



Missing packages in online deliveries

IDD 941N Thesis Preparation
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| Thesis Journey

01

Exploratory
phase and
topic selection



02

Secondary
Research
and scoping



03

Primary
Research and
user interviews



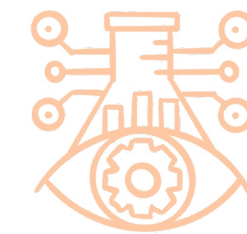
04

Debriefs
insights and
synthesis



05

Problem
statement
and definition



06

Final How
might we



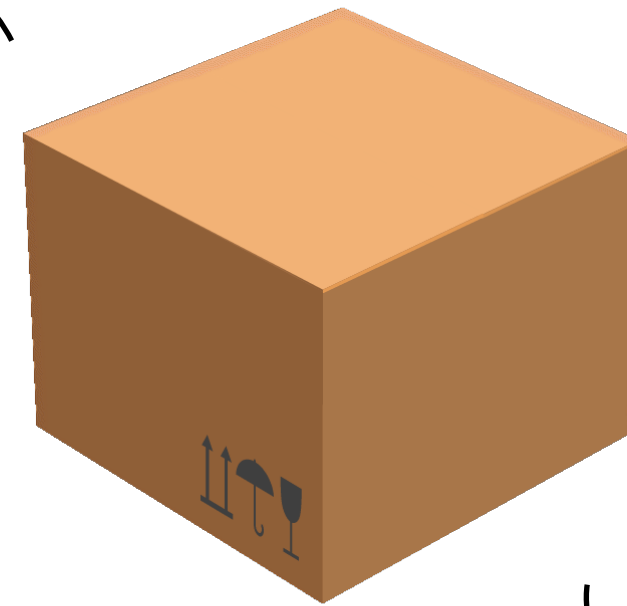
What is a missing package?

A missing package is a package that has not been delivered to the intended recipient and cannot be located by the carrier as well.

Why packages go missing?

Delivery

- Unclear delivery instructions
- Delivered to incorrect address
- Absence of signature verification
- Negligence of post delivery confirmation



Human error

- Package scanned incorrectly during transit
- Mistakes during sorting for transfer
- Errors in record keeping of packages
- Poor handling

Package labels

- Poorly placed labels
- Usage of multiple labels on same package
- label damaged beyond recognition

| How might we-Initial

How might we
reduce the amount of missing and misplaced
packages in online deliveries?

Who is the user?

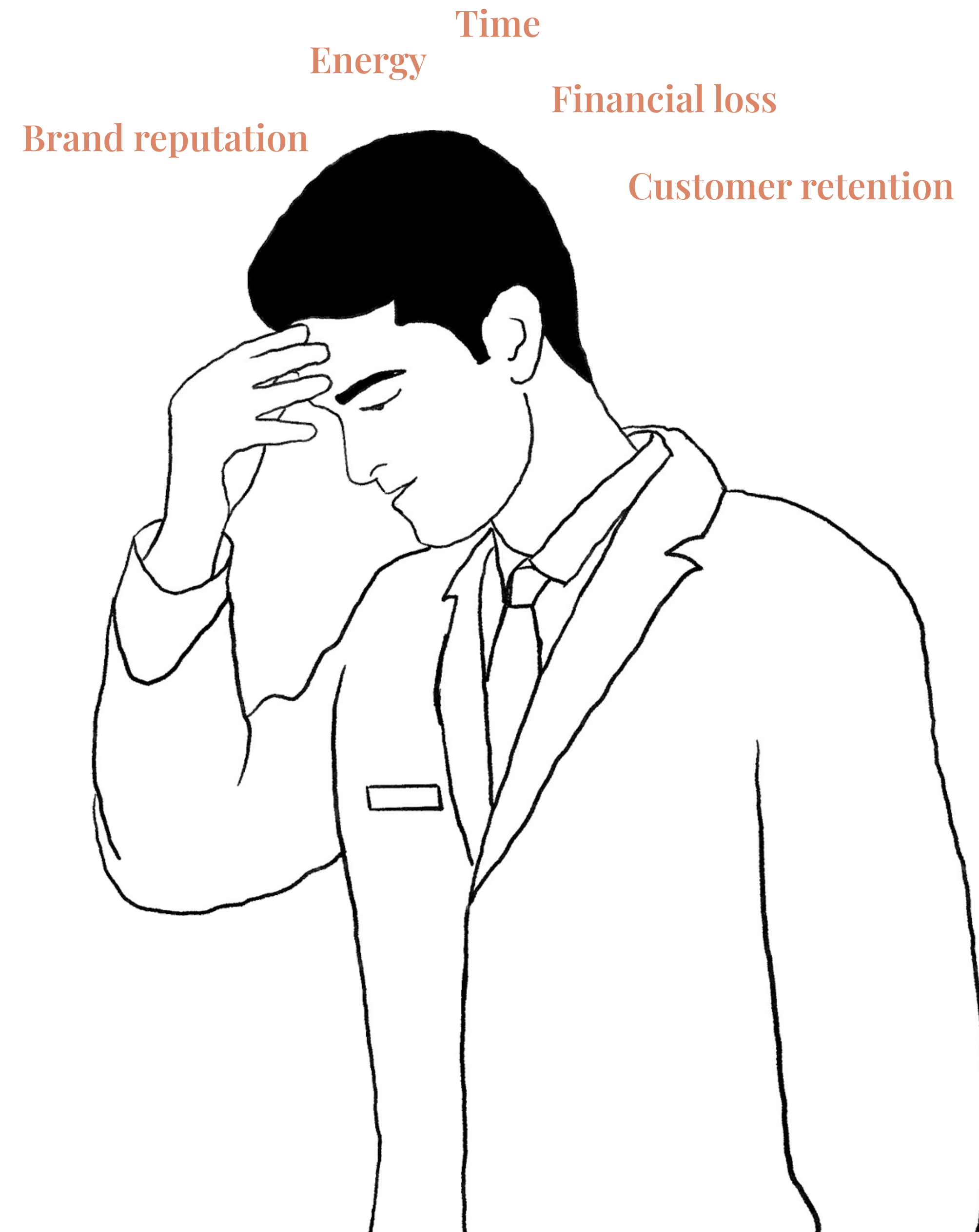
Meet

Retailer Ryan

- Graduate of the Ivey Business School
- An entrepreneur with 10 years of retail experience
- Owns a personal clothing retail business
- Strives to present a secure image of his brand to his customers



Unfortunately,
missing or lost packages
pose serious threats to his
retail business.



