MAIL CARRIERS

Stage 3: Prototyping the Interaction

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Design Problem

The new **postal transformation system** has streamlined Canada Post's processes so that a **single mail carrier** can now deliver mail and packages, as well as pick up mail from mailboxes, reducing operation costs. However, this shift has caused mail carriers to work **long, potentially dangerous hours,** and **develop injuries much more easily** due to the more physically taxing work they need to complete.

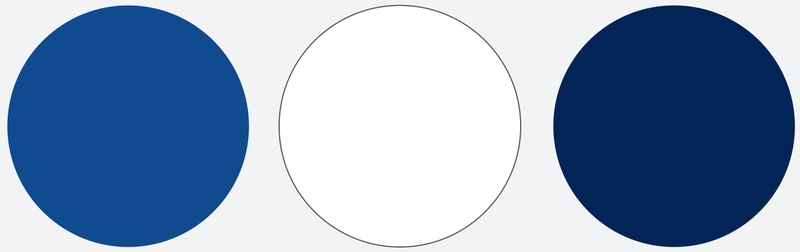
We know that we cannot, with a simple GUI design, completely overhaul the postal delivery system. However, given the issues noted above, we do want to create an interface that can help mail delivery agents complete their work in a **safe and efficient manner**.

Our System

Our interactive system is a mobile application for mail delivery agents to allow them to deliver and pick up mail in a **safer and more efficient manner**. The application will take data from mail sorting machines and personal preferences, and develop a **personalized delivery and pickup plan** for carriers to efficiently and safely deliver and pick up mail along their route, with information on how to optimally bundle mail according to proximity and weight, where to park, how many letters to carry at once, and where exactly to deliver to. The plan's focus is to **reduce difficult and dangerous foot travel** while **maximizing delivery efficiency**.

The app also measures **metrics**, how much mail is being delivered and how much it weighs, how much the carrier has to walk, and how difficult in general the route is to deliver that day. These metrics are compiled in the app, and if the carrier has a particularly physically strenuous day, the app will **adjust the next day's route** to ease the load on this carrier.

Style Guide: *Font + Colour Choice*



#184086 Background Colour

#FFFFFF Text

#102654 Header & Navigation Menu

We chose two shades of blue as the main colour of our application. This blue is the same shade of blue that is used in Canada Post's logo. We did not use the red because we felt it would be too eye-catching and possibly misleading users.

Font: Source Sans Pro

Aa **Semibold** Name of Application Size: 32pt

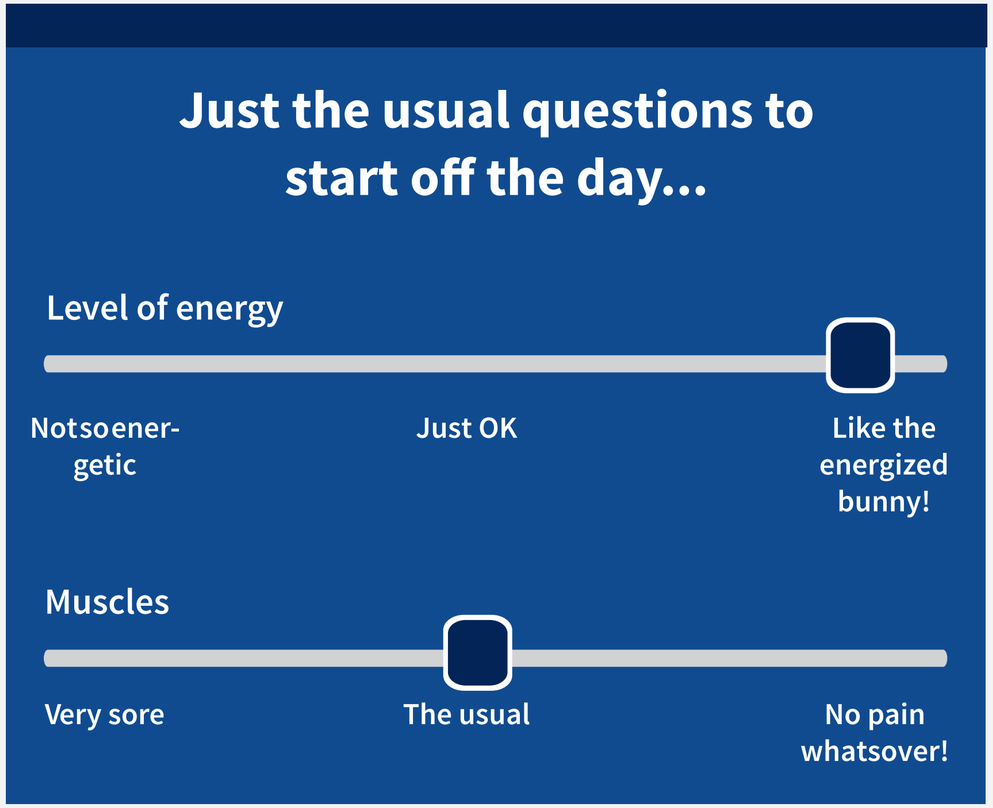
Aa **Bold** Category Headers Size: 35pt

Aa Light Body Text Size: 35pt

We used a san-serif font because it's more legible when read on a phone especially at a glance. We made the categories the heavier weight because we wanted it to be the main focus than name of our application.

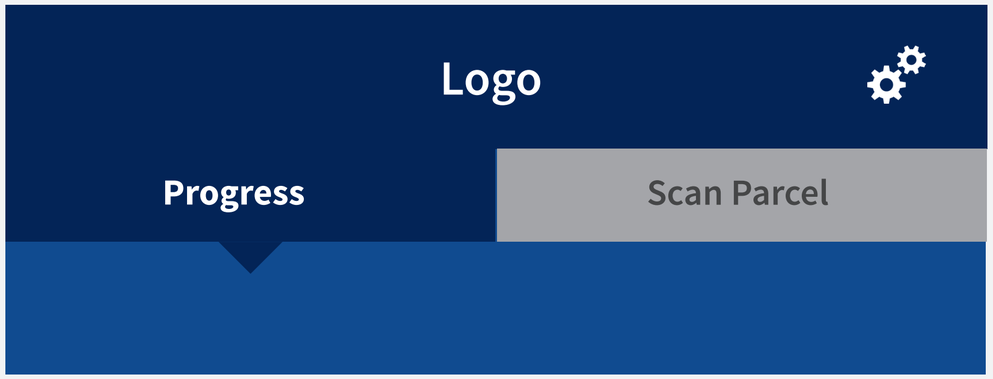
Style Guide: *Buttons + User Input*

Slider:



Button:

Settings & Navigation



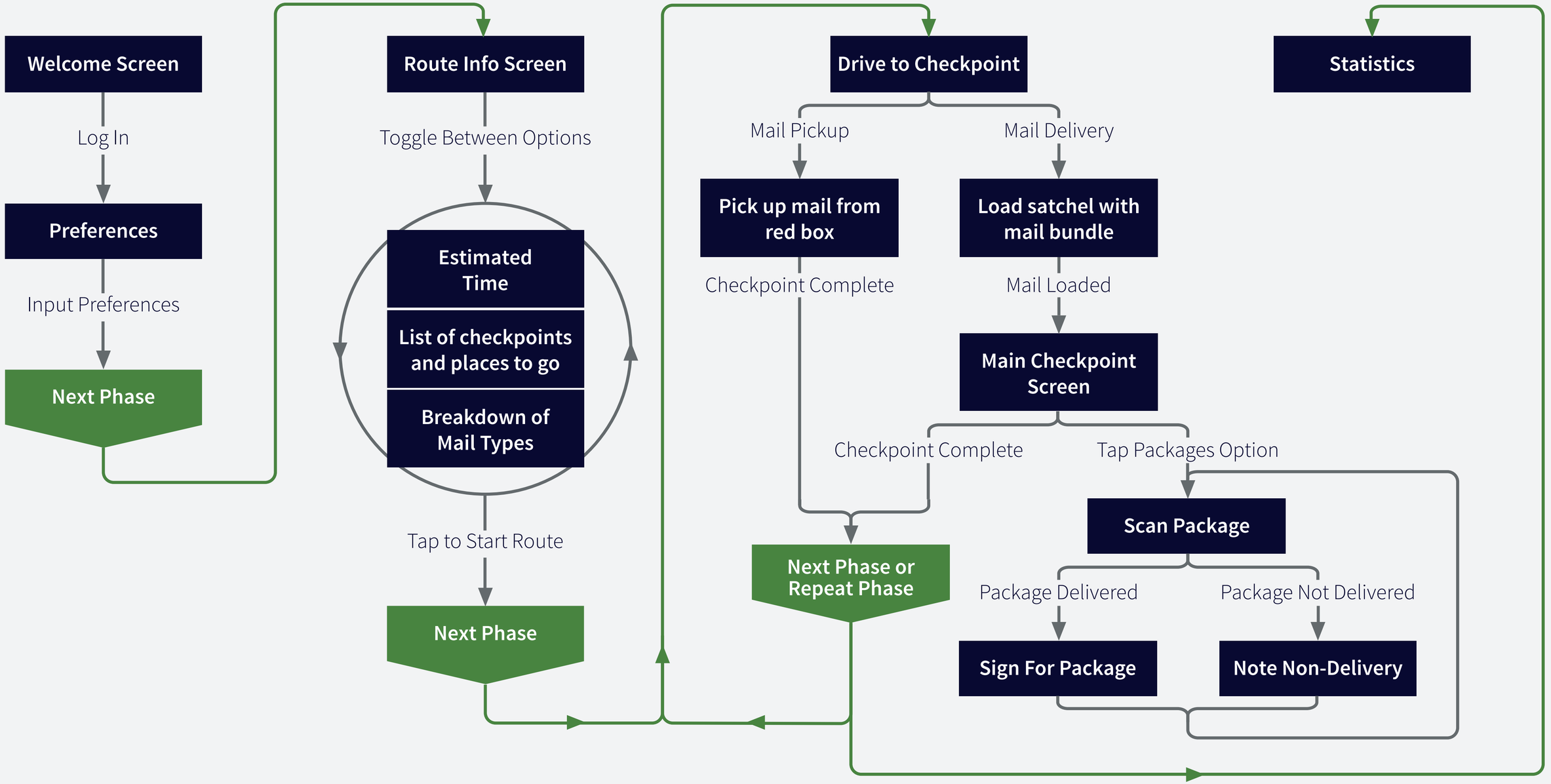
A chill workout

The norm

Climbing Mt Everest type of workout!

Flow Chart

Welcome - - - - - - - - - - **Route Info** - - - - - - - - - - - - - - **Mail Delivery** - - - - - - - - - - - - - - **End of Day**



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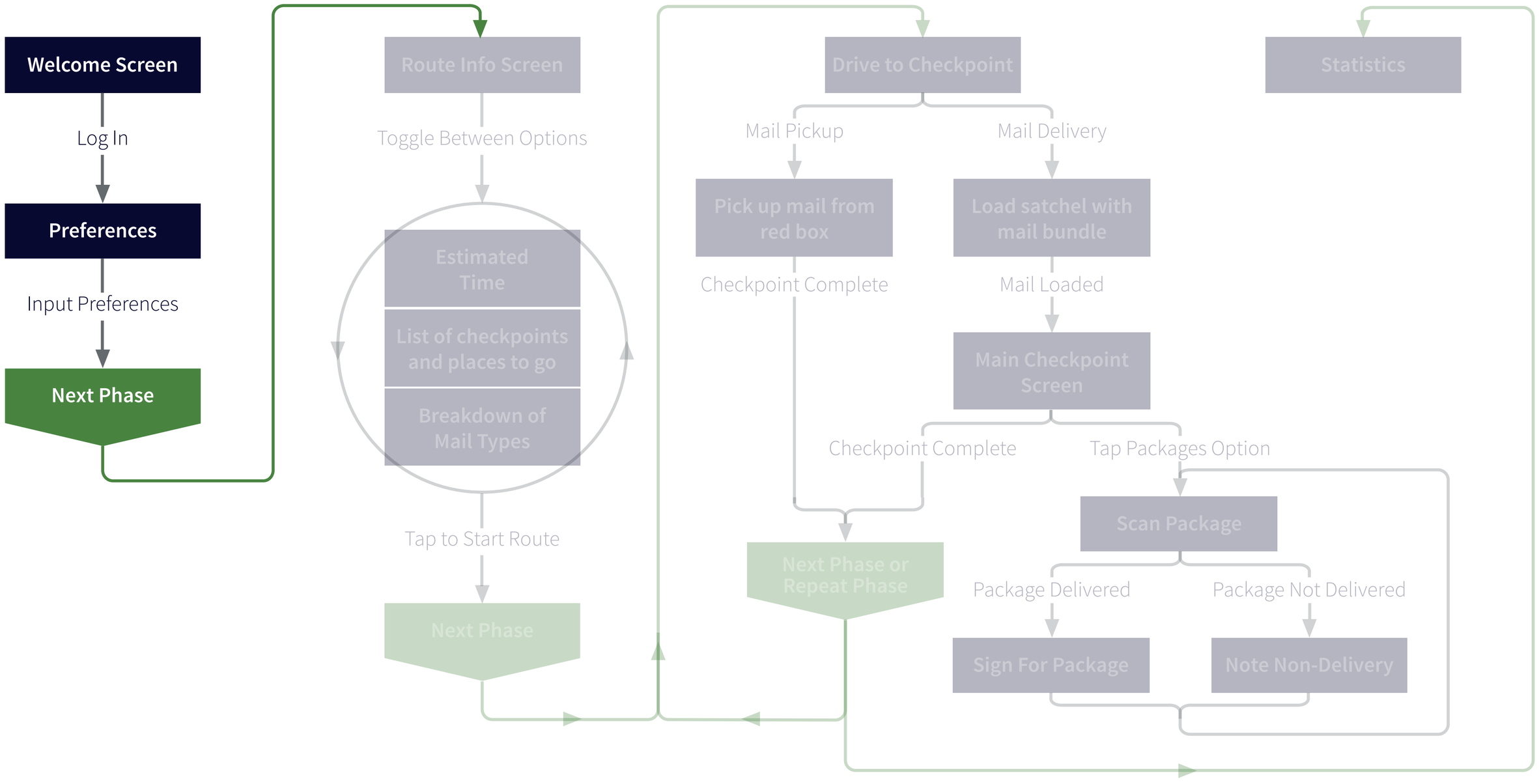

