



a day at
Baggage Claim

“We do everything we can to prevent passengers from checking bags, because it only leads to passengers having bad experiences.”

– *Marketing Manager, Continental Airlines*

All stories, statistics and quotes come from watching,
talking and listening to:

30 passengers

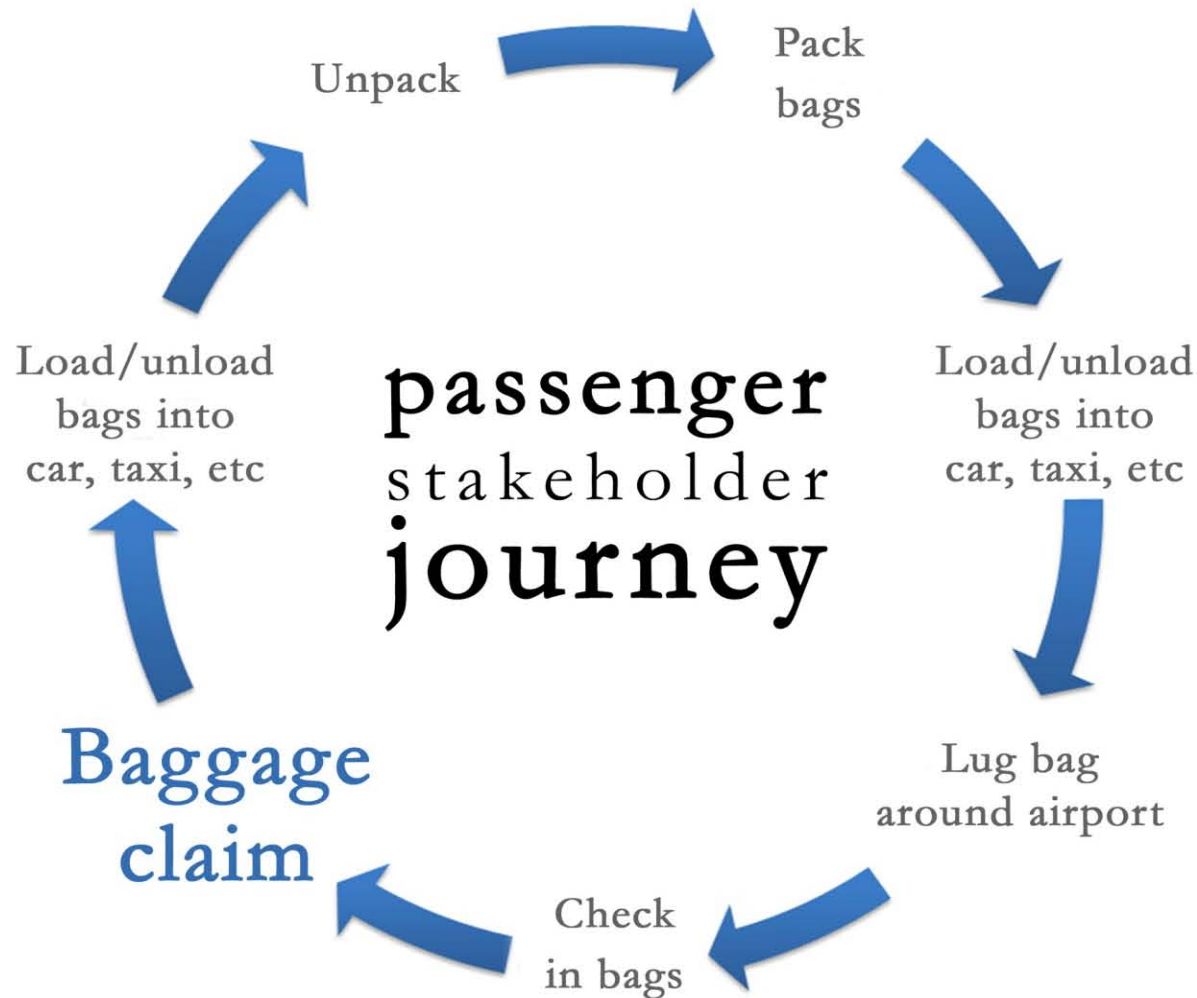
4 airline employees

3 baggage handlers

2 airport executives

in 4 airports for 10 hours

Baggage goes through a long journey.
Baggage claim is just one leg



Baggage claim has 4 stakeholders with 4 distinct journeys...

