed bookings
- └ "In Progress" → Currently active jobs
- └ "Awaiting Completion" → Jobs ready for SI entry
- └ "Completed" → Finished jobs
- └ "Cancelled" → Cancelled bookings

Job Actions:

- └ Pending Jobs:
 - └ "View Details" → Job information
 - └ "Message Client" → Chat with resident
 - └ "Get Directions" → Navigation
 - └ "Start Job" → Mark as in progress
- └ In Progress Jobs:
 - └ "Update Status" → Progress notifications
 - └ "Message Client" → Communication
 - └ "Complete Job" → Request SI from client
- └ Awaiting Completion:
 - └ "Enter Service ID" → SI Entry Flow
 - └ "Contact Client" → If SI not provided

SI Entry Flow:

- └ Input: Service ID from resident
- └ Validation: SI format and authenticity
- └ Success: Job marked complete, tokens transferred
- └ Error: Invalid SI → Contact support/client
- └ Completion: Payment received, rating prompt sent to client

3.3 Calendar Management Flow

Calendar Management

- View Options:
 - Daily view
 - Weekly view
 - Monthly view
- Availability Management:
 - Set Working Hours:
 - Daily schedules
 - Day-off settings
 - Holiday scheduling
 - Block Time Slots:
 - Personal appointments
 - Maintenance time
 - Emergency blocks
 - Booking Settings:
 - Advance booking limits
 - Minimum booking notice
 - Buffer time between services
- Booking Management:
 - View existing bookings
 - Reschedule requests
 - Cancellation handling
- Integration:
 - Sync with personal calendar
 - Export booking data

3.4 Service Request Bidding Flow

Service Request Marketplace

- Browse Available SRs:
 - Filter by service type
 - Filter by location
 - Filter by budget range
 - Sort by deadline/date posted
- SR Detail View:
 - Display: Full request details
 - Display: Resident's requirements
 - Display: Timeline and budget
 - Display: Existing bids (if visible)
- Create Bid:
 - Step 1: Proposal Details
 - Input: Service approach
 - Input: Timeline estimate
 - Input: Detailed cost breakdown
 - Step 2: Pricing
 - Input: Total price in tokens
 - Validation: Within resident's budget
 - Justification: Value proposition
 - Step 3: Additional Information
 - Input: Relevant experience
 - Upload: Portfolio samples
 - Input: Questions for resident
 - Step 4: Submit Bid
 - Review: Complete proposal
 - Submit: Bid to resident
 - Notification: Bid submitted successfully
- Bid Management:
 - Track: Bid status
 - Respond: To resident questions
 - Update: Bid if allowed

3.5 Profile & Portfolio Management Flow

Profile Management

— Basic Information:

- Edit: Business name, description
- Update: Contact information
- Manage: Service areas

— Service Offerings:

- Add/Remove: Service categories
- Update: Service descriptions
- Modify: Pricing structure
- Set: Service availability

— Portfolio Management:

- Upload: Work samples
- Organize: Into categories
- Add: Project descriptions
- Remove: Outdated content

— Certification Management:

- Upload: Professional certificates
- Update: Qualification information
- Verify: Credential authenticity

— Performance Insights:

- View: Rating trends
- Analyze: Client feedback
- Improve: Based on reviews

Agent User Flows

4.1 Agent Dashboard Flow

Agent Dashboard

- Performance Overview:
 - Monthly sign-ups
 - Commission earned
 - Active subscribers
 - Leaderboard position
- Quick Actions:
 - "Onboard New User" → User Registration Assistance
 - "Marketing Materials" → Promotional Content
 - "Track Performance" → Analytics Dashboard
 - "Cause Management" → Cause Champion functions
- Target Metrics:
 - Monthly sign-up goals
 - Social media post requirements
 - Commission projections
- Recent Activity:
 - New sign-ups
 - Commission updates
 - Platform notifications

4.2 User Onboarding Assistance Flow

Assisted Registration

- User Type Selection:
 - Help resident registration
 - Help SP registration
- Registration Assistance:
 - Guide through registration steps
 - Verify information accuracy
 - Assist with document uploads
 - Resolve technical issues
- Agent Attribution:
 - Link new user to agent
 - Record referral source
 - Set up commission tracking
- Follow-up Actions:
 - Send welcome materials
 - Schedule orientation call
 - Monitor initial app usage

4.3 Cause Champion Functions Flow

Cause Champion Dashboard

- Cause Applications:
 - Review: Submitted applications
 - Investigate: Cause legitimacy
 - Verify: Supporting documentation
 - Decision: Approve/reject application
 - Active Cause Management:
 - Monitor: Donation progress
 - Update: Cause status and information
 - Communicate: With cause beneficiaries
 - Report: Fund utilization
 - Cause Creation:
 - Set up: Approved causes in app
 - Configure: Target amounts and deadlines
 - Upload: Supporting media
 - Publish: Cause for community donations
 - Reporting:
 - Generate: Cause impact reports
 - Track: Donation patterns
 - Provide: Transparency updates
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Community Features Flows