Flow Chart

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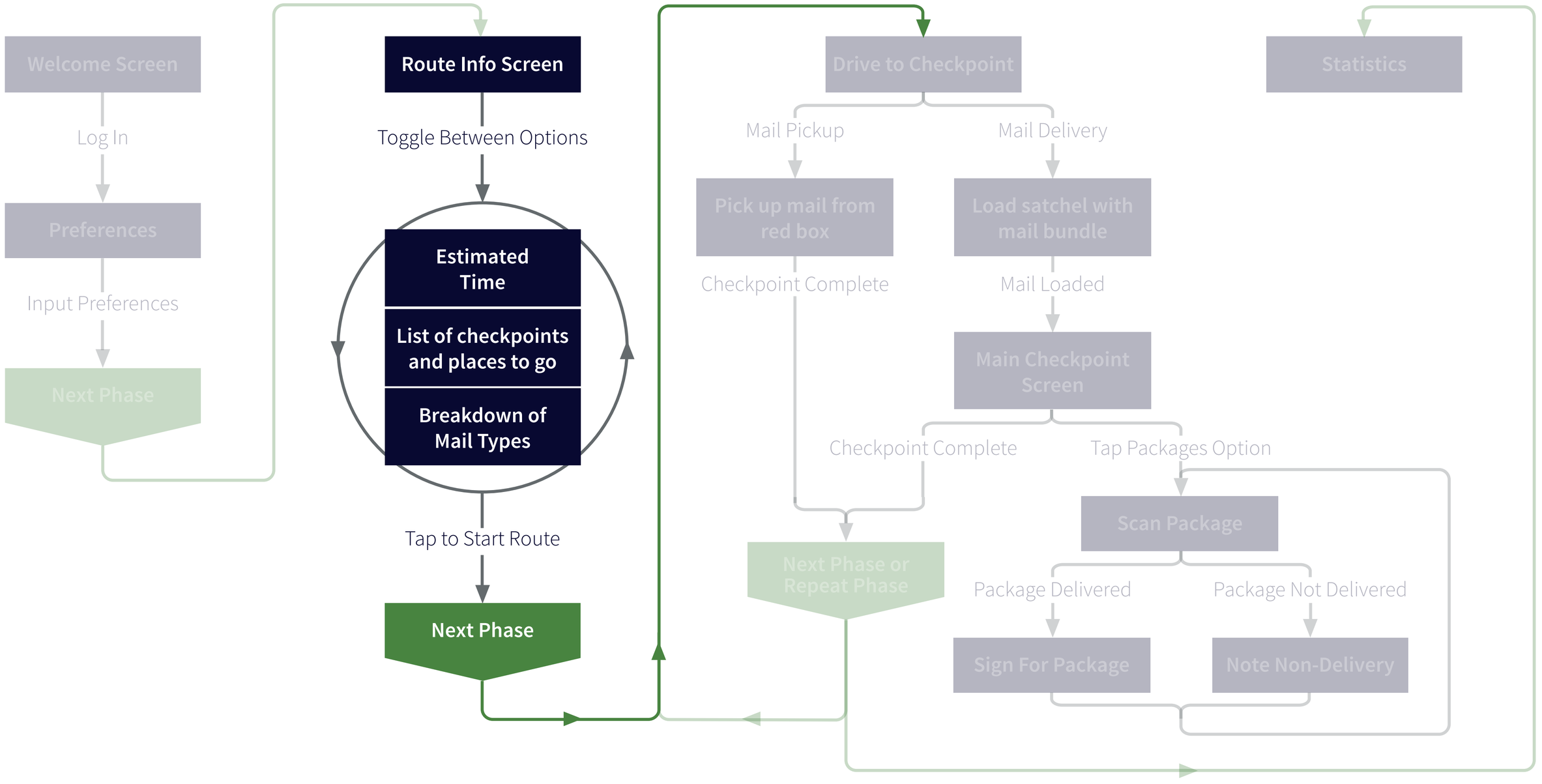

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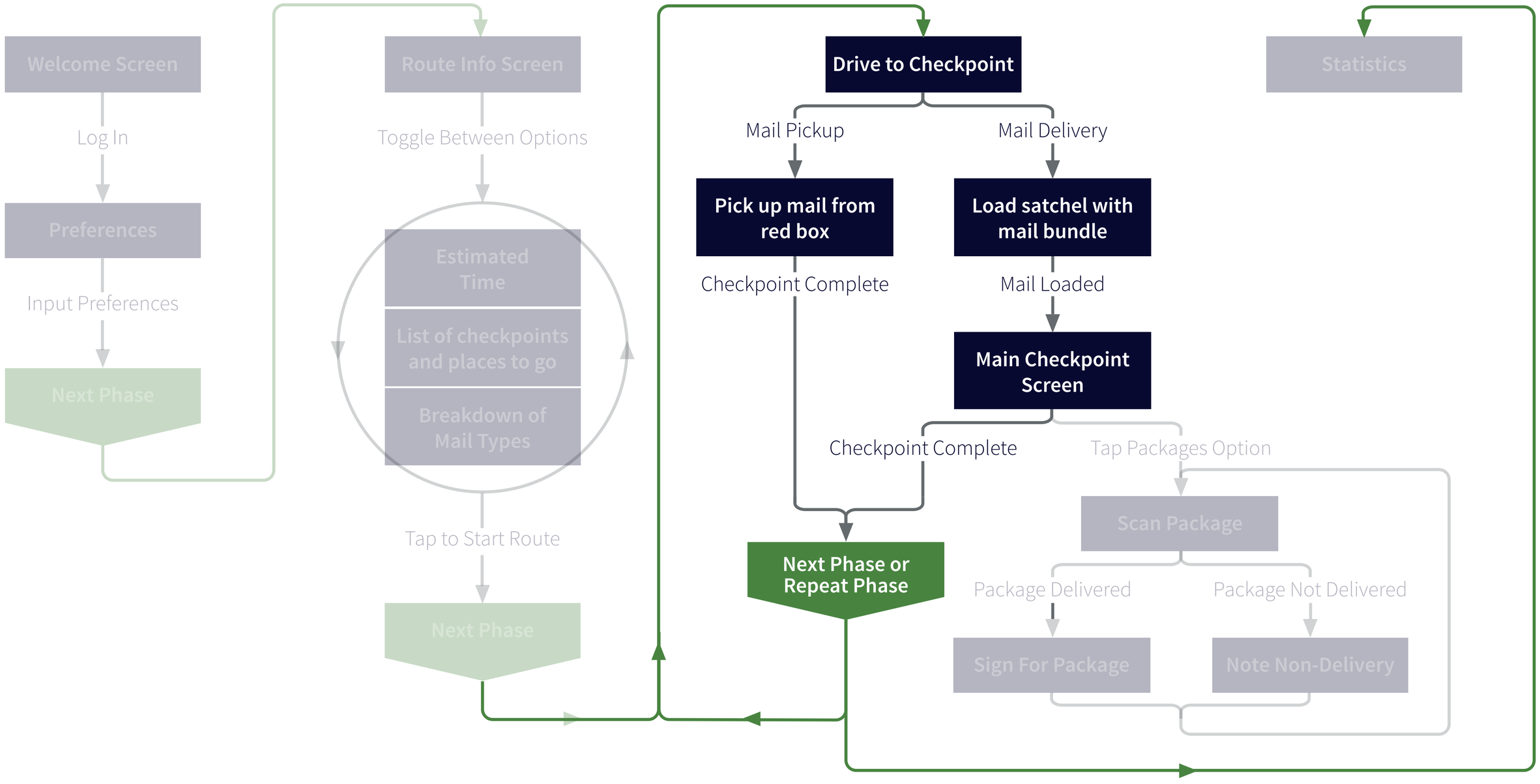