1. Passengers

Find correct carousel ▶ Jostle for position ▶ Wait ▶ Identify bag ▶ Lift bag ▶ Carry (cart) out

2. Families, friends, rides (i.e. who's picking you up?)

Find correct carousel ▶ Wait ▶ Reunite with passenger ▶
Help load bags

3. Airlines

Answer questions ▶ Prevent theft ▶ Collect uncollected bags
▶ Track lost bags

4. Airports (owners, managers, maintenance)

Design baggage claims ▶ Rent baggage claims to airlines ▶
Clean and maintain



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UX965
UX071
UX913
UX757



When asked, only **15%** of passengers could identify their plane by its flight number.

“Deciding where to stand is like preparing for **war**.”

– *Passenger, British Airways*

People tend to stand in **3** places:

1. closest to where bags come out
2. their first contact point with the carousel
3. close to where everyone else is standing





“I feel like I have **no control**. I don’t know where, when and if my bags are coming. What if they are on a different continent?”

– *Passenger, Jet Blue*

“It takes a long time for bags to arrive at baggage claim on purpose. **We want it to take a long time.** The more time it takes, the more customers spend at duty free. We’ve done the math to prove it.”

– *Airport Executive*



“The baggage claim area is so ugly and depressing. It yells...get out!”

– *Passenger, Emirates*

“Airlines aren’t allowed to post signs, play music, add plants or decorate baggage claim”

- Baggage Claim Manager, Virgin America

“We design baggage claims to not be comfortable because we don’t want people to linger and add to the crowds”

- Airport Executive

EXIT



Restrooms  →





Passengers do more than just get their bags at baggage claim. They check their email, get a luggage cart, **say bye to new airplane friends**, reunite with family, coordinate rides, **entertain their children**, fix their zippers, call their loved ones to let them know they've arrived, **change their clothes** (e.g. add a sweater), wait for their rides, make hotel reservations, **repack their bags** (from carryon to suitcase), situate themselves on a local map, go to the restroom, exchange money, use the ATM, wait, and... pick up their bags.

If you watch carefully, you can see it.

There is usually an initial burst of bags and then a long wait. I asked a baggage handler why...

“My bonus depends on the time it takes to get the first bag from the plane to the belt. So I grab the first bag and rush it to baggage claim. **Then I take a break.**”

-Baggage Handler, LAX



Mr. Las Vegas
THE NEWTON
DURING NOW IN A
NEW ENGAGEMENT

Welcome. Vegas Smells!

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THE SHIP
THE PALACE
Spectacular
entertainment
concerts in the heart of the city

Southwest

8 Shuttle Bus
Limousine



Wife: is that our bag?

Husband: no

Wife: yes it is

Husband: it's too small

Wife: you sure?

Husband: yes

(wife lifts up bag and checks tag)

Wife: **it's not ours**



“One time I couldn’t lift my bag off the belt quick enough and I felt so **embarrassed**. You have to outsmart the belt!”

– *Passenger, British Airways*

“I know I’m small, but I seriously can’t always reach my bag.”

– *Passenger, Southwest*

“Because the belt is angled, tall suitcases and boxes stick out beyond the belt. I’ve seen people get knocked”

– *Baggage Handler, American Airlines*

4 minutes – bags come (on average) 4 mins after the 1st passenger arrives at the carousel

2 minutes – once the baggage alarm rings, it still takes 2 mins for bags to actually come

12 minutes – it takes 12 mins for all bags to come out (e.g. carousel stops)

8 bags – once the carousel stops, 8 bags are left on the belt unclaimed

3 passengers – once the carousel stops, 3 passengers are left without their bag

(All statistics are on average what I observed)

EXIT

CLAIM AREA
1

FOR YOUR SAFETY
Please do not sit or climb on
this baggage claim device

Opt to save
on baggage
for a year

Mayor Gavin Newsom
Welcomes you to San Francisco

UNITED
Looking for your bag?
See Baggage Information
Kiosks for details.
STAR ALLIANCE



Back, Relax,
Enjoy triple miles.



Unlocking the
Mileage Plus® Card

Fire Hose

Odd Size
Baggage
→

DESTINATION FROM	FLIGHT CLASS	FARE	DESTINATION FROM	FLIGHT CLASS	FARE
Chicago	175	1	New York Kennedy	100	1
Chicago-Midway	125	1	Phoenix	75	1
Houston	75	1	Portland	100	1
Las Vegas	65	1	San Diego	100	1
London	125	1	Washington Dulles	100	1
Los Angeles	75	1	Washington Dulles	100	1
ALL UNITED EXPRESS ON CLASS 1			ALL UNITED EXPRESS ON CLASS 1		

← Flights in Next Class Area

UAL 3 OF 4

“My bag didn’t come out. It was **terrifying**.
I couldn’t find anyone to help me”

- Passenger, United Airlines

“I wish I could see the belts from my desk. If I’m at my desk, passengers can’t see me either.”

