History
Passengers satisfaction rate according to waiting time:

- 88% if < 10 minutes
- 68% if < 30 minutes
- 54% if < 60 minutes

79% of mishandled bags were delayed bags
15% damaged or pilfered
6% lost or stolen

Baggage was the topic of three of the top six items on a list of mobile services that passengers would use regularly

**Passenger experience**
Industry Challenges

- Low production efficiency and capacity per square meter
- Space intensive infrastructure
- Poor CAPEX utilization
- High operational costs
- Poor work environment
- Inefficient handover of responsibility between stakeholders
- Poor tracking of baggage
Sorting hall utilization

1904sqm / 20516 sqft

68m / 223 ft

28m / 92 ft
Sorting hall utilization

66% of floorplan is driveways, make-up positions, and staging area
Check-in Pattern
Summary of challenges

- Baggage tracking
- Work environment
- Controlling check-in pattern
- Space utilization
The BBHS System
Current operation is based on filling carts one-by-one with BAX until full, resulting in low efficiency and utilization.
BAX storage in Conciliation Units

In system storage for high utilization of carts, resulting in efficient make-up and reduced turnaround time.

Increased cart utilization resulting in up to 1 BBHS cart per 8 traditional carts
TAKING BAGGAGE HANDLING INTO THE 21ST CENTURY
Subsequent process enhancements
Typical departure process

- Delivery of BAX (from Sorter)
- Reconciliation
- Loading carts
- BAX storage (on carts)
- Delivery to aircraft
- Loading aircraft
BBHS departure process

- Delivery of BAX (from Sorter)
- BAX storage (in System)
- Reconciliation
- Loading carts
- Delivery to aircraft
- Loading aircraft
BBHS Fit

- Sorting system
- Baggage storage
- Make-up
- Delivery
Lean concept animation
Overview
Acquire information through Barcode or RFID

IT integration for tracking

- Faster baggage deliveries
- Gentler baggage handling
- 50% less lost baggage
- Passenger notifications

Passenger notification

Acquire information through Barcode or RFID
60 BAX flushed in < 10 secs
Full traceability of BAX
Automated inbound sortation
Quick handling of transit BAX
1. Unloading aircraft
2. Positioning carts at Arrival Station
3. Flushing baggage

Arrival
BBHS departure process

- Full baggage inventory available real time and upon dispatch
- Modular build up of early storage and sortation lanes
- Intelligent baggage storage
- Adaptable to pier, carousel and chute departure setups
- Flexible size and capacity with high space utilization

BAX storage (in System)
BBHS departure process

Rapid on demand make up

Reconciliation based on pull principle

Manual handling reduced by 95%

High process efficiency

Carts filled in < 10 secs
BBHS ULD Handling

- Rapid on demand make up
- Reconciliation based on pull principle
- Full tracking
- Increased filling efficiency
BBHS Components
Make-up Station
Departure Setup

Make-up
Departure Setup

Make-up
Buffering baggage in Capacity Boosters

Make-up and segmentation

Flushing baggage

Make-up
BBHS Cart

All shelves are equipped with rollers, ensuring baggage moves off the shelves when the lids are opened.

One cart has the capacity of approx. 30 BAX. BBHS suggests that carts are paired in two forming a train.

360 degree rotation

2300mm

1600mm

3000mm