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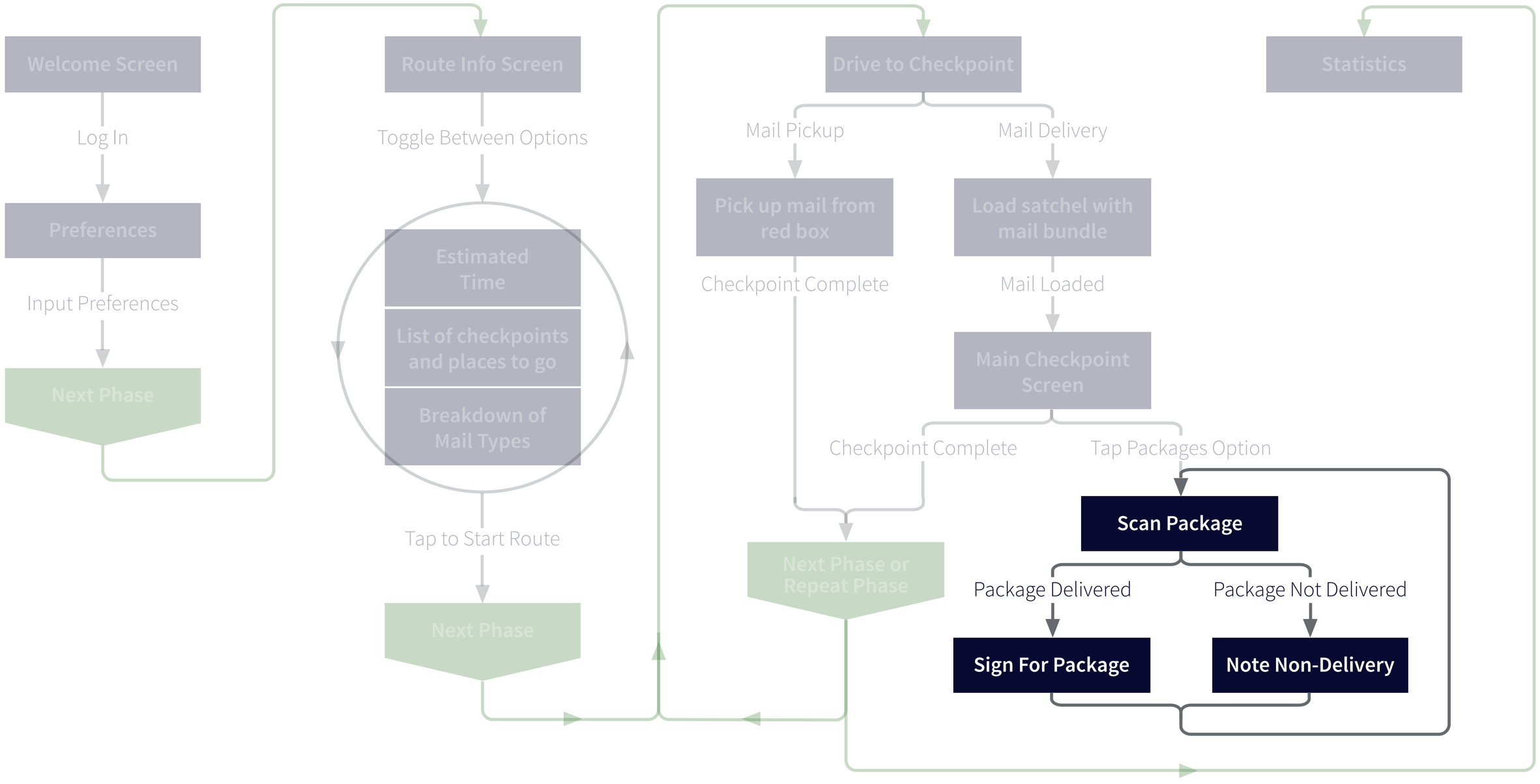

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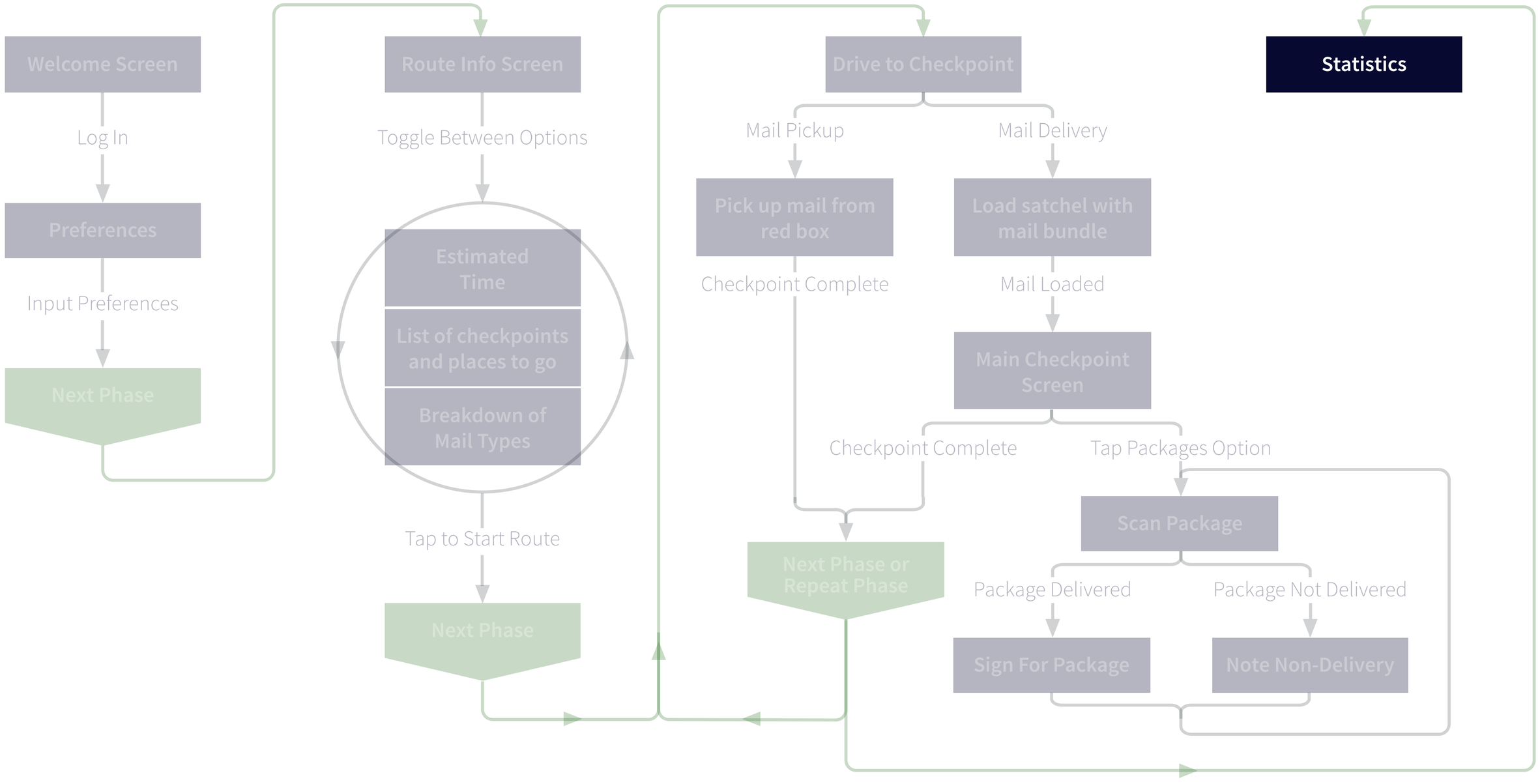


PIERRE CAMBRAY
DELIVERY AGENT

GENDER: Male

AGE: 55

LOCATION: Montreal, Quebec

OCCUPATION: Mail Delivery Agent

SKILLS & EXPERIENCE

LIFTING HEAVY ITEMS

PREPARING ROUTINE REPORTS

DRIVING THE COMPANY VEHICLE

CUSTOMER SERVICE

> **"I want to stay healthy and avoid injury while delivering the mail efficiently."**

Pierre is a Montreal-based Canada Post delivery agent, and has held his position for the past 29 years. He loves the interactive nature of his job and the fact that he gets to serve others. Due to Pierre's age and injury concerns, he is always concerned about his health on the job. He has suffered from many minor back and shoulder injuries, and nurses a reoccuring knee injury as well. They have caused him to slow down and even stop delivering due to the pain. Because of his love for the job and physical activity, Pierre wants to stay healthy and finish his routes.

END GOALS

The most important goal for Pierre is to **deliver mail to the correct address**. As letter carriers' routes cover a large area, Pierre also wants to be **efficient in organizing and delivering mail**.

EXPERIENCE GOALS

Pierre wants to **stay healthy on the job** and prevent injuries, strains, and exhaustion. Pierre also enjoys **interacting with customers** and earning the reputation of a **trustworthy and dependable mail carrier**.

LIFE GOALS

Pierre wants to earn and **maintain physical fitness**, part of the reason he originally took his current job.

