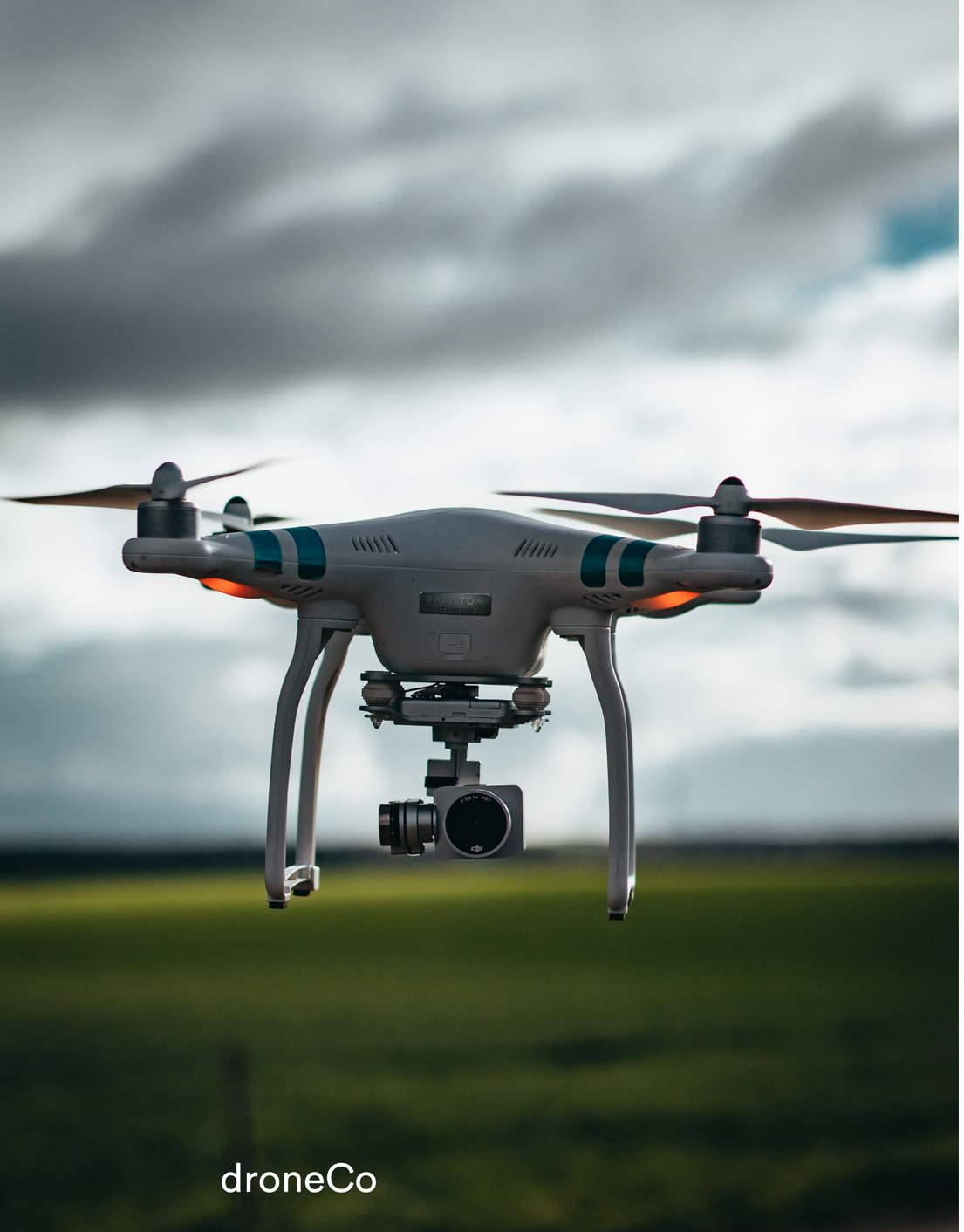

Design case study for droneCo.

By Hadi Shaikh

The sole purpose of this case study is to design dashboards for 3 personas such as Package Shipper, Package Shipper and Package Recipient.

Task brief

This conceptual design is only meant for the practice purpose to sharpen my UX design skills and to submit test for. Choosing this app was the challege because it already has many trendy updated features. So it would enhance my skill according to me.

Client : Task for UX Designer (Job role)

Role : Analyzing and designing app and dashboards

Deadline: 3 Days (March-28-2021 to March-31-2021)

Tools : Adobe Illustrator, Adobe Photoshop, Adobe XD

Methods :User surveys & interviews, Empathy map, User personas, User journey map, User flow, Low fidelity wireframes, High fidelity wireframes.

My Role

UX research and designing accordingly plays the major role in designing any user or customer centric products. My role was to collect all the necessary data from the resources, gathering them all together, ideate and then create low fidelity sketches followed by high fidelity wireframe to high fidelity design and then prototyping to gather user's feedbacks before it is launched.