What are those threats?



- Missing or lost packages leads to decreased customer satisfaction and negative reviews from the customers that impacts **the retailer's brand reputation**.
- The negative reviews can refrain the customers from shopping with the retailer, which can lead to **decline in sales and revenue** for the business.
- The retailer is required to re-ship the package or issue a refund to the customer if their package is lost, which results in **additional reshipping expenses and lost revenue**.
- In addition, he also incur **costs associated with resolving customer complaints**.
- Missing and lost packages can lead to **inefficiencies and disruptions in the supply chain**, which impacts the retailer's overall operations and efficiency, which results in more **financial losses and reduced efficiency**.

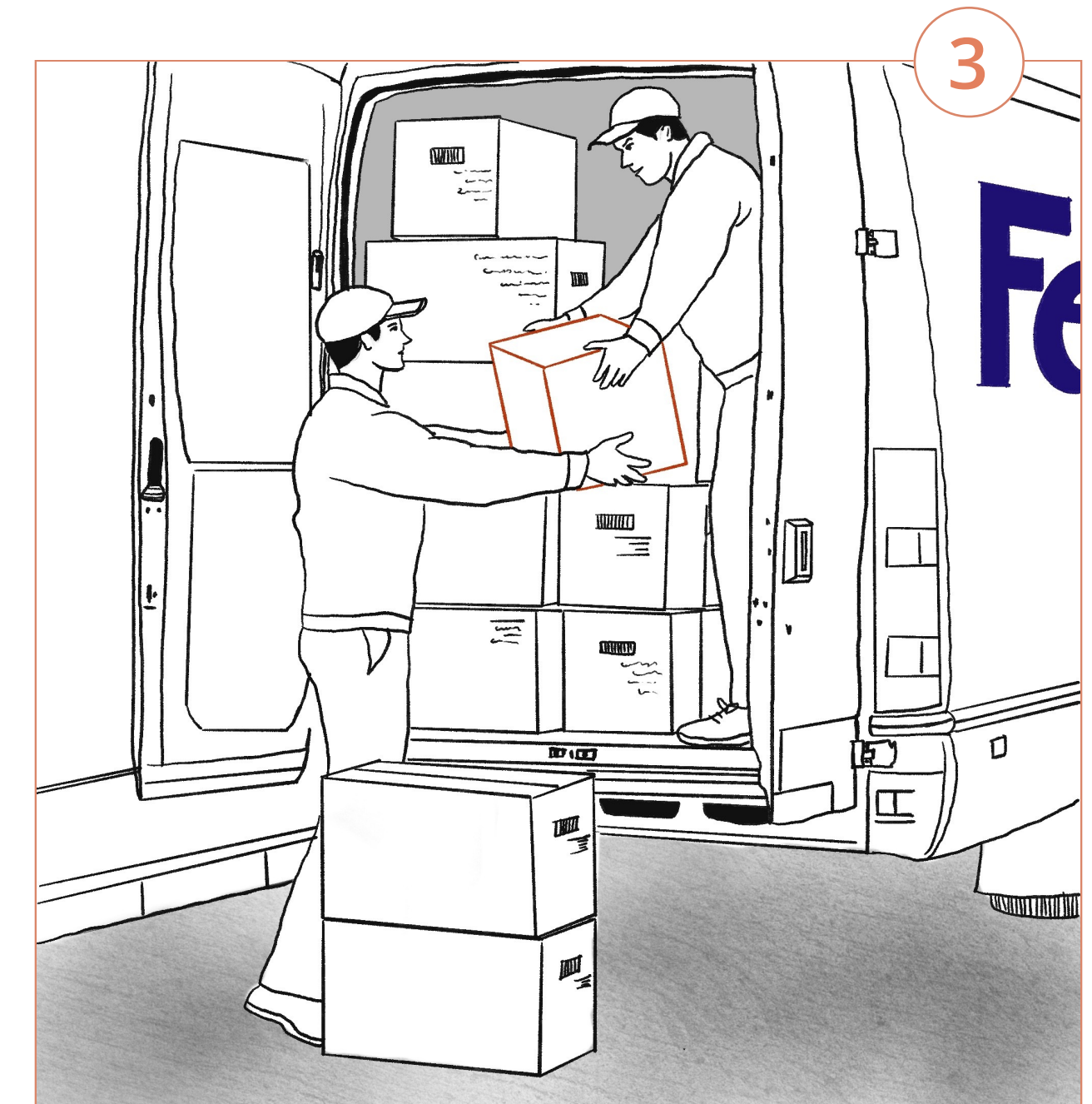
Meet- Retailer Ryan



Ryan carefully packs the package with the customer's ordered items and brings it to the shipping office.



The postal worker places the required labels on the package, scans it, and verifies that it is prepared for shipping.