5.1 STAR Projects Flow

STAR Projects Hub

Project Discovery:

- Browse: Active projects
- Filter: By category, funding level
- Search: Specific project types

Project Creation:

- Step 1: Project Details
 - Input: Project title, description
 - Input: Community benefit explanation
 - Input: Expected outcomes
- Step 2: Project Requirements
 - Input: Token target amount
 - Input: Project deadline
 - Input: Minimum contributors
 - Input: Geographic scope
- Step 3: Project Management
 - Set: Creator as default admin
 - Configure: Voting mechanisms
 - Set: Communication preferences
- Step 4: Launch Project
 - Review: Complete project details
 - Publish: Project for community joining
 - Notify: Relevant community members

Project Participation:

- Join Project:
 - Review: Project details and requirements
 - Confirm: Token contribution amount
 - Deduct: Tokens from wallet to escrow
 - Access: Project collaboration area
- Project Collaboration:
 - Chat: With other project members
 - Vote: On project decisions
 - Track: Project progress
 - Receive: Update notifications
- SP Selection Process:
 - Review: SP applications
 - Evaluate: Proposals and experience
 - Vote: On preferred SP
 - Appoint: Selected SP

Project Completion:

- Quality Assurance:
 - QA Review: Completed work
 - Member Consultation: If required
 - Approve/Reject: Work completion
 - Release: Service ID to SP
- Project Closure:
 - Final Report: Project outcomes
 - Token Distribution: If incomplete
 - Success Celebration: Community recognition

- └ Post-Project:
 - ├ Impact Assessment: Community benefit
 - ├ Lessons Learned: For future projects
 - └ Member Recognition: Contribution acknowledgment

5.2 STAR Causes Flow

STAR Causes Hub

- └ Cause Discovery:
 - ├ Browse: Active causes
 - ├ Filter: By urgency, category, location
 - ├ Follow: Causes of interest
 - └ Share: Causes on social media
- └ Cause Application (by residents):
 - ├ Application Form:
 - ├ Input: Cause description
 - ├ Input: Supporting documentation
 - ├ Input: Beneficiary information
 - └ Input: Funding target and timeline
 - ├ Verification Documents:
 - ├ Upload: Proof of need
 - ├ Upload: Beneficiary consent
 - └ Upload: Supporting evidence
 - └ Submission:
 - ├ Submit: Application to Cause Champion
 - ├ Receive: Application confirmation
 - └ Wait: For review and approval
- └ Donation Process:
 - ├ Select Cause: From available causes
 - ├ Choose Amount: Token donation amount
 - ├ Confirm Donation: Review and confirm
 - ├ Process Payment: Deduct from wallet
 - └ Receive Confirmation: Donation acknowledgment
- └ Cause Tracking:
 - ├ Progress Updates: From Cause Champion
 - ├ Funding Status: Current vs target amounts
 - ├ Timeline Updates: Milestones and deadlines
 - └ Impact Reports: How funds are used
- └ Cause Closure:
 - ├ Final Report: Cause outcome
 - ├ Fund Distribution: To beneficiaries
 - ├ Community Update: Results and impact
 - └ Thank You: To all contributors

Token Economy Flows

6.1 Token Purchase Flow

Token Purchase

- Purchase Options:
 - One-time Purchase:
 - Select: Token quantity
 - Calculate: Total cost
 - Choose: Payment method
 - Process: Payment transaction
 - Subscription Purchase:
 - Select: Monthly package tier
 - Review: Package benefits
 - Set up: Recurring payment
 - Configure: Auto-renewal settings
- Payment Processing:
 - Mobile Money: EFT, banking app integration
 - Card Payment: Credit/debit card
 - Bank Transfer: Direct bank transfer
 - Alternative: Agent-assisted payment
- Transaction Completion:
 - Payment Verification: Confirm payment received
 - Token Allocation: Add tokens to wallet
 - Receipt Generation: Transaction receipt
 - Confirmation: SMS/email notification
- Error Handling:
 - Payment Failed: Retry options
 - Partial Payment: Refund/completion options
 - Technical Issues: Support contact information

6.2 Token Redemption Flow

Token Redemption

- Redemption Request:
 - Input: Number of tokens to redeem
 - Calculate: Cash value ($0.9 * \text{cost price}$)
 - Display: Final amount after fees
 - Confirm: Redemption amount
- Bank Details:
 - Input: Bank account information
 - Verify: Account ownership
 - Confirm: Transfer details
 - Security: Additional verification if needed
- Processing:
 - Validate: Sufficient token balance
 - Deduct: Tokens from wallet
 - Initiate: Bank transfer
 - Generate: Transaction reference
- Completion:
 - Confirmation: Redemption processed
 - Timeline: Expected transfer time
 - Tracking: Reference number provided
 - Notification: When transfer completes
- Error Scenarios:
 - Insufficient Balance: Error message
 - Invalid Bank Details: Correction required
 - Transfer Failed: Retry/support options
 - System Issues: Support escalation