Introduction

Drones are being used in various commercial drone applications like security & surveillance, inspection, public safety, warehouse management & delivery. With the advent of COVID-19 vaccine pharmaceutical company GSL is looking to deliver vaccines using drones to remote hospitals/vaccination centers. Vaccines need to be stored at a certain temperature & requires continuous monitoring.

GSL has hired a drone delivery operator called DroneCo to conduct safe operations.

Design a drone delivery solution to manage a fleet of delivery drones for such operations. Ensure safety & security of the drone operations & package.

Research and design an interactive prototype for the drone delivery solution.

The solution will have dashboards for 3 personas:

- Package Shipper (GSL)

- Drone Delivery Operator (DroneCo)

- Package Recipient (Hospital)

The solution needs to be a web app which should work on a desktop for GSL & DroneCo and mobile for hospital

Ensure safety and security of packages for the recipient.

Key features: drone fleet management, live control, telemetry, mission planning, live video from the drone camera as per the persona.

Propose a stand operating procedure for deploying this solution both in rural and urban areas.

Challenges

1. To find and present an idea or solutions for various platforms for different problems such as natural calamities, no-connectivity areas, drone-theft solutions, humidity, heavy rains, air-traffic detection, delivery on time, route finding, etc.

2. Since drone delivery ideas is currently being studied vastly on the global platform, there are few thoughts which needs to be think about such as internet or GPS connectivity is not as strong as some developed area so delivery might be delayed or there are chances of drone theft or lost.

3. To make people/enterprises or business use drone deliveries to make it more efficient to reach their products to customers. And making an application solution user-friendly for enterprises to use and make their task easy and reduce timing than the regular.

4. To improve app security, easy drone fleet management, live control, telemetry, mission planning, live video from the drone camera as per the persona.

Research

Since the COVID started, it has been advised to keep distance and have contact less doings as much as you can. Since then drone delivery idea is peeping out. Big companies to small enterprises, medical fields, grocery delivery can be carried out by drones.

As this project is referring to the medical supplies delivery, I started my research through internet to learn how drones works and how the task can be carried out with easy. For that different platforms has been used such as YouTube videos, Google web search, visiting hospitals, asking doctors, retailers and people (who might play role as a recipients) questions regarding this ideas, there are few things that I came up with:

- Package security.
- Easy to handle.
- Effects of weather on the drone and the delivery.
- There are certain medicines or supplies that must be delivered within given time.
- Managing drones fleet should not be messy and easy to understand.
- Static data must be replaced by the dynamic data to keep watch on drones and deliveries.
- Temporary halts of drones in emergency to secure the package as well as drone.

William Guy Thilgen Jr. 2 weeks ago

Drones have issues on a good weather day, they have considerably more issues on bad weather days.

1 REPLY

Badass Beaver 1 month ago

Interesting idea but what if the drone malfunctions in which the package is dropped and it crashes through the window? Not something that I want to deal with and personally I rather see Amazon expand the lockers to accommodate larger packages.

1 REPLY

R

Razel Lagman 3 months ago

Reminder: Never accept packages delivered by drones from unknown sender or without prior knowledge/information of the packages!

REPLY

View reply

Mishika Chawla 1 month ago (edited)

Beautiful idea especially for contactless delivery serving the need of the hour. Especially, for crime prone areas; it comes out as a great solution to unsafe roads of different countries. Also, adding to the market share of the company.

REPLY

F

Factual Information 2 months ago

it will not work near me as I live within close proximity to an airport.

REPLY

Objectives of research

After the research I further divided my research studies into several compartments to understand and design user-centric interface with ease.

| Insecurities of ordering from drone.

| Package security.

| Delivery timing.

| Tracking

| Landing of packages/drones.

| Safe area.

| QR generated locations.

Pain points and solutions

My purpose is to create an user interface easy to understand without any crowded dynamic data and easier to operate. There were problems such as natural/weather changes. Most of the drone are not waterproof or water-resistant. Changes in weather might happen to have according to the region. That can affect drones. That comes into error prevention part. Drone theft part can also not be ignored. Looking at 3 personas, one thing comes handy and common and that is drone's path tracking.

Features can be added apart from the regular dashboard panels:

| Live camera tracking.

| QR code scanning after receiving a delivery.

| Pre-download the map/track of the areas where connectivity can possibly be low.

| Live monitoring video window.

| SOS option for drone related emergencies.

| Weather change detection widget.

User persona

Name Here, 25

Pune, Maharashtra
Single
00lpa

Bio

Personality

Pain-points

Goals

droneCo

User persona

Name Here, 25

Pune, Maharashtra
Single
00lpa

Bio

Personality

Pain-points

Goals

droneCo

User persona

Name Here, 25

Pune, Maharashtra
Single
00lpa

Bio

Personality

Pain-points

Goals

droneCo

Design process

Empathise → Define → Ideate → Prototype → Test → Implement

Note

For best user experience we need to do field studies to gather experiences, expectations and pain points from the actual users.

But due to COVID it is nearly impossible to do so as our actual users are working tirelessly in hospitals.

As I am new to this whole concept of drone delivery, I would need few points or questions answered from your side.

Rest I have completed my case study.

droneCo