CHALLENGES

- Bad weather conditions (e.g. icy roads, snow, rain)
- Lots of letters/packages to carry
- Physically demanding job
  Extremely long/irregular hours

FRUSTRATIONS

- Reoccurring knee injury, other injuries sustained on the job
- Weather conditions that make the job more difficult
- Accidentally delivering mail to the wrong house/person

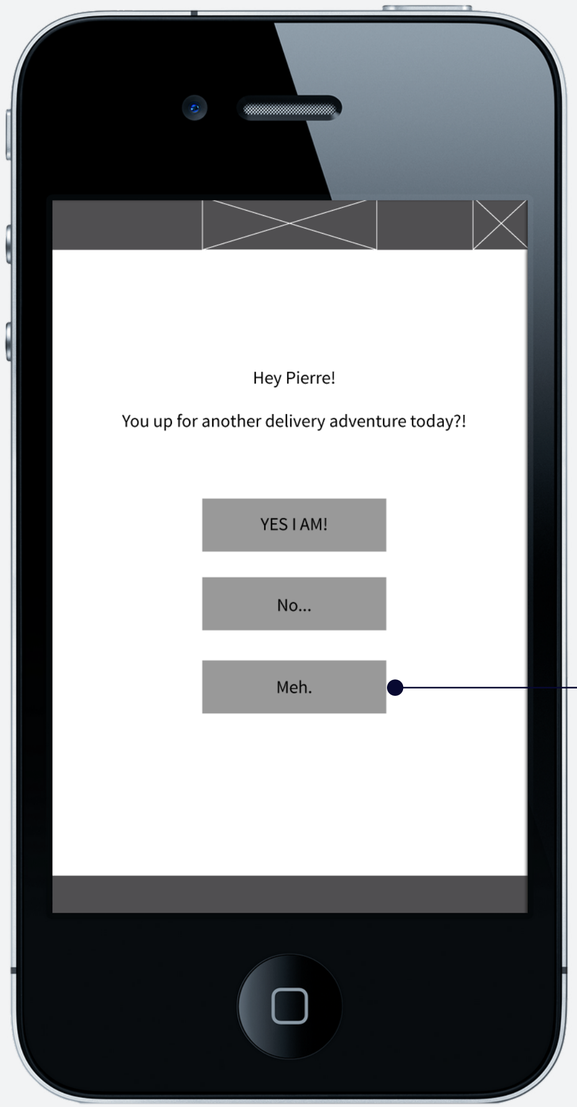
TASKS

- Organize mail and load into truck
- Deliver letters and parcels along established routes, plus special delivery and express mail
- Collect payment for cash-on-delivery service
- Record delivery of registered mail
- Return undeliverable mail to post office
- Collect mail from mailboxes

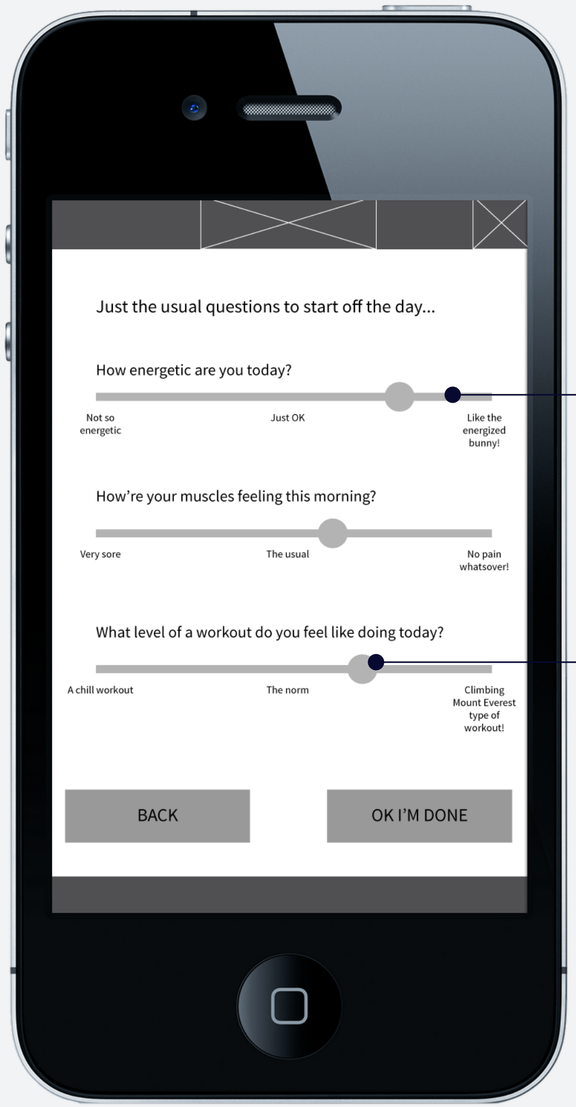
BRENDAN LANE | PATRICK MAGDUA | CHRISTIE WONG | LEVONA YIM

Welcome

On the welcome screen, the carrier inputs answers questions and personal preferences that affect their route for the day. While the route will be strenuous and difficult no matter what they do, their ability to have some control over the process will help to mitigate any frustrations they may have.

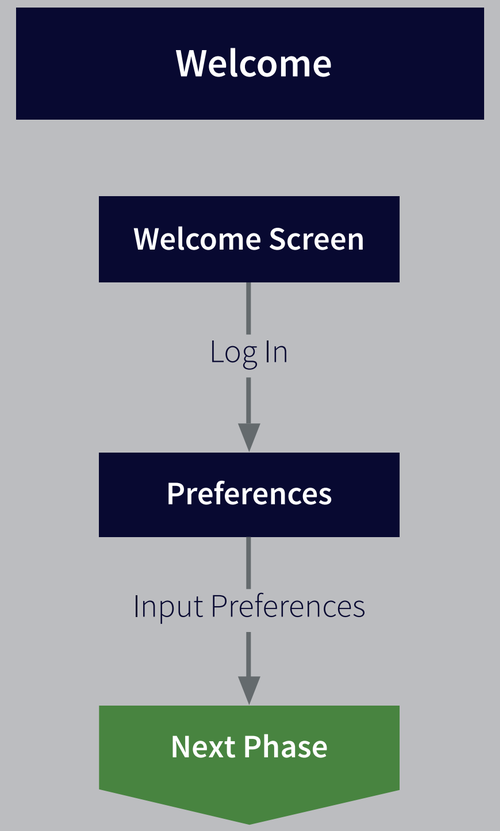


Natural language is used to personify the app and make it seem more like an assistant than a faceless tool.



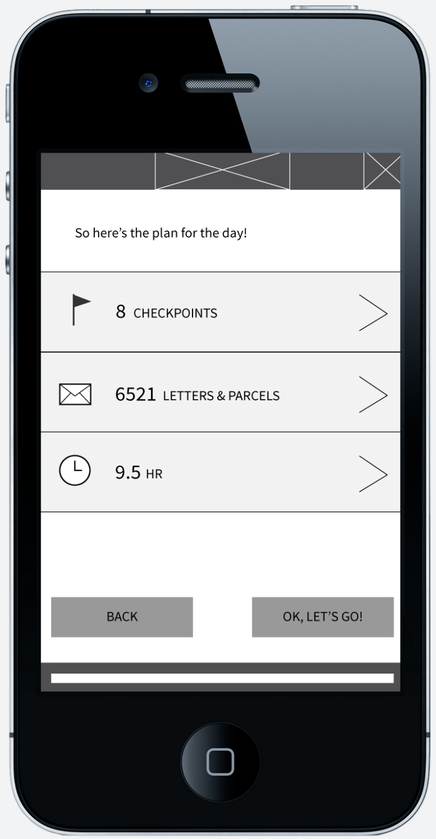
The user slides the sliders to answer questions about their physical and mental state.

These sliders default to the previous day's responses to show the carrier what they felt like the day before.