- Baggage Claim Manager, Virgin America

“The desks are located around corners so that the staff don’t get asked questions they don’t know the answers to.”

- Airport Executive



Stakeholders' Needs. *Summarized.*

Passengers.

- Short wait time
- Reliability (bag is always there)
- More information.** Where, when and if their bags are coming
- Knowing which carousel has their bags
- Stress free** (e.g. positioning around the carousel)
- Easily identify which bag is theirs
- Activities to **entertain kids**, while waiting
- Comfortable waiting area
- Easily **lift/load** their bag
- Clear, affordable and easy access to luggage carts
- Safety (bags won't be stolen)
- Easily find help when needed

Families, friends, rides

- **When/where** their passengers are arriving
- Easy identifiable markers to locate their passengers
- Comfortable **waiting area**

Airlines

- Clearly visible help desks
- Minimize cost, while remaining reliable
- Positive passenger experience
- Easily store left over baggage
- Safe belts

Airports

- **Minimize floor space** (the more space baggage claims take, the more costly)
- Cheap build and maintenance costs
- Maximize passenger spend (e.g. shopping)

Solutions. Ideas.

Which carousel is mine?

1. **Helpful screens.** Get rid of departure flights from baggage claim screens (only list arrivals) and show ETAs for bags.
2. **Use Text (SMS) Messages.** Send a text message to passengers with belt number.

Increasing Information + Control

3. **Personally RFID tag all bags.** Put an RFID chip on each bag (\$0.20 per bag) at check in. Then provide estimated bag arrival time via a screen or text message to each passenger. Also, set up airlines to use RFID to track lost bags.
4. **Text message rides.** Text rides when their passengers are expected to have their bags.

Making bags easier to find

5. **Colored tags.** Add different colored tags to bags to make it easier for passengers to find their bags.
6. **Place directional signs.** Similar to airport bathrooms (walk in through the right, exit from the left), directional signs will encourage passengers to spread out around the belt.
7. **Mirrors inside belts.** Mirrors on the opposite side passengers stand will allow people to see their luggage tags if their bags are flipped.

Make waiting less painful

8. **Entertaining floors.** Add maps, games, drawings on the floor to entertain children, while still keeping them close to their parents.
9. **WIFI.** Add free WIFI access and phone reception boosters

Baggage Carrousel Design

10. Change shape. The long belts make it hard to spot your bag coming. A flower shape belt will give each passenger more time, room and visibility to grab their bag.

11. No more 30 degree angles. Most belts are angled (30 degrees), which requires a lip (4 inches high) to prevent the bags from falling out. The lip means passengers have to lift their bags to get them. Make the belts flat (parallel with ground), remove the lip—no more lifting.

Where can I get help?

12. Front and center. Help desks should be front and center. Reduce the distance between airline employees and passengers by having low desks.

Make the whole thing much easier...

- **Who needs baggage claim?** Outsource to Fedex. Airlines stop checking in and transporting bags. Instead, hire cargo courier (e.g. Fedex, UPS) to pick up and deliver all bags.

- **Like an ATM, but with your baggage.** Using **RFID** tags (\$0.20 per bag) placed on each bag at check in, allow users to walk up to an automated window (e.g. vending machine, ATM) with their ticket and have the bags spit out on request. The passenger can also approach the machine for an ETA of their bag.



about me.

When I was eight years old, I **built cities**. Entire cities. I built police departments, post offices, taxi stands and grocery stores. I built them out of Legos. Ever since then, I've loved creating. When I was 12 my best friend and I **created and sold our own search engine** (brainfind.com). Right before Stanford Business School, I helped Tesco, the world's 3rd largest retailer, launch a **new chain of grocery stores** in the U.S. We launched 180 stores selling healthy food at affordable prices in low income areas—a **Whole Foods at Walmart prices**. I ran supply chain strategy in the U.S., was selected as the youngest member of their U.S. Supply Chain Governance Committee and developed algorithms saving the company over \$25 million per year. I realized that combining my love of creating new things with helping people gives me a high. It is what I want to do. **Designing better products, process and businesses achieves both.**

David Royin

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Southwest 215

Flights
At Other
Carousels

1
2
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Baggage Claim
Parking A-D

Hudson News

SOUTHWEST
AIRLINES