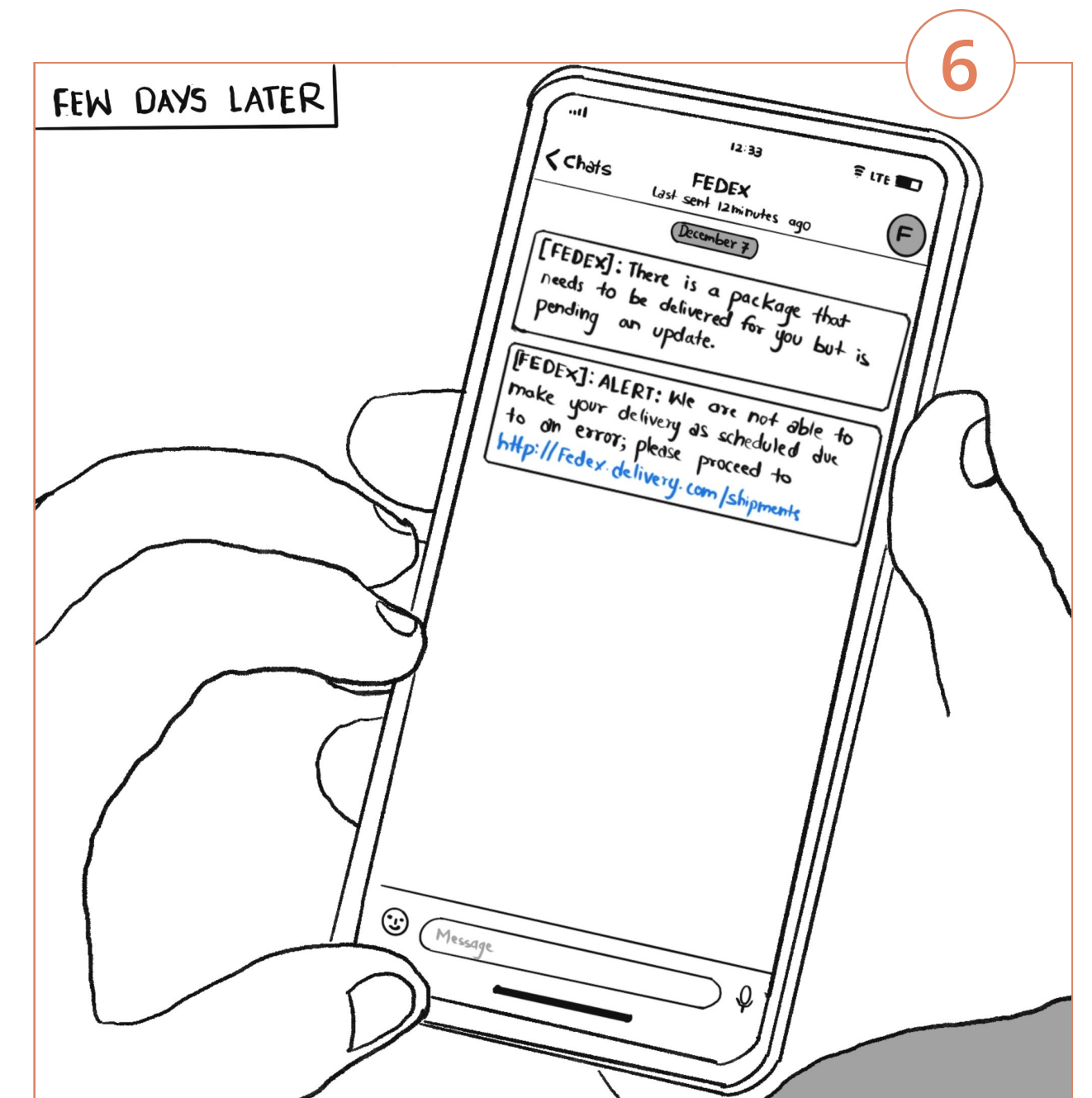
The package is then loaded onto a delivery truck and begins its journey.



The package is supposed to be transferred at a warehouse in between, but, accidentally, it is rerouted to a different destination.



This starts a chain of errors in motion, where the package further gets transferred to different warehouse.



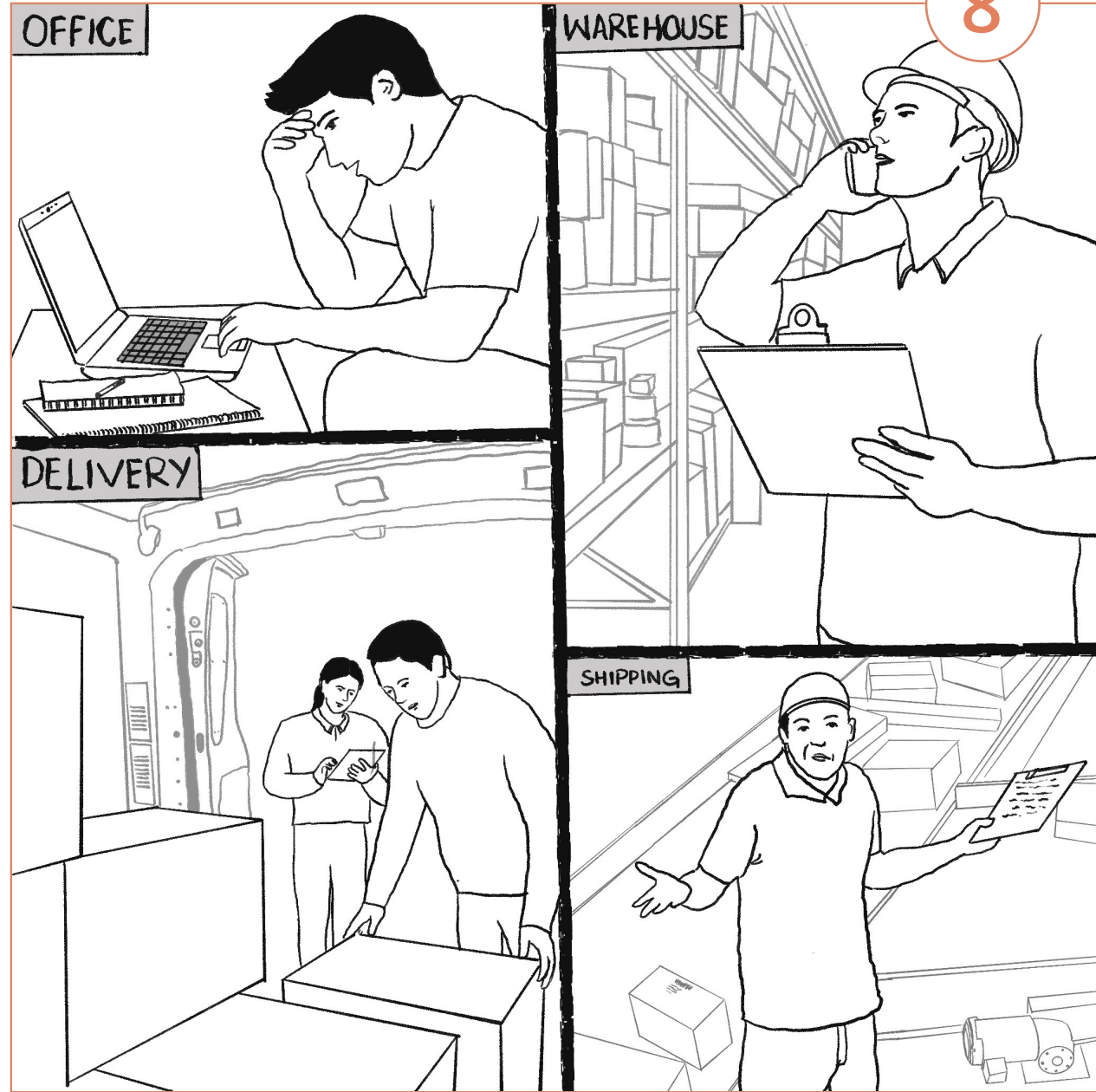
The retailer receives an alert that the package has not been delivered as expected.