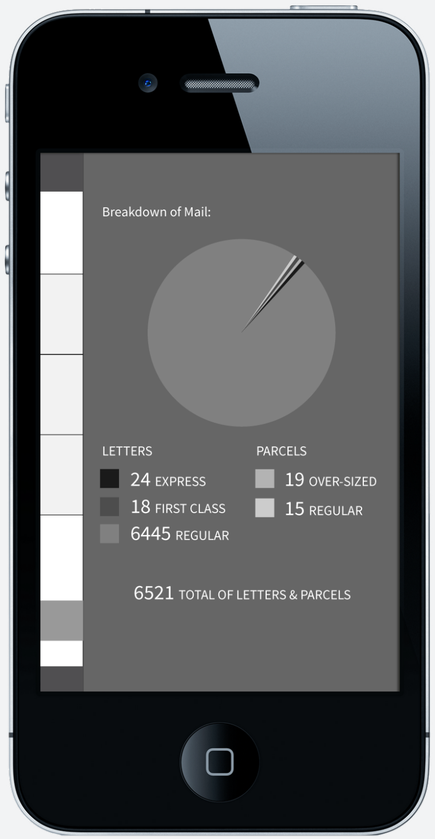


Route Info

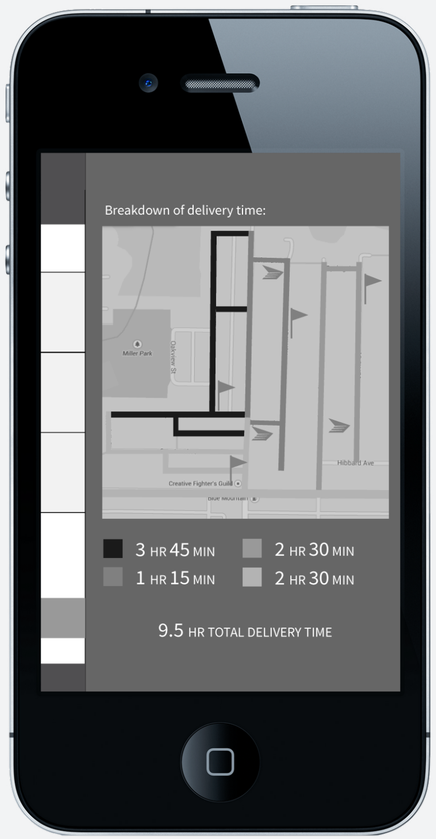
Once they've inputted their information, the carriers can then view information about their route such as how many stops they need to make and how long their route is expected to take.

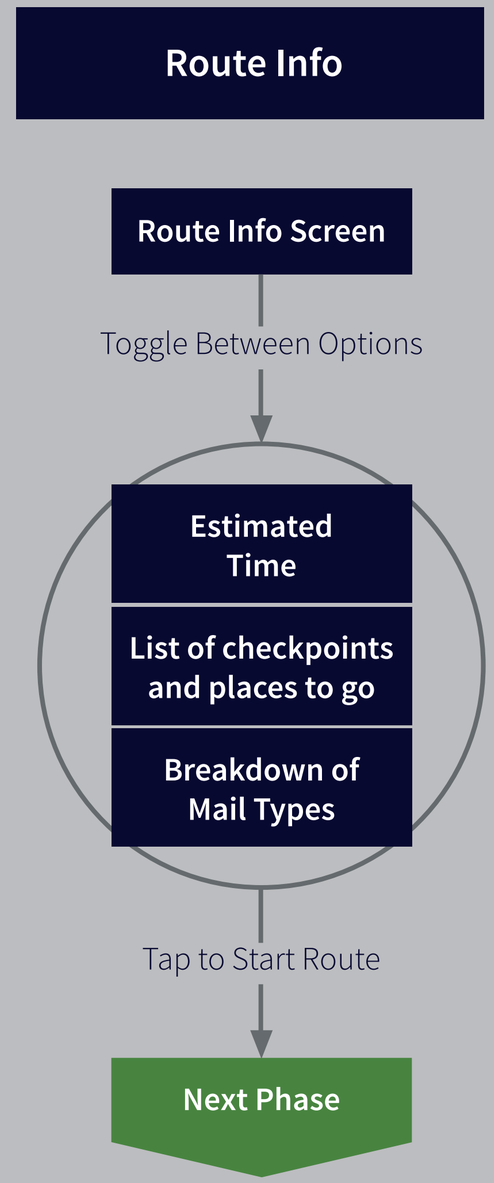


This screen provides basic information about the carrier's route, and they can tap a button to drill down and view more.



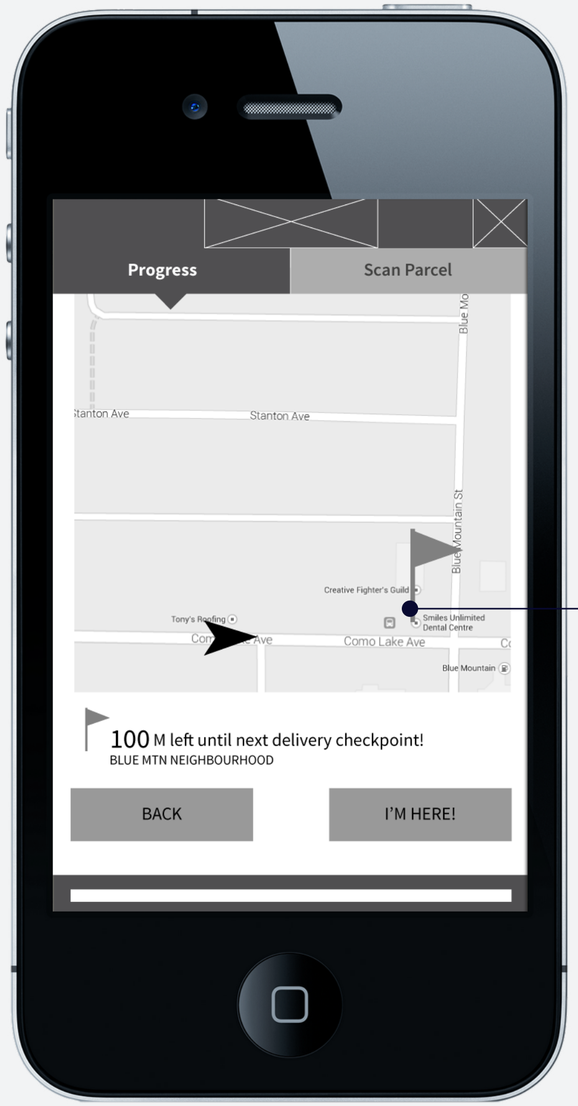
From the drilled down menu, the carrier can then swipe to go back to the previous menu.



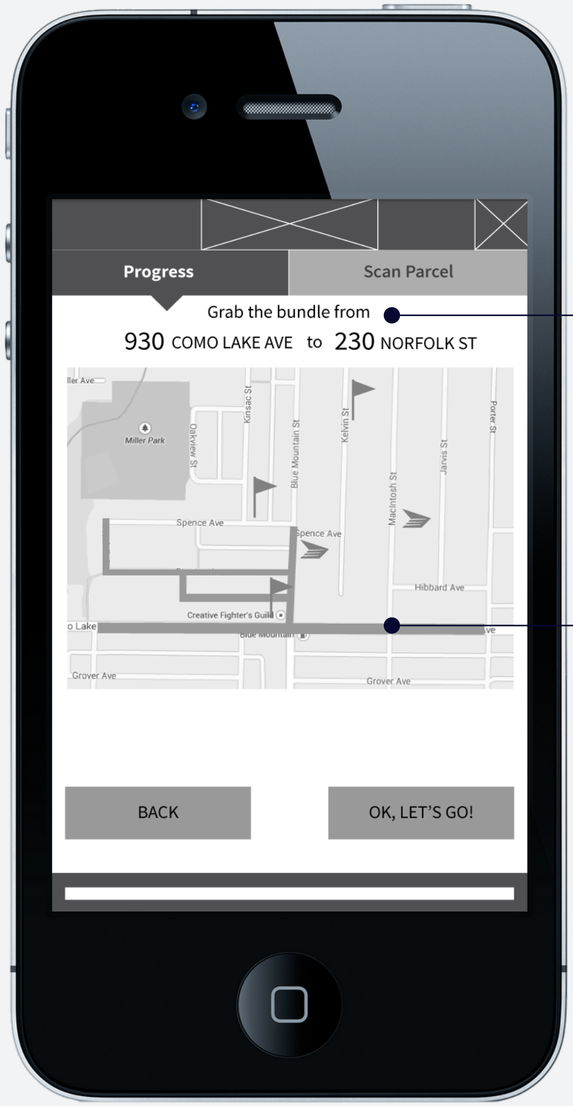


Mail Delivery

Once the route begins, then carriers are asked to move from checkpoint to checkpoint. To begin, they drive to a checkpoint, park, and then select the mail bundle that was created back at the mail depot.