6.3 Subscription Management Flow

Subscription Management

- Subscription Dashboard:
 - | — Current Plan: Active subscription details
 - | — Next Billing: Date and amount
 - | — Token Balance: Current and projected
 - | — Usage Statistics: Monthly consumption
- Plan Management:
 - | — Upgrade Plan:
 - | — Compare: Plan options
 - | — Calculate: Price difference
 - | — Confirm: Upgrade
 - | — Apply: Immediate upgrade
 - | — Downgrade Plan:
 - | — Review: New plan features
 - | — Confirm: Downgrade
 - | — Apply: Next billing cycle
 - | — Cancel Subscription:
 - | — Retention: Offer alternatives
 - | — Confirm: Cancellation
 - | — Process: End of current period
 - | — Confirmation: Cancellation processed
- Billing Management:
 - | — Payment Method: Update/change
 - | — Billing History: Previous payments
 - | — Invoice Download: PDF receipts
 - | — Failed Payment: Retry/update payment
- Auto-renewal:
 - | — Enable/Disable: Auto-renewal toggle
 - | — Notification: Renewal reminders
 - | — Grace Period: Payment retry window

Error Handling & Exception Flows

7.1 Network & Connectivity Errors

Network Error Handling

- Connection Lost:
 - Detection: Network status monitoring
 - User Notification: "Connection lost" message
 - Retry Mechanism: Automatic retry attempts
 - Offline Mode: Limited functionality
 - Recovery: Resume when connection restored
- Slow Connection:
 - Detection: Response time monitoring
 - User Feedback: Loading indicators
 - Optimization: Reduce data usage
 - Timeout Handling: Graceful failure
- Server Errors:
 - 5xx Errors: Server maintenance message
 - API Failures: Retry with backoff
 - Service Unavailable: Alternative actions
 - Error Reporting: Log for analysis
- Data Sync Issues:
 - Conflict Resolution: Server vs local data
 - Data Recovery: Restore from backup
 - Sync Retry: Automatic synchronization
 - Manual Sync: User-initiated sync

7.2 Payment & Transaction Errors

Payment Error Handling

— Payment Failures:

- Insufficient Funds:
 - Display: Clear error message
 - Suggest: Top-up options
 - Retain: Transaction for retry
- Card Declined:
 - Display: Generic decline message
 - Suggest: Alternative payment methods
 - Contact: Bank if needed
- Payment Gateway Error:
 - Retry: Automatic retry
 - Alternative: Different payment method
 - Support: Contact information
- Timeout Errors:
 - Status Check: Verify payment status
 - Prevent: Duplicate charges
 - Resolution: Manual verification

— Token Transaction Errors:

- Insufficient Token Balance:
 - Block: Transaction attempt
 - Display: Current balance
 - Redirect: Token purchase
- Escrow Failures:
 - Rollback: Transaction reversal
 - Notification: User and SP alert
 - Support: Manual resolution
- Redemption Issues:
 - Bank Validation: Account verification
 - Transfer Failure: Retry mechanism
 - Dispute Resolution: Support process

— Double-spending Prevention:

- Transaction Locking: Prevent duplicates
- Balance Verification: Real-time checks
- Audit Trail: Complete transaction history

7.3 Booking & Service Errors

Booking Error Handling

— Calendar Conflicts:

- Slot Unavailable:
 - Real-time Check: Availability verification
 - Alternative Suggestions: Other available slots
 - Notification: SP of booking attempt
- Double Booking:
 - Prevention: Locking mechanism
 - Resolution: First-come-first-served
 - Compensation: Alternative options
- SP Unavailability:
 - Auto-notification: SP of cancellation
 - Refund Process: Token return
 - Alternative: Suggest other SPs

— Communication Failures:

- SMS Delivery Failed:
 - Retry: Multiple delivery attempts
 - Alternative: In-app notification
 - Manual: Agent assistance
- Push Notification Issues:
 - Fallback: SMS notification
 - Email: Backup communication
 - In-app: Message center
- Chat System Down:
 - Alternative: Phone contact
 - Status: System status page
 - Recovery: Message queue

— Service Completion Issues:

- Missing Service ID:
 - Resend Option: SMS resend
 - Support Contact: Manual resolution
 - Verification: Alternative methods
- Invalid Service ID:
 - Validation: Format checking
 - Error Message: Clear explanation
 - Resolution: Support assistance
- Dispute Resolution:
 - Evidence Collection: Photos, messages
 - Mediation: Admin intervention
 - Resolution: Refund/re-service

— No-show Scenarios:

- SP No-show:
 - Automatic Refund: Token return
 - Penalty System: SP rating impact
 - Alternative SP: Suggest replacements
- Resident No-show:
 - Grace Period: 15-minute waiting time
 - SP Compensation: Partial token payment
 - Resident Penalty: Warning/account flag

└ Rebooking: Resident can reschedule

7.4 User Account & Authentication Errors

Authentication Error Handling

└ Login Issues:

└ Account Locked:

 └ Display: Lockout message with timeline

 └ Recovery: Account unlock process

 └ Prevention: Security best practices

└ Forgotten Password:

 └ Password Reset: Email/SMS reset link

 └ Security Questions: Alternative verification

 └ Account Recovery: Support assistance

└ Suspended Account:

 └ Notification: Suspension reason

 └ Appeal Process: Account review request

 └ Resolution: Reinstatement or closure

└ Device/Location Issues:

 └ New Device: Verification required

 └ Suspicious Activity: Additional security

 └ Location Blocking: Geofencing alerts

└ Profile & Data Issues:

└ Profile Corruption:

 └ Data Recovery: Backup restoration

 └ Profile Rebuild: User re-entry

 └ Support: Technical assistance

└ Document Verification Failed:

 └ Resubmission: Clear requirements

 └ Alternative Documents: Accepted formats

 └ Manual Review: Admin verification

└ Data Sync Conflicts:

 └ Conflict Resolution: User choice

 └ Backup Recovery: Previous version

 └ Merge Process: Combine data sources

└ Permission & Access Errors:

└ Feature Access Denied:

 └ Subscription Required: Upgrade prompts

 └ Verification Needed: Document upload

 └ Geographic Restrictions: Service area limits

└ Role-based Access:

 └ Insufficient Permissions: Role verification

 └ Role Change: Admin approval required

- | └ Temporary Access: Limited time permissions
- | └ API Rate Limiting:
 - | └ Rate Limit Exceeded: Cooling-off period
 - | └ ~~Premium Bypass: Subscription benefits~~
 - | └ Fair Usage: Usage guidelines

Community Features Error Handling

STAR Projects Errors:

Project Creation Failed:

Validation Errors: Field requirements

Duplicate Projects: Conflict detection

Resource Limits: Maximum project limits

Joining Project Issues:

Insufficient Tokens: Balance check

Project Full: Participation limits

Deadline Passed: Project closure

Geographic Restrictions: Area limitations

Voting System Errors:

Double Voting: Prevention mechanisms

Voting Deadline: Time limit enforcement

Quorum Issues: Minimum participation

Project Completion Issues:

QA Disputes: Resolution process

SP Performance: Quality standards

Fund Distribution: Escrow release

Project Abandonment: Refund process

STAR Causes Errors:

Cause Application Rejected:

Reason Provided: Clear explanation

Appeal Process: Resubmission option

Alternative Suggestions: Similar causes

Donation Processing Errors:

Payment Failure: Retry mechanism

Cause Closed: Refund/redirect options

Amount Limits: Maximum donation rules

Cause Management Issues:

Champion Unavailable: Backup assignment

Update Failures: Manual intervention

Transparency Concerns: Audit process

Fund Distribution Problems:

Beneficiary Verification: Identity checks

Transfer Failures: Alternative methods

Fraud Prevention: Monitoring systems

Chat & Communication Errors:

Message Delivery Failed:

Retry Mechanism: Automatic resending

Offline Storage: Queue for later

Alternative Channels: SMS/email backup

Inappropriate Content:

- | | Inappropriate Content:
 - | | Content Filtering: Automated detection
 - | | User Reporting: Community moderation
 - | | Moderation Action: Warning/suspension
 - | | Appeal Process: Content review
- | | Spam Prevention:
 - | | Rate Limiting: Message frequency limits
 - | | Pattern Detection: Automated spam detection
 - | | User Blocking: Temporary restrictions
- | | Community Reporting: User-driven moderation

System Administrative Flows

8.1 User Management Administrative Flow

Admin User Management

User Verification:

- |— SP Verification Queue:
 - |— Review: Registration documents
 - |— Verify: Business credentials
 - |— Background Check: Identity verification
 - |— Approve/Reject: Account status
 - |— Notification: Decision communication
- |— Agent Application Review:
 - |— Evaluate: Application completeness
 - |— Reference Check: Background verification
 - |— Interview: Optional screening call
 - |— Decision: Approval/rejection
 - |— Onboarding: Training materials

Cause Champion Approval:

- |— Assess: Community standing
- |— Verify: Credentials and experience
- |— Training: Platform responsibilities
- |— Certification: Champion status
- |— Monitoring: Performance tracking

Account Moderation:

- |— Suspension Management:
 - |— Violation Detection: Rule enforcement
 - |— Investigation: Evidence collection
 - |— Decision: Penalty determination
 - |— Implementation: Account restriction
 - |— Communication: User notification
- |— Appeals Process:
 - |— Receive: User appeals
 - |— Review: Case evidence
 - |— Investigate: Additional information
 - |— Decision: Uphold/overtturn
 - |— Implementation: Account status change
- |— Permanent Bans:
 - |— Severe Violations: Policy breaches
 - |— Final Warning: Last chance notice
 - |— Ban Implementation: Account closure
 - |— Data Retention: Legal compliance

Performance Monitoring:

- |— SP Performance Tracking:
 - |— Monitor: Ratings and reviews
 - |— Identify: Underperforming providers
 - |— Intervention: Improvement support

- | | | └─ Intervention: Improvement support
- | | └─ Action: Probation/removal
- | └─ Agent Performance Review:
 - | | └─ Track: Sign-up metrics
 - | | └─ Evaluate: Activity levels
 - | | └─ Reward: Top performers
 - | | └─ Support: Struggling agents
- └─ Community Health:
 - | └─ Monitor: Platform usage patterns
 - | └─ Identify: Concerning trends
 - | └─ Intervention: Corrective measures
 - | └─ Enhancement: Feature improvements
- └─ Data Management:
 - └─ User Data Privacy:
 - | └─ Compliance: POPIA/GDPR requirements
 - | └─ Data Requests: User information access
 - | └─ Data Deletion: Account closure cleanup
 - | └─ Audit Trail: Data access logging
 - └─ Backup & Recovery:
 - | └─ Regular Backups: Automated scheduling
 - | └─ Data Integrity: Verification checks
 - | └─ Recovery Testing: Restore procedures
 - | └─ Disaster Recovery: Emergency protocols
 - └─ Analytics & Reporting:
 - | └─ Usage Statistics: Platform metrics
 - | └─ Financial Reports: Token economy health
 - | └─ Community Impact: Social benefit tracking
 - | └─ Performance Dashboards: KPI monitoring

8.2 Financial System Administrative Flow

Financial System Administration

Token Economy Management:

Token Price Setting:

Market Analysis: Economic factors

Price Adjustment: Rate modifications

Impact Assessment: User behavior analysis

Communication: Price change notifications

Subscription Package Management:

Package Design: Tier structure

Pricing Strategy: Competitive analysis

Benefit Allocation: Value proposition

Launch: Package deployment

Commission Structure:

Agent Commission: Rate setting

Charity Allocation: Fund distribution

System Fees: Operational costs

Adjustments: Performance-based changes

Financial Reporting:

Revenue Tracking: Income analysis

Cost Management: Expense monitoring

Profit Analysis: Margin calculation

Regulatory Compliance: Financial reporting

Transaction Monitoring:

Fraud Detection:

Pattern Analysis: Suspicious activity

Automated Alerts: Risk indicators

Investigation: Manual review

Action: Account restrictions

Dispute Resolution:

Complaint Intake: Issue reporting

Evidence Collection: Documentation

Mediation: Conflict resolution

Final Decision: Resolution implementation

Refund Processing:

Refund Requests: Validation

Approval Process: Authorization

Processing: Token/cash refunds

Confirmation: User notification

Audit Trail:

Transaction Logging: Complete records

Access Monitoring: System usage

Compliance Checks: Regulatory requirements

Report Generation: Audit documentation

- Report Generation: Audit documentation
- Banking Integration:
 - Payment Gateway Management:
 - Provider Relations: Gateway partnerships
 - Technical Integration: API management
 - Monitoring: Transaction success rates
 - Optimization: Performance improvements
 - Bank Account Management:
 - Corporate Accounts: Business banking
 - Segregated Funds: User token backing
 - Reconciliation: Account balancing
 - Reporting: Financial statements
 - Regulatory Compliance:
 - Financial Licenses: Legal requirements
 - AML Compliance: Anti-money laundering
 - KYC Procedures: Customer verification
 - Reporting: Regulatory submissions
- Risk Management:
 - Financial Risk Assessment:
 - Liquidity Risk: Cash flow management
 - Credit Risk: Token backing adequacy
 - Operational Risk: System failures
 - Market Risk: Economic impact
 - Security Measures:
 - Encryption: Data protection
 - Access Control: Authorization systems
 - Monitoring: Security alerts
 - Incident Response: Security breaches
 - Insurance & Protection:
 - Platform Insurance: Liability coverage
 - User Protection: Fraud compensation
 - Data Protection: Privacy insurance
 - Business Continuity: Operational resilience

8.3 Platform Operations Administrative Flow

Platform Operations Management

System Maintenance:

Scheduled Maintenance:

- Planning: Maintenance windows
- Notification: User communications
- Execution: System updates
- Verification: Post-maintenance checks

Emergency Maintenance:

- Incident Detection: System monitoring
- Impact Assessment: Severity evaluation
- Emergency Response: Immediate action
- Communication: Real-time updates

Performance Optimization:

- Monitoring: System performance
- Bottleneck Identification: Problem areas
- Optimization: Performance improvements
- Testing: Validation of changes

Capacity Planning:

- Usage Forecasting: Growth projections
- Resource Planning: Infrastructure needs
- Scaling: Capacity expansion
- Cost Management: Budget optimization

Content Management:

Community Guidelines:

- Policy Development: Rule creation
- Communication: User education
- Enforcement: Violation handling
- Review: Policy updates

Content Moderation:

- Automated Filtering: Content screening
- Manual Review: Human moderation
- User Reporting: Community moderation
- Action: Content removal/restriction