7



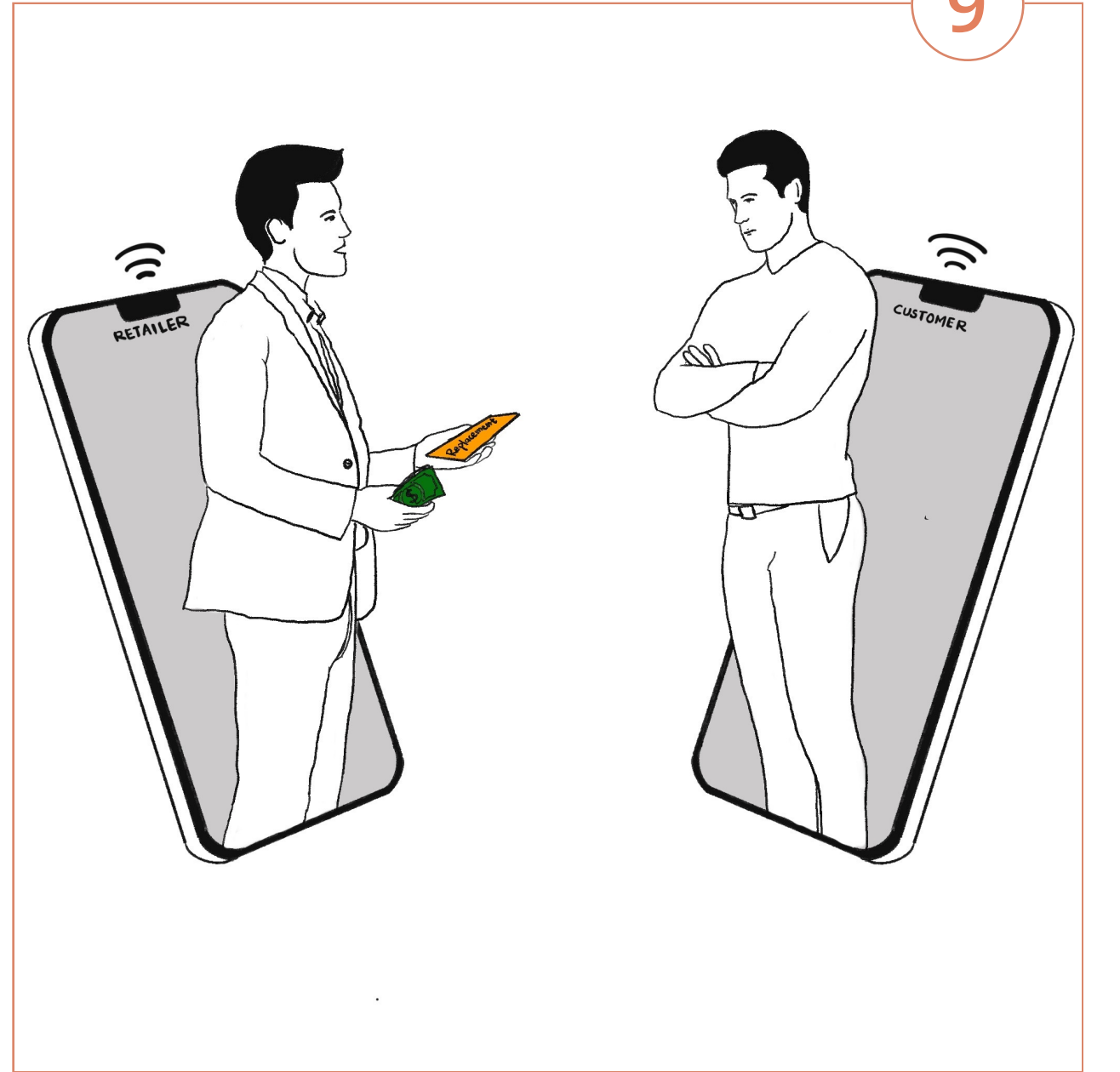
He immediately reaches out to the shipping service to try and track down the lost package.

8



After a thorough search, it becomes clear that the package has been misplaced due to human error and cannot be located.

9



The retailer apologizes to the customer and offers to either refund their money or send a replacement package

More than 1 in 10 packages 'disappear without explanation' in major US cities, and it's a huge headache for retailers

1.7 million +

packages disappear nationwide, everyday, contributing to growing problems for retailers and delivery service companies dealing with an estimated **\$25 million** in lost goods and services.

8% of all

packages are either lost or stolen during the delivery process, according to a National Retail Federation survey.

16% of consumers

stop buying products from a business if they don't get their delivery on time resulting in financial decline for the retailer.