Using a map, the carrier navigates to the checkpoint, and then taps “I’m Here!” to advance.



The carrier will have already bundled this mail at the depot. Once they’ve loaded it into their satchel they begin the route.

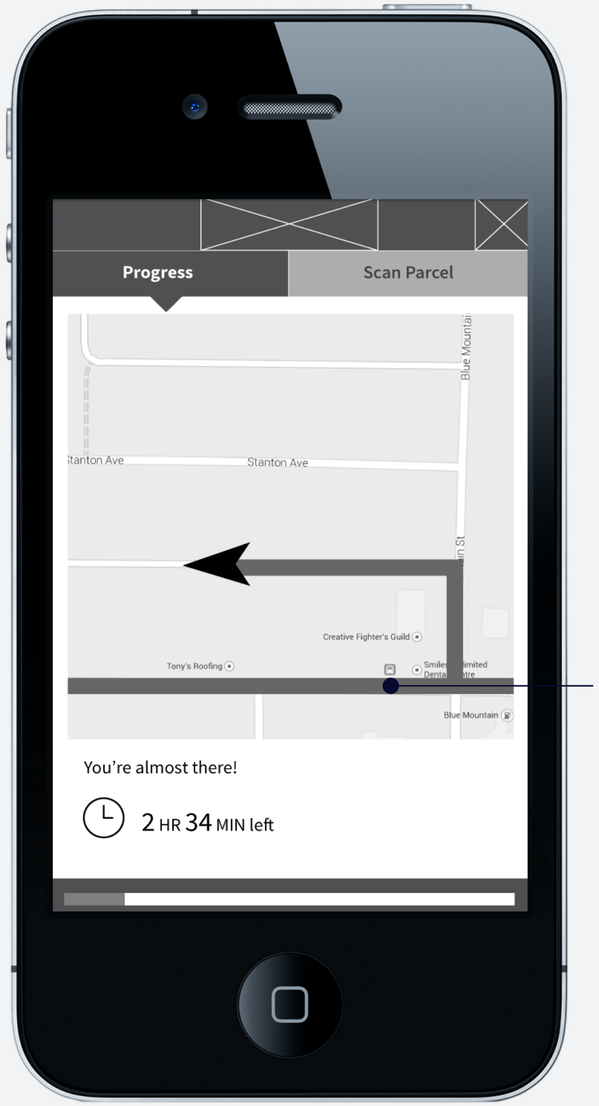
The highlighted route shows what ground the carrier will cover in this section of the route.

Mail Delivery

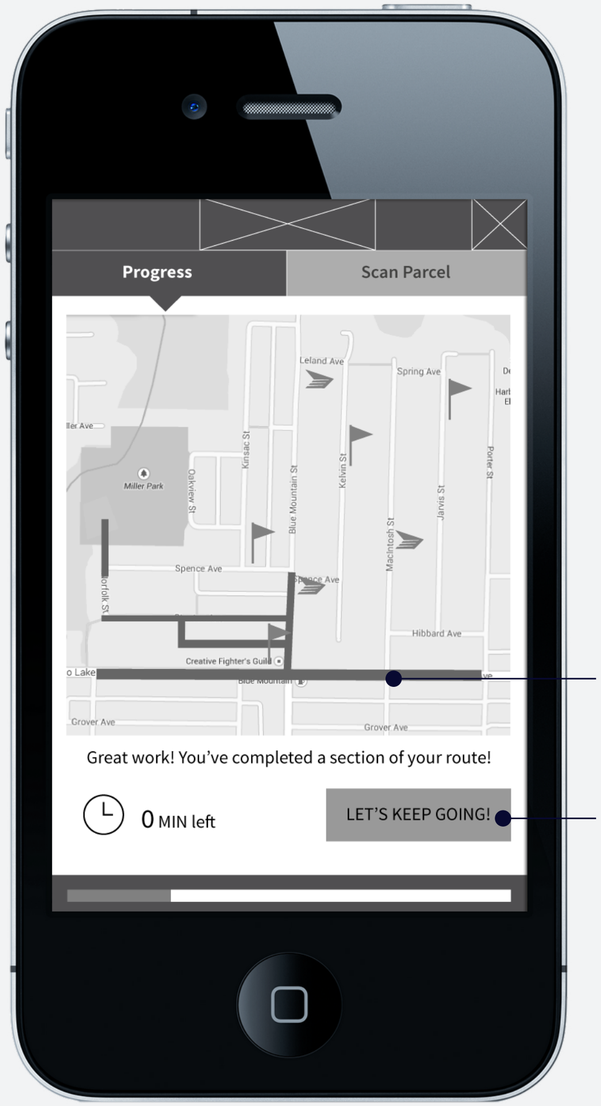
- **Drive to Checkpoint**
- Mail Delivery
- **Load satchel with mail bundle**
- Mail Loaded
- **Main Checkpoint Screen**
- Checkpoint Complete
- **Next Phase or Repeat Phase**

Mail Delivery

The carrier then delivers mail on foot through the selected part of the route until they're complete. Once they finish the segment they move on to the next checkpoint, or back to the depot if they completed the last section of the route. This stage is cyclical, and the carrier will repeat the checkpoint phase many times.

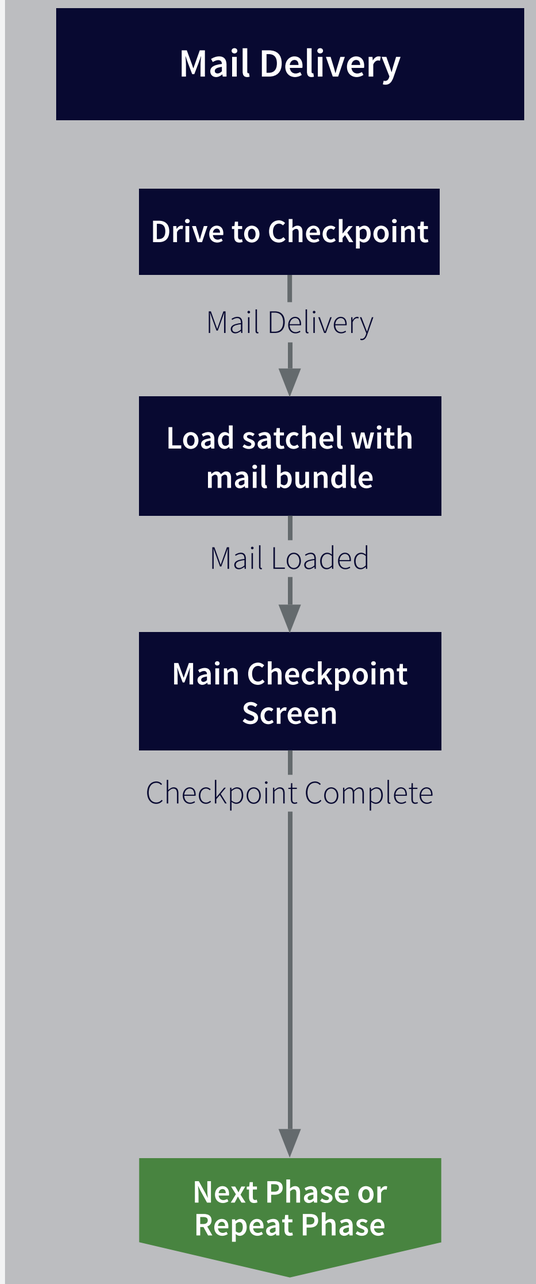


The highlighted route shows what ground the carrier has already covered, while another colour in front of the carrier will denote what parts of the route still remain.