Educational Content:

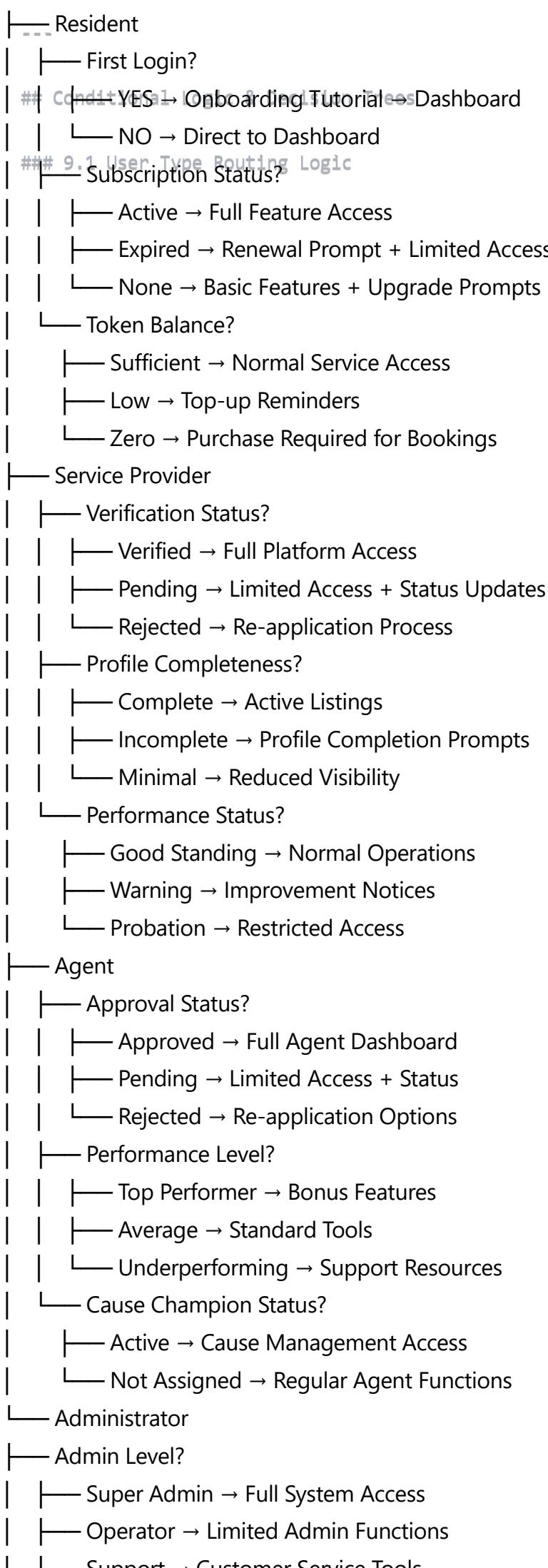
- User Guides: Platform tutorials
- Best Practices: Usage recommendations
- FAQ Management: Common questions
- Training Materials: Skill development

Marketing Content:

- Promotional Materials: Agent resources
- Social Media: Community engagement
- Press Releases: Media communications
- Success Stories: User testimonials

- Success Stories: User testimonials
- Support & Customer Service:
 - |— Help Desk Operations:
 - | |— Ticket Management: Issue tracking
 - | |— Response Times: Service levels
 - | |— Escalation: Complex issue handling
 - | |— Resolution: Problem solving
 - |— Knowledge Base:
 - | |— Documentation: Comprehensive guides
 - | |— Video Tutorials: Visual learning
 - | |— Troubleshooting: Common problems
 - | |— Updates: Content maintenance
 - |— Community Forums:
 - | |— User Discussions: Peer support
 - | |— Moderation: Community guidelines
 - | |— Expert Participation: Staff involvement
 - | |— Knowledge Sharing: Best practices
 - |— Feedback Management:
 - | |— Feedback Collection: User input
 - | |— Analysis: Trend identification
 - | |— Prioritization: Feature requests
 - | |— Implementation: Platform improvements
- Quality Assurance:
 - |— Testing Procedures:
 - | |— Feature Testing: New functionality
 - | |— Regression Testing: Existing features
 - | |— Performance Testing: System capacity
 - | |— Security Testing: Vulnerability assessment
 - |— Bug Management:
 - | |— Bug Reporting: Issue identification
 - | |— Prioritization: Severity assessment
 - | |— Resolution: Fix implementation
 - | |— Verification: Testing fixes
 - |— Release Management:
 - | |— Version Control: Code management
 - | |— Deployment: Release procedures
 - | |— Rollback: Emergency procedures
 - | |— Documentation: Change logs
 - |— Continuous Improvement:
 - | |— Performance Metrics: KPI tracking
 - | |— User Feedback: Satisfaction surveys
 - | |— Process Optimization: Efficiency improvements
 - | |— Innovation: New feature development