Survey

To test the problem space on a countable number of users



Pre-Interview Survey for Shipping errors/Lost Packages

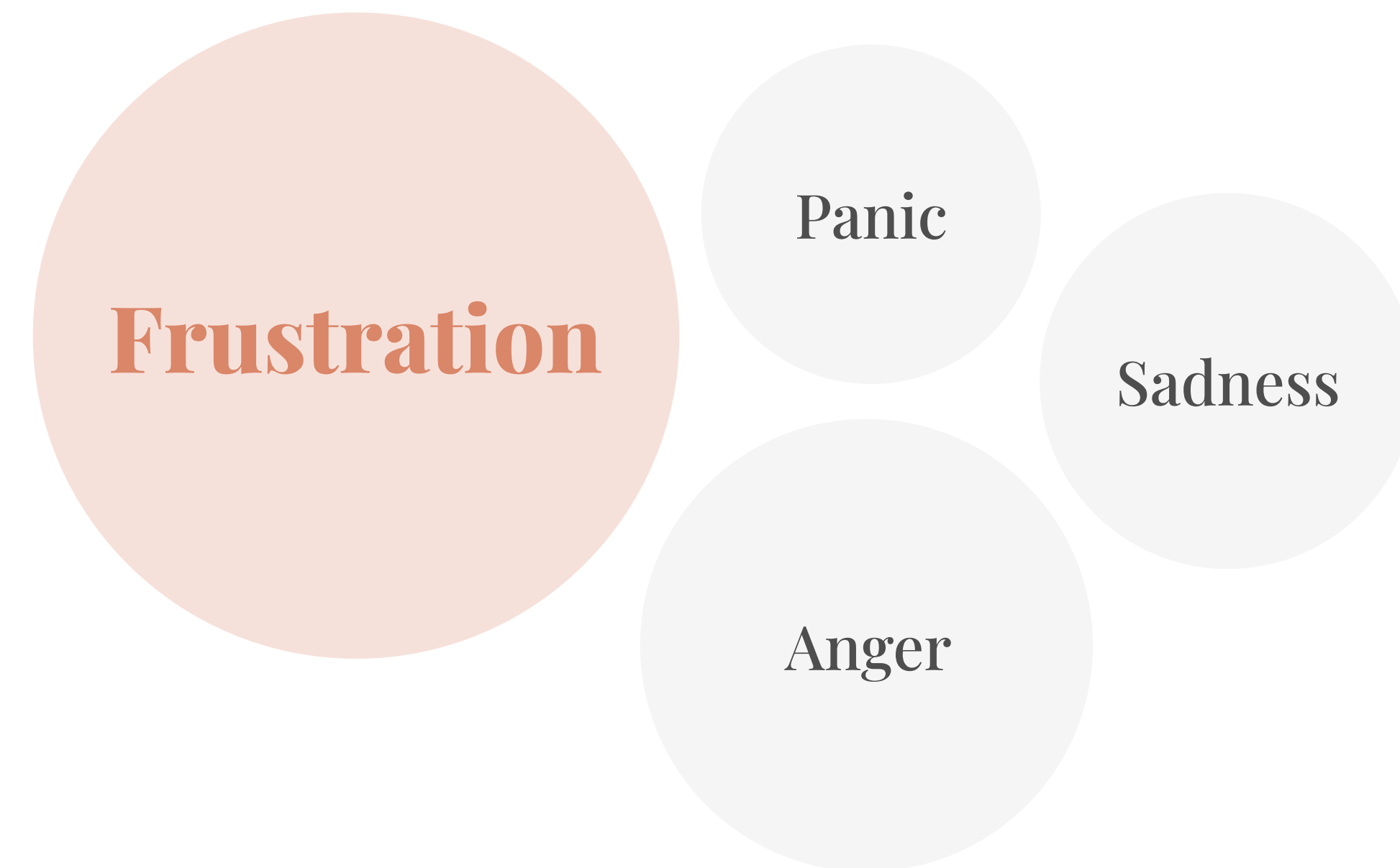
My name is Vaibhav. Gaikwad, I'm a graduate student at **Thomas Jefferson University, Philadelphia** studying 'User Experience and Interaction Design. This survey is a research method used for collecting data from a predefined group of respondents to gain information and insights into the shipping errors and misplaced/lost deliveries faced by online retailers/Business owners.

My Thesis aims at reducing the number of shipments/packages that are lost during online deliveries due to multiple factors. My primary focus is to gain insights into the issues when a shipment is lost and how it affects online retailers and business owners.

Thank you!

36 Responses

**More than 50% retailers face this problem
3-5 times in a month**



How are missing package issues currently handled?

Provide “pickup locker” options

Handling their own shipping and deliveries

Verify the customer’s address multiple times

Providing alternatives to delivery like in-store pick ups

Use third-party tracking and delivery services

File an insurance claim to cover the combined insured value of the lost packages

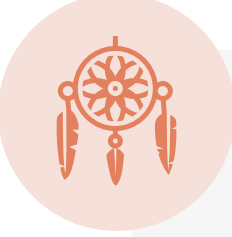


Primary research-Identifying User goals


- 01** Know the delivery procedure in detail to identify any errors made as the product travels from the retailer to the user
- 02** Discover the primary reasons why previous deliveries of shipments and packages failed to reach their destination.
- 03** Calculate the losses an independent business must go through if a shipment is lost.
- 04** Learn more about the frauds/scams involving lost or missing shipment reports.
- 05** Recognize the impact a missing shipment has on a brand's reputation and the connection between independent business and customers.

Interview Participants- Retailers

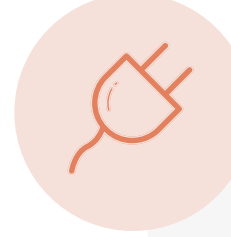
12 Retailers
12 Debriefs




Terisa Ahliquat
Reet's on ETSY



Rucha Nikumbh
The untraditional female




Timothy Lewis
Independent Retail




Bobbie Abdalla
Independent Retail



Kamala Perry
WIGSUS.com




Morris Burke
Dragoncastlebooks.com



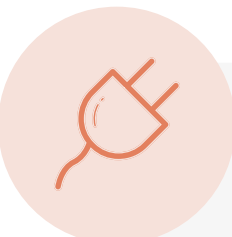
Oscar Miles
Mika Miles Clothing



Megan Melly
Prestige store



Olieve Juliet
Sam's beauty



Jose Burrows
Independent Retail



Jasper Harvey
Jeff's Nike



Dhanashree Mulay
Darjja.com

Interview Insights

“ We just have to be truthful and honest, and eventually send another product if the shipment is lost or misplaced , its really frustrating. ”

Rucha

“ I was freaking out about a package not getting there, and the courier representative told me that it has been delivered, there is nothing they can do. ”

Terisa

“ Most of the times you have to send a new product and a new item, which is a huge loss to the business. ”

Timothy

“ Only got 40% of the total value as a compensation from the insurance company ”

Bobbie

“ I will write the address myself after confirming with the customer to reduce this. ”

Jasper

“ I feel a lot frustration and loss, when I am not able to track my package effciently, I don't know who to blame for that. ”

