Product Requirements Document: SUIVI

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1. Introduction/Overview

SUIVI is an online parcel sending service platform (web), with plans for a mobile application that connects senders with riders. Senders can request pickups, track deliveries, and conveniently complete transactions through integrated payment gateways (cards via Stripe and M-Pesa). Riders can manage assignments through a central dashboard, update parcel statuses, and communicate with users in real-time. The platform is currently implemented with Flask, and another version (incomplete) exists using Django.

2. Goals and Objectives

- **Business Goals:**
  - Increase efficiency in parcel delivery operations.
  - Reduce delivery times.
  - Improve customer satisfaction.
  - Expand service reach and user base.
- **Product Objectives:**
  - Provide a user-friendly interface for customers to manage their deliveries. ○ Enable real-time tracking of parcels.
  - Offer a secure and reliable platform for transactions.
  - Provide an efficient rider interface for managing deliveries.

3. Target Audience

- **Senders:** Individuals and businesses who need to send parcels. ○ Demographics: Varied (age 18-65+), located within service areas. ○ Needs: Reliable, fast, and affordable parcel delivery.
  - Pain Points: Inconvenience of traditional delivery methods, lack of transparency in tracking, unreliable service.
  - Motivations: Convenience, efficiency, ability to track shipments, secure delivery.
- **Riders:** Individuals who deliver parcels.

- Demographics: Varies.
- Needs: Clear delivery assignments, efficient routing, and communication tools.
  - Pain Points: Difficulty in managing deliveries, lack of clear communication with senders, and inefficient processes.
- Motivations: Earning income, flexible working hours, and efficient delivery management.

4. Product Features

4.1 Sender Features

- **Parcel Request:**
  - Senders can submit a request for parcel pickup, specifying pickup and delivery locations, package details, and preferred delivery time.
  - Senders can schedule pickups.
  - Senders receive a confirmation of their request with a unique tracking ID. ○ Senders can upload pictures of the parcel during the pickup request. ● **Parcel Tracking:**
  - Senders can track the real-time location and status of their parcels using the tracking ID.
  - The system provides clear and timely updates on the delivery status (e.g., "Pending," "In Transit," "Out for Delivery," "Delivered").
- **Delivery History:**
  - Senders can view a history of their past deliveries, including details such as date, location, and status.
- **User Profile Management:**
  - Senders can create and manage their profiles, including personal information, contact details, and delivery addresses.
- **Payment:**
  - Senders can make payments for delivery services.
  - The system supports most common card payments via Stripe and M-Pesa payments.
  - The system provides secure payment processing.
- **Notifications:**
  - Senders receive SMS, Emails and push notifications about the status of their parcel deliveries, including:
    - Pickup confirmation after a request is submitted.

- ■ Updates when the parcel is picked up, in transit, out for delivery, and delivered.
- ■ A notification when the rider is approximately 15 minutes away from the pickup or delivery location.
- ● **Support/FAQ:**
  - ○ Senders can access a support section or FAQ to find answers to common questions and get assistance.
- ● **Feedback:**
  - ○ Senders can upload pictures as feedback after delivery.

4.2 Rider Features

- ● **Dashboard:**
  - ○ Riders can view their assigned deliveries, delivery status, and earnings. ●
- **Delivery Management:**
  - ○ Riders can view assigned deliveries, including pickup and delivery locations, and package details.
  - ○ Riders can visually comprehend parcel required cycle from pickup to delivery point on maps and audio guidance
  - ○ Riders can update the status of deliveries (e.g., "Picked Up," "In Transit," "Out for Delivery," "Delivered").
- ● **Navigation:**
  - ○ Riders can access navigation tools(in-app map and audio navigation or others such as google maps) to optimize delivery routes.
- ● **Communication:**
  - ○ Riders can communicate with senders and administrators (in-app and others). ●
- **Profile Management:**
  - ○ Riders can manage their profiles, including personal information and contact details.
- ● **Proof of Delivery:**
  - ○ Riders can upload pictures of delivered parcels.

4.3 Administrator Features

- ● **Dashboard:**
  - ○ Administrators can view a dashboard with key metrics, such as the number of pending deliveries, completed deliveries, user activity, and agent activity. ● **User**

Management:

○ Administrators can create, view, edit, and delete sender and rider accounts. ●

Agent Management:

○ Administrators can create, view, edit, and delete agent accounts. ●

Parcel Management:

○ Administrators can view, track, and manage all parcel deliveries in the system. ○ Administrators can assign parcels to agents.

○ Administrators can update the status of parcels.

● **Reporting:**

○ Administrators can generate reports, including:

■ Daily, weekly, and monthly delivery summaries.
■ Reports on average delivery times.
■ Reports on user and rider activity.
■ Financial reports on payment transactions.

● **System Configuration:**

○ Administrators can configure system settings, such as delivery rates, service areas, and user roles.

● **FAQ Management:**

○ Administrators can add, edit, and delete FAQs.

○ The system can take in FAQs and notify administrators of unanswered queries. ○ Administrators can resolve unanswered FAQs.

5. User Stories/Use Cases

5.1 Sender User Stories

● As a registered sender, I want to request a parcel pickup so that I can send my parcel to a recipient.
● As a sender, I want to track my parcel's location in real-time so that I know when it will arrive.
● As a sender, I want to view my past delivery history so that I can easily access information about my previous shipments.
● As a sender, I want to manage my profile information so that my details are always up-to-date.
As a sender, I want to upload feedback pictures after delivery. ● As a sender, I want to receive a notification when the rider is arriving.