User Authentication → Determine User Type



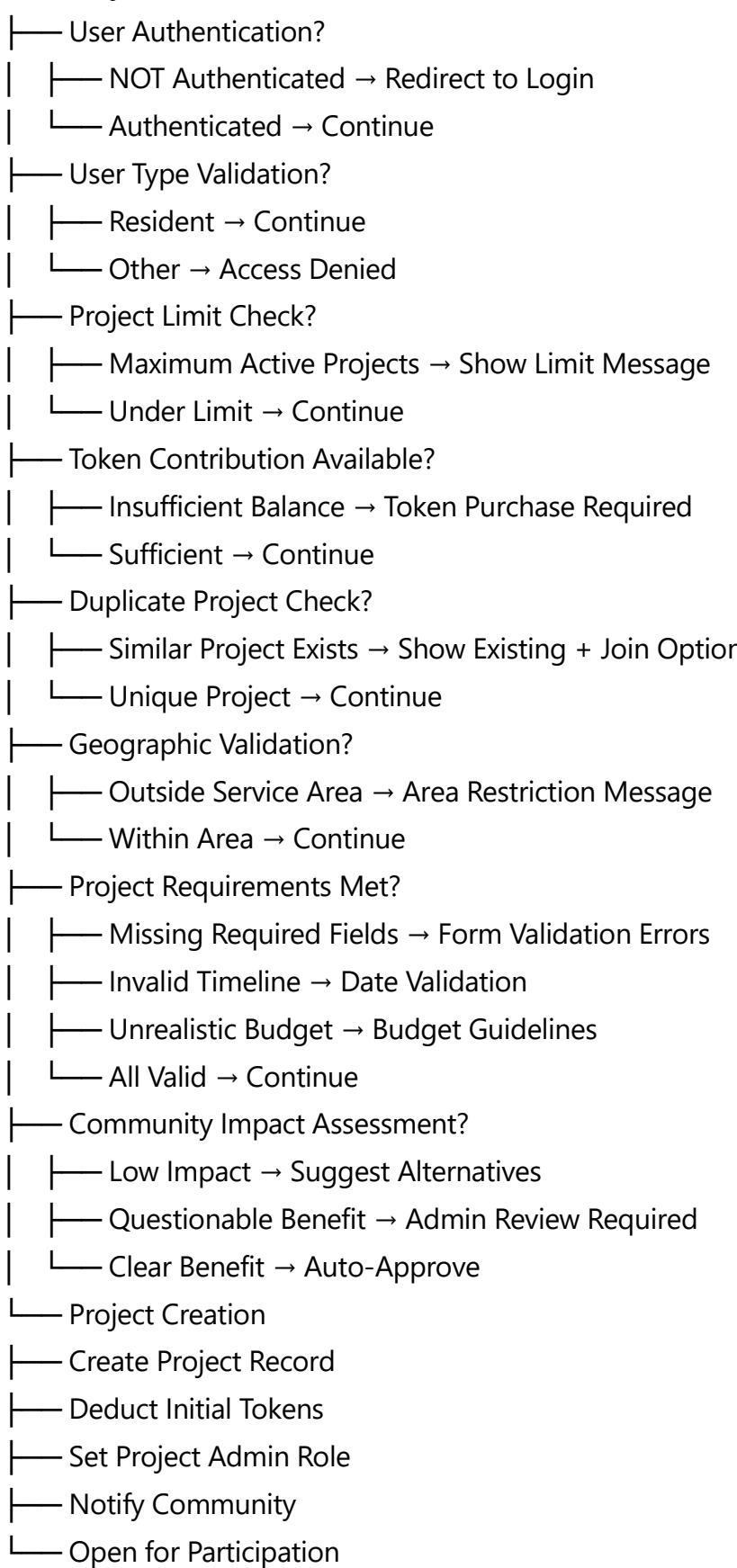
- | — Support → Customer Service tools
- | — Department?
- | — Financial → Token/Payment Management
- | — Operations → Platform Management
- | — Support → User Assistance
- | — Moderation → Content Management

9.2 Booking Decision Tree

```
Booking Attempt
└── User Authentication?
    ├── NOT Authenticated → Redirect to Login
    └── Authenticated → Continue
└── User Type Validation?
    ├── Resident → Continue
    └── Other → Access Denied
└── Service Provider Available?
    ├── NOT Available → Show Unavailable Message
    └── Available → Continue
└── Time Slot Validation?
    ├── Slot Taken → Refresh Calendar + Alternative Suggestions
    ├── Outside Business Hours → Show Available Hours
    └── Available → Continue
└── Token Balance Check?
    ├── Insufficient → Redirect to Token Purchase
    └── Sufficient → Continue
└── Booking Restrictions?
    ├── Maximum Bookings Reached → Show Limit Message
    ├── Blacklisted from SP → Access Denied
    └── No Restrictions → Continue
└── SP Approval Required?
    ├── YES → Send Request to SP → Await Approval
    └── NO → Immediate Booking
└── Payment Processing?
    ├── Token Deduction Failed → Error + Retry
    ├── Escrow Failed → Transaction Rollback
    └── Success → Booking Confirmed
└── Booking Confirmation
└── Generate Service ID
└── Send SMS to Resident
└── Notify Service Provider
└── Update Calendars
└── Send Confirmation Email
```