Olieve

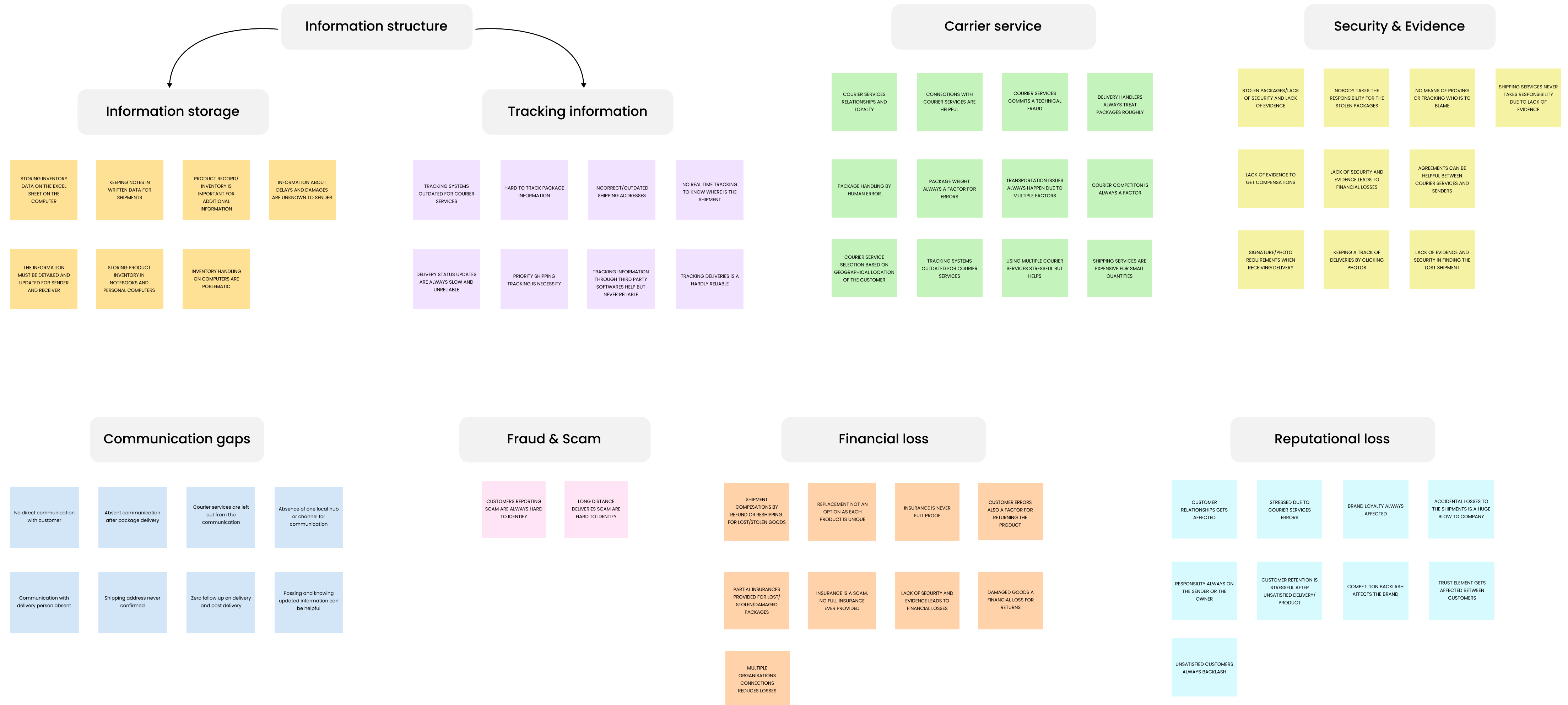
“ We do lose trust from customers but try to compensate them with one way or the other. ”

Morris

“ I was delivering the products myself in the local areas to avoid such issues. ”

Jose

Affinity mapping



Remember-Retailer Ryan?



GOALS

- Minimize the number of lost or missing packages.
- An easier way to locate missing packages with reduced time and resources spent.
- Improve customer satisfaction.
- Reducing financial losses by reducing the number of refunds and reshipments.
- Secure more business and customer retention to the brand.

NEEDS

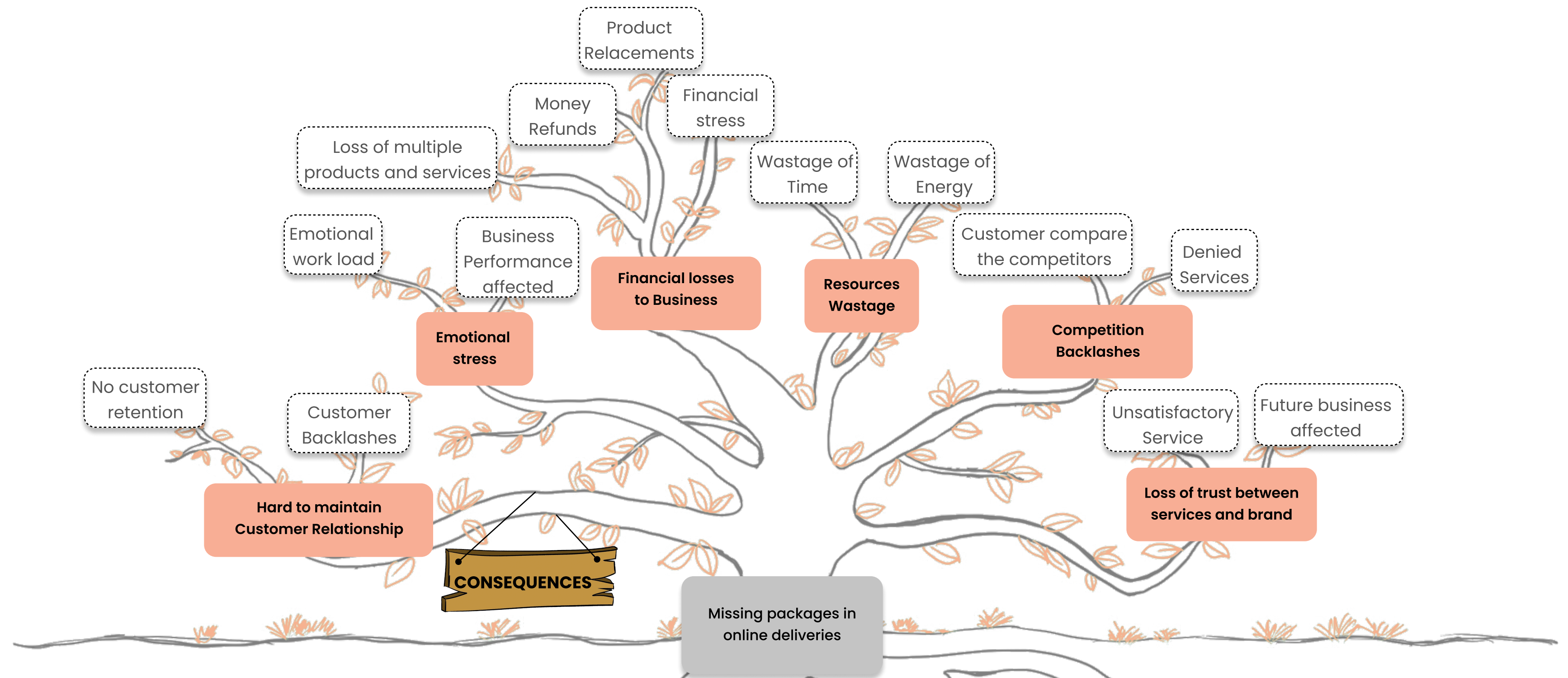
- To address customer issues and problems as soon as they arise.
- Timely and precise information about the location of the package.
- Collaborations and communication with shipping carriers

CHALLENGES / FRUSTRATIONS

- The flow of packages across the complex supply chain makes it difficult to accurately track a package
- Customer expectation for efficient and quality delivery can be challenging to live up to if the packages go missing
- Limited control over the delivery process due to third party carriers handling the delivery and tracking services