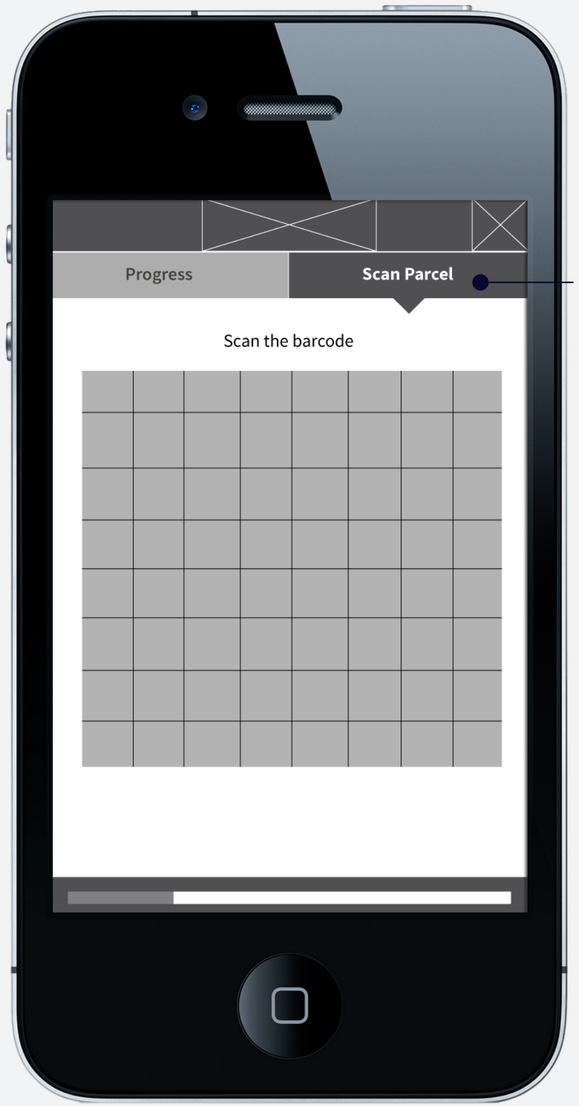
Completed sections of the route are highlighted in the dark colour to show what's been done.

This button cues carriers to move on to the next checkpoint.

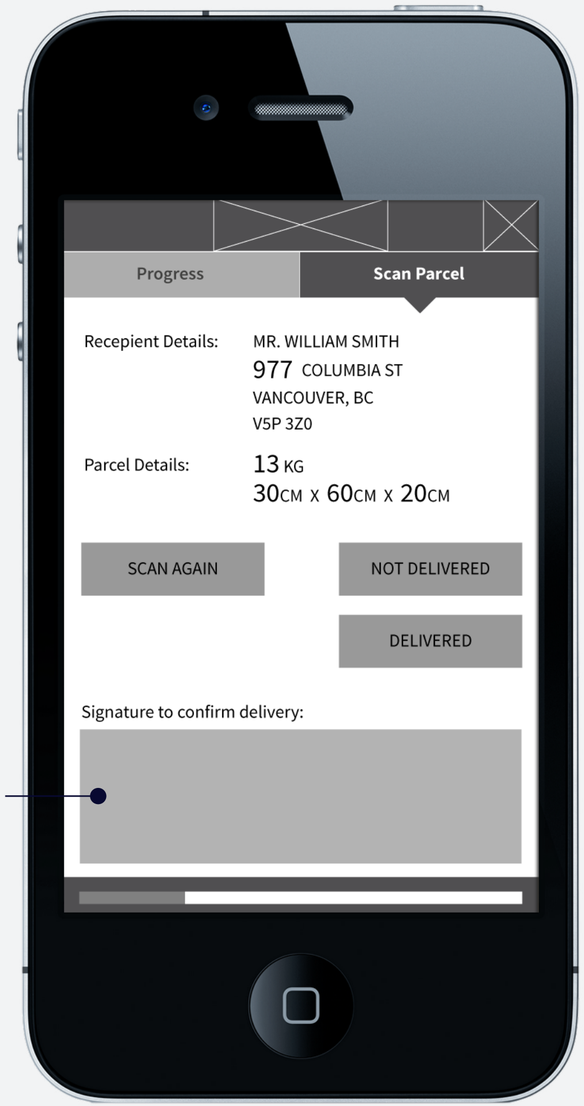


Packages

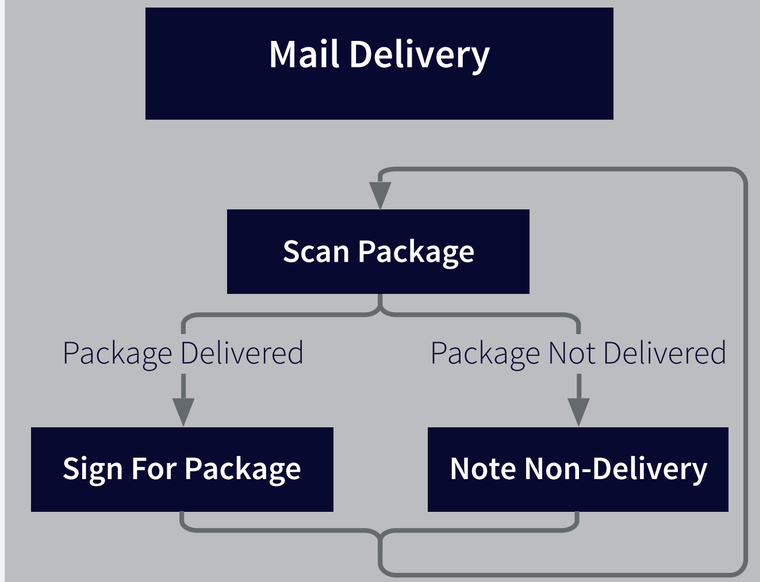
During the route, the carrier will need to deliver packages by scanning their barcodes, asking for signatures, and noting whether or not the package was delivered. Undelivered packages get counted as a metric which help determine the next day's route.



The top tabs allow the carrier to switch from viewing their route to package delivery. This makes the process quick and simple.

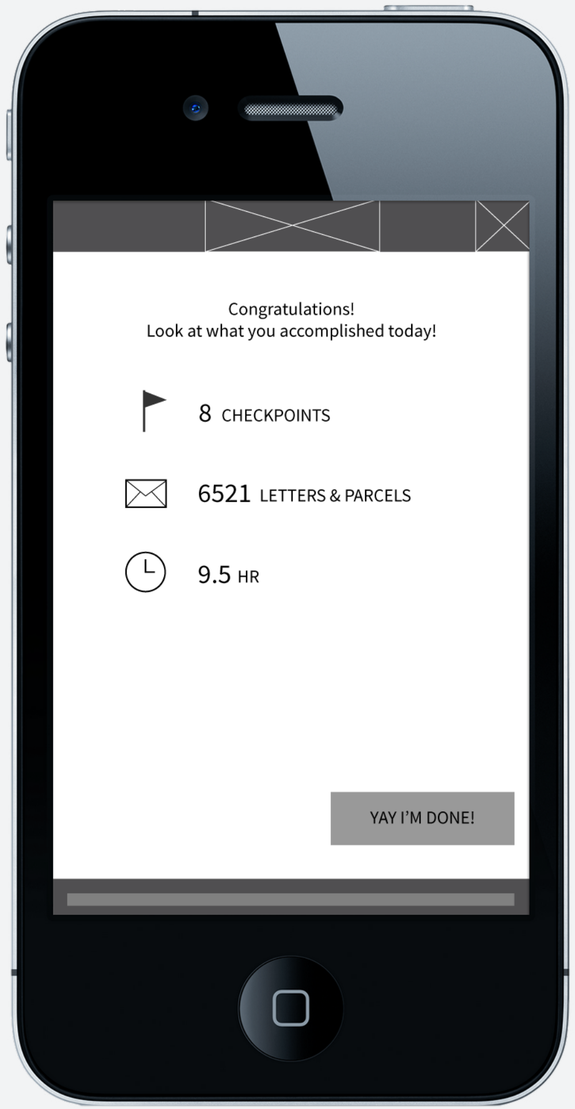


The carrier will ask recipients to sign for packages here.



End of Day

At the end of the day, once carriers return to the depot, they will receive a statistic report on their work for the day. The app will also internally measure their workload, number of undelivered packages, and a number of other factors to adjust the plan for the next day.



End of Day

Statistics

Thank You