5.2 Rider User Stories

● As a rider, I want to view my assigned deliveries so that I can plan my route. ● As a rider, I want to update the status of a delivery so that senders and administrators are informed of its progress.
● As a rider, I want to communicate with senders and administrators so that I can coordinate pickups and deliveries.
● As a rider, I want to manage my profile information so that my contact details are up-to-date.
● As a rider, I want to upload pictures of the delivered parcels.

5.3 Administrator User Stories
● As an administrator, I want to view a dashboard so that I can get a quick overview of the system's performance.
● As an administrator, I want to manage user accounts so that I can control access to the system.
● As an administrator, I want to manage parcel deliveries so that I can ensure efficient and timely delivery.
● As an administrator, I want to generate reports so that I can analyze system data and identify areas for improvement.
● As an administrator, I want to manage FAQs, so users can get quick help.

6. Functional Requirements

● The system shall allow senders and riders to register and log in securely.

● The system shall allow senders to request parcel pickups with detailed information, including parcel pictures.

● The system shall provide real-time parcel tracking information.

● The system shall store and display delivery history for senders.

● The system shall allow administrators to manage senders, riders, and parcels.

● The system shall generate reports on system activity.

● The system shall support M-Pesa and card payment processing.● The system shall have a comprehensive FAQ section.

● Senders should be able to upload pictures of parcels.

● Receivers should be able to upload feedback pictures.

● Riders should be able to upload pictures of delivered parcels. **7.**

Non-Functional Requirements

● **Usability:** The system shall be user-friendly and easy to navigate for senders, riders, and administrators.
● **Reliability:** The system shall be reliable and available with minimal downtime. ●
Performance: The system shall be responsive and performant, with fast loading times.
● **Security:** The system shall be secure, protecting user data and ensuring secure transactions.
● **Scalability:** The system shall be scalable to handle a growing number of users and deliveries.
● **Maintainability:** The system shall be designed for easy maintenance and updates.
● **Consistency:** The system should have a consistent UI/UX theme.

8. User Interface (UI) and User Experience (UX) Considerations

● The system should have a clean and modern design.
● The user interface should be intuitive and easy to navigate.
● The system should be accessible on various devices (desktop, mobile). ●
The system should provide clear and helpful feedback to users. ● The system should adhere to accessibility guidelines.
● The system should have a consistent and unique UI/UX theme.

9. Release Criteria

● All functional requirements are implemented and tested.
● All critical and high-priority bugs are resolved.
● The system meets the performance and security requirements. ●
User acceptance testing (UAT) is completed successfully.

● Documentation is complete.

10. Success Metrics

- Number of registered users (senders and riders).
- Number of parcel deliveries per month.
- Average delivery time.
- Customer satisfaction rating (e.g., through surveys).
- System uptime.
- Adoption rate of the parcel tracking feature.
- Number of support requests.
- Mobile application launch.

11. Open Issues

- Mobile application development.
- Refining UI/UX to be consistent and have a unique theme.
- Implementing all SMS notifications (e.g., when a rider is arriving, when a receiver is sent a parcel).
- Ensuring email templates are consistently designed to match the SUIVI theme. ● Fully developing sender and rider dashboard metrics and content. ● Implementing all admin features.
- Implement users' push notifications
- Implement scheduling of parcel pickup request(s).
- Implement in-app Audio map navigation and guidance.
- Implement google maps navigation guidance for riders to choose from when picking up and delivering parcels
- Implement Admin, Riders and Senders in-app communication.
- Implementation of a customer rating system.
- Update parcel entity to hold upload of pictures while requesting pickup and for delivered parcels.
- Expansion of service areas:
  - **Local Deliveries (Within County):**
    - **Zonal Pricing:** Implement a system where delivery costs are calculated based on zones within the county. This could be based on distance from a central point or pre-defined areas.
    - **Optimized Routing:** Develop algorithms to optimize rider routes for local deliveries, potentially using real-time traffic data and rider availability. ■ **Rider Specialization:** Allow riders to specialize in local deliveries, potentially

offering them incentives or bonuses for high-volume local deliveries.
- **Local Hubs (Optional):** Consider establishing local hubs or pickup/drop-off points to streamline local delivery operations and reduce transit times.
- **Partnerships (Optional):** Partner with local businesses or community centers to serve as package collection points.
- **Long-Distance Deliveries (Across Counties):**
  - **Inter-county Network:** Establish a network of riders or partners in different counties to facilitate long-distance deliveries. This might involve partnerships with existing courier services or establish suivi couriers in future versions
  - **Variable Pricing:** Implement a pricing model that accounts for the increased costs associated with long-distance deliveries, such as fuel, time, and potential tolls.
  - **Tracking and Security:** Enhance tracking and security measures for long-distance deliveries to ensure packages arrive safely and on time. This could include more detailed tracking updates and insurance options.
  - **Delivery Time Estimates:** Provide senders with accurate delivery time estimates for long-distance deliveries, taking into account factors such as distance, road conditions, and potential delays.
  - **Hub and Spoke Model:** Explore a hub-and-spoke model, where parcels are transported to central hubs in each county before being distributed to their final destinations.