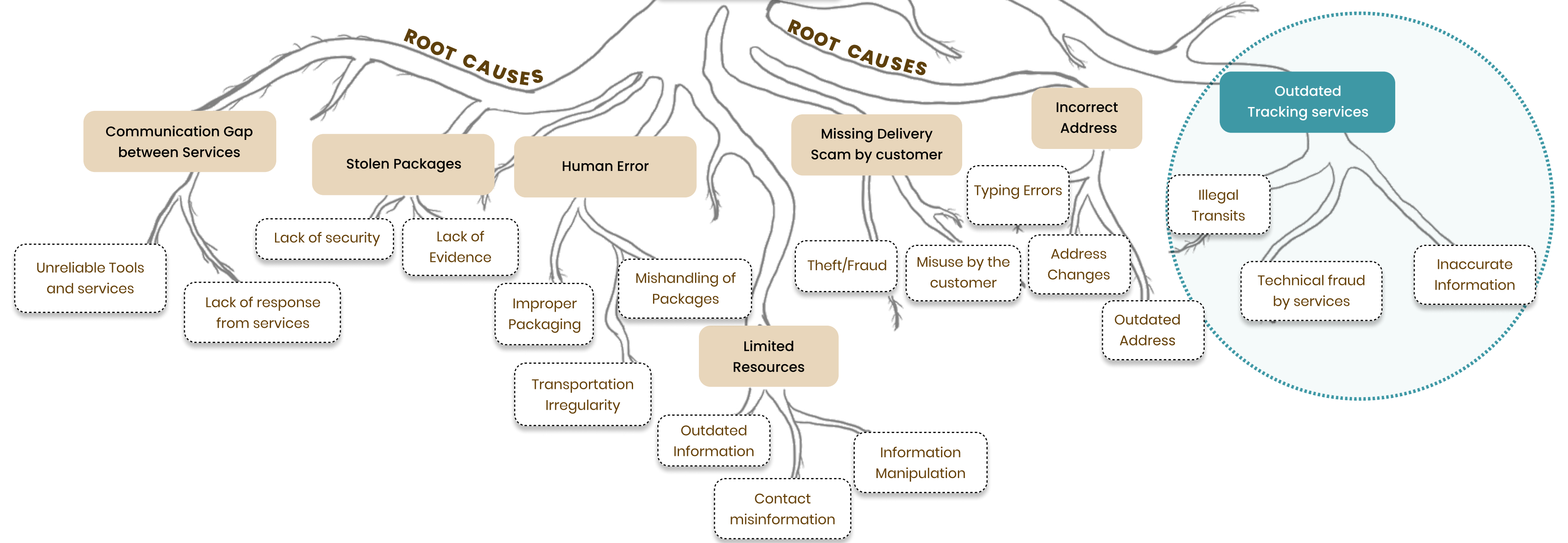
The tree top

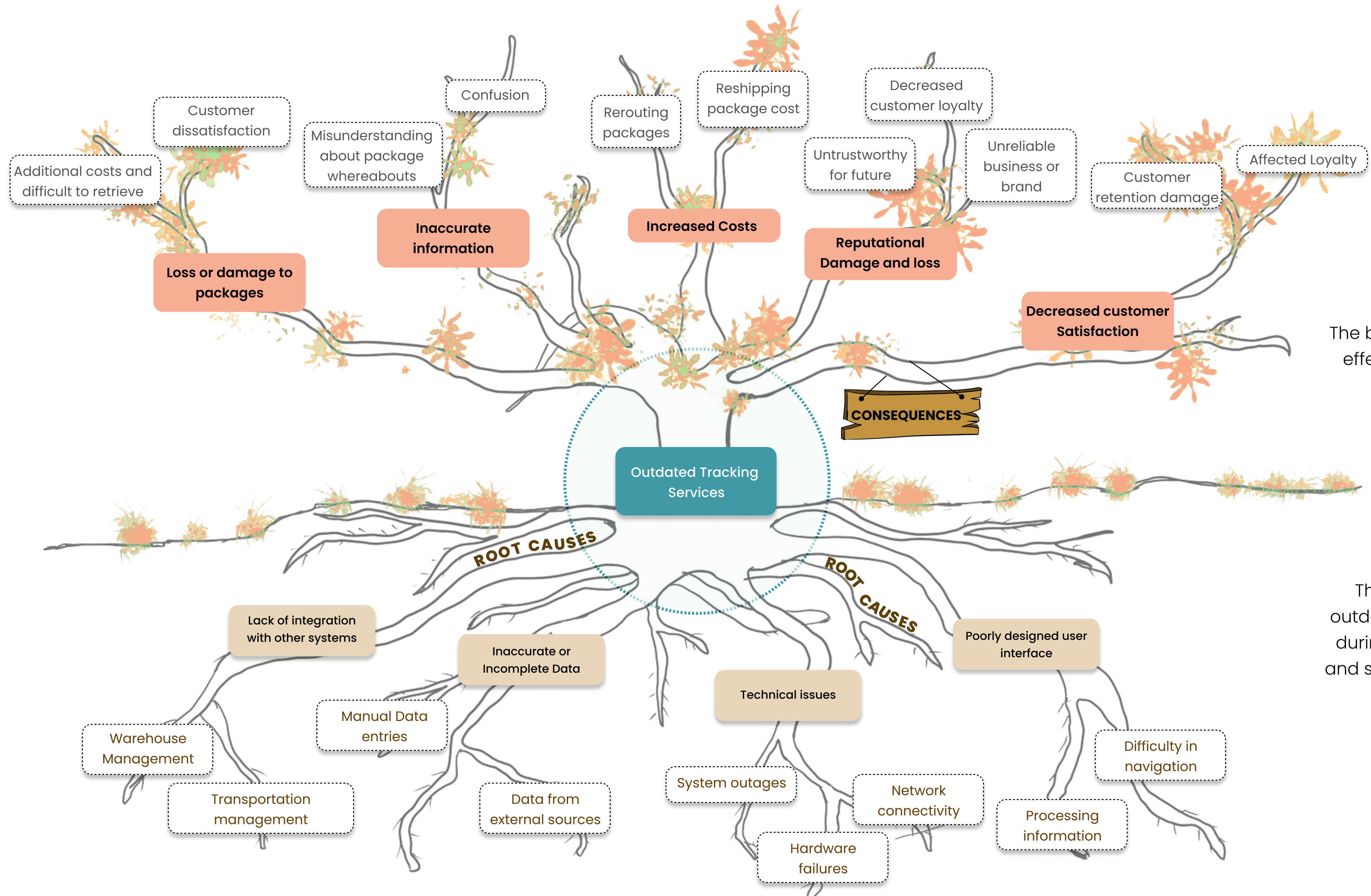
The branches of the tree represents the primary consequences faced by users when a package is lost or missing, whereas the extended branches highlights the secondary issues that are often overlooked.