9.3 Community Project Decision Tree

STAR Project Creation



Performance & Scalability Considerations

10.1 High-Load Scenarios

System Load Management

- └── Peak Usage Periods:
 - └── Evening Hours (18:00-21:00)
 - └── Weekend Mornings (09:00-12:00)
 - └── Payday Periods (Month-end)
 - └── Community Events
- └── Load Balancing Strategies:
 - └── Horizontal Scaling: Multiple server instances
 - └── Database Sharding: Distributed data storage
 - └── CDN Usage: Content delivery optimization
 - └── Caching Layers: Redis/Memcached implementation
- └── Performance Monitoring:
 - └── Response Time Tracking: API performance
 - └── Database Query Optimization: Slow query identification
 - └── Memory Usage Monitoring: Resource utilization
 - └── Error Rate Tracking: System stability
- └── Degradation Strategies:
 - └── Feature Disabling: Non-critical function suspension
 - └── Read-Only Mode: Maintenance mode operations
 - └── Queue Management: Delayed processing
 - └── User Communication: Status updates

10.2 Data Consistency & Integrity

Data Management Strategies

Transaction Management:

- | — ACID Compliance: Database transactions
- | — Distributed Transactions: Multi-service coordination
- | — Rollback Procedures: Error recovery
- | — Conflict Resolution: Concurrent access handling

Backup & Recovery:

- | — Automated Backups: Scheduled data protection
- | — Point-in-Time Recovery: Specific moment restoration
- | — Cross-Region Replication: Disaster recovery
- | — Backup Testing: Recovery verification

Data Validation:

- | — Input Validation: User data verification
- | — Business Rule Enforcement: Logic consistency
- | — Referential Integrity: Relationship maintenance
- | — Audit Logging: Change tracking

Synchronization:

- | — Real-Time Sync: Immediate data consistency
- | — Eventually Consistent: Delayed synchronization
- | — Conflict Resolution: Data merge strategies
- | — Offline Synchronization: Disconnected operation

Security & Privacy Flows

11.1 Data Protection Flow

Data Protection Implementation

- └─ Personal Data Handling:
 - └─ Data Minimization: Collect only necessary data
 - └─ Purpose Limitation: Use data for stated purposes only
 - └─ Retention Policies: Automatic data deletion
 - └─ Access Controls: Role-based data access
- └─ Encryption Standards:
 - └─ Data at Rest: Database encryption
 - └─ Data in Transit: SSL/TLS protocols
 - └─ Token Security: Cryptographic protection
 - └─ Key Management: Secure key storage
- └─ Privacy Compliance:
 - └─ POPIA Compliance: South African privacy laws
 - └─ GDPR Readiness: European data protection
 - └─ Consent Management: User permission tracking
 - └─ Right to Deletion: Data removal requests
- └─ Security Monitoring:
 - └─ Intrusion Detection: Unauthorized access alerts
 - └─ Anomaly Detection: Unusual activity patterns
 - └─ Incident Response: Security breach procedures
 - └─ Vulnerability Assessment: Regular security audits

11.2 Fraud Prevention Flow

Fraud Prevention System

Identity Verification:

- |—— Document Verification: ID authentication
- |—— Phone Verification: SMS confirmation
- |—— Biometric Verification: Future implementation
- |—— Address Verification: Location confirmation

Behavioral Analysis:

- |—— Usage Patterns: Normal behavior baselines
- |—— Transaction Patterns: Financial behavior analysis
- |—— Device Fingerprinting: Device identification
- |—— Location Tracking: Geographic consistency

Risk Scoring:

- |—— User Risk Assessment: Individual risk levels
- |—— Transaction Risk: Payment risk evaluation
- |—— Dynamic Scoring: Real-time risk adjustment
- |—— Machine Learning: Pattern recognition

Response Actions:

- |—— Low Risk: Normal processing
- |—— Medium Risk: Additional verification
- |—— High Risk: Manual review required
- |—— Critical Risk: Immediate suspension

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Conclusion

This comprehensive application flow document provides detailed guidance for implementing the STAR Community app across all user journeys, error scenarios, and system operations. The document should be used in conjunction with technical specifications and updated regularly as the platform evolves.

Key Implementation Priorities:

1. **User Experience**: Ensure smooth, intuitive flows for all user types
2. **Error Handling**: Implement robust error recovery mechanisms
3. **Security**: Maintain strong security and privacy protections
4. **Scalability**: Design for growth and high-load scenarios
5. **Community Impact**: Support features that drive local economic development

Maintenance Notes:

- Review and update flows quarterly
- Incorporate user feedback into flow improvements
- Monitor performance metrics and optimize bottlenecks
- Ensure compliance with evolving regulations
- Plan for feature expansion and new user requirements

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