The tree roots

There are multiple factors which leads to the problem of missing packages during deliveries, analyzing each factor to extent highlights the primary causes and the secondary issues behind the same for a determining solution.





The tree top

The branches of the tree represents the primary effects due to outdated package tracking in online deliveries

The tree roots

The tree roots deep dives into causes why outdated tracking occurs between user groups during online deliveries which leads to primary and secondary effects highlighted in the tree top analysis.

Delivery



Shipping



Warehouse



Office



Ryan trying to find the location of his missing package by contacting all the services and individuals involved in the delivery.



A tracking tool for post-purchase experience for merchants and consumers

S trengths	W eaknesses	O pportunities	T hreats
<ul style="list-style-type: none">• Wide range of delivery options• Integration with other e-commerce platforms like Shopify and e-bay• Advanced tracking and reporting technology• Wide range of service selection option for the retailers. Ex- Fedex, UPS, DHL	<ul style="list-style-type: none">• Mostly dependent on the carriers for the services to be in the market• Limited control over quality of delivery services and process• Limited market capabilities	<ul style="list-style-type: none">• E-commerce growth and expansion into market• Integration with additional services with access to the user database• Expansion into new market for deliveries apart from retailer shipping and packaging Ex- Food, Medicine etc	<ul style="list-style-type: none">• Competition from platforms that offer similar services. Ex - Shipbob, Returnly etc• Changes in consumer behaviour• Changes in rules and regulations related to shipping• Changes in labor practices

<h2>S</h2> <p>trengths</p>	<h2>W</h2> <p>eaknesses</p>	<h2>O</h2> <p>pportunities</p>	<h2>T</h2> <p>hreats</p>
<ul style="list-style-type: none">• Integration with carriers like UPS, USPS and FedEx• Customized shipping options for retailers w.r.t time and carrier• Integration with platforms like Woocommerce, shopify etc• Automation capabilities to create label and send notifications	<ul style="list-style-type: none">• Availability only in certain regions• Dependency on carriers makes it difficult to resolve issues track packages efficiently• Heavy technological dependence of GPS and scanners	<ul style="list-style-type: none">• International and regional expansion• Software innovation to add more features or improve services• Partnership with other platforms to reach new customer base	<ul style="list-style-type: none">• Development of new shipping and fulfillment methods or platforms• Platforms like Shipbob, Elitextra for competition

 Strengths	 Weaknesses	 Opportunities	 Threats
<ul style="list-style-type: none"> • Convenient for customer timings • Customizable pick-up options • Advanced tracking and reporting technology • Multiple pick-up time and locations options for customers 	<ul style="list-style-type: none"> • Dependence on physical store locations • Extra staff requirements for processing and handling • Limited market capabilities 	<ul style="list-style-type: none"> • E-commerce growth and expansion into market • Integration with loyalty programs, offering rewards and discount for more foot traffic. • New features and capabilities to improve its curbside and in-store pick up option services. 	<ul style="list-style-type: none"> • Changes in technology leading to new pickup method and delivery options • Changes in consumer behavior, leading to home deliveries. • Weather conditions and accidental interruptions.

Problem statement

Goals

Needs

Challenges

How big?

Why important?

Existing solutions fails?

Retailers face a significant challenge in accurately and reliably tracking packages in online deliveries. The ability to track packages is important for retailers, as it allows them to know the whereabouts of their packages and to ensure that their packages are delivered safely. When packages are lost or missing, it can lead to frustration and disappointment for customers, and can result in inquiries or complaints that take time and resources for retailers to handle. This can have a negative impact on customer satisfaction and loyalty, and can lead to lost sales and revenue for retailers.

That being said, it is likely that this problem affects a significant number of retailers and consumers, as the volume of online shopping and package deliveries continues to grow. In 2019, the number of packages delivered worldwide was estimated to be around 100 billion, and this number is expected to continue to grow in the coming years. With such a large volume of packages being shipped, it is likely that a significant number of them will go missing or be lost at some point during the delivery process. According to the National Federation Survey almost 8% of packages from all deliveries are either lost or goes missing, which can be estimated for \$8 billion lost in value.

Existing solutions, such as package tracking systems and customer support, have not fully addressed the problem of lost or missing packages. Package tracking systems may provide inaccurate or outdated information, or may not offer transparency about the package's location. Though, customer support can help address individual issues, but may not be able to prevent lost or missing packages from occurring.

As a result, retailers are struggling to meet the goals and needs of their customers and to provide a positive package tracking experience. Improving package tracking in online deliveries, retailers can make it easier to locate missing packages and minimize the time and resources required to do so.

This includes providing accurate and up-to-date information about the location and status of packages, as well as offering transparency and visibility into the package's journey. If at all packages do go missing, retailers need to be able to quickly and effectively address customer concerns and resolve any issues.

Retailers often rely on third-party carriers to handle the delivery of packages, which means they may have limited control over the process. The movement of packages through complex supply chains can make it difficult to track their location and ensure they are delivered as expected. It also involves reducing the number of lost or missing packages and providing efficient and effective support to address any issues that do arise. By addressing these challenges, retailers can provide a better experience for their customers and maintain a competitive edge in the market.

How might we improve the accuracy and reliability of package tracking in online deliveries for retailers to reduce the number of lost or missing packages, eventually reducing financial losses, and damage to the retailer's business and its reputation?

Success metrics- KPIs/KEIs

30%

Customer Satisfaction

The measure of client satisfaction with the delivery process could be one metric. Every successful delivery can be measured through post delivery verifications.

KPI

40%

Transparency in tracking packages

How well informed retailers and consumers are regarding the whereabouts of their packages and any potential delays and damages.

KEI

30%

Cost Savings

Retailers will be able to save money if delivery tracking is improved since fewer lost or missing packages would mean fewer enquiries or complaints from customers about these problems.

KPI

| Next steps

- 01** Research on tracking technologies with respect to package deliveries and shipments
- 02** Gather more insights on current solutions and tracking network in the shipping and logistics department
- 03** Brainstorm on the potential directions.
- 04** Ideate and come up with concrete solutions.



Thank you