TOWARDS DISSOCIATION OF PASSENGERS AND BAGGAGE

Sarah Al-Hilfi*, Pavel Loškot*, Peter Ball*

*College of Engineering, Swansea University, Swansea, SA2 8EN, UK
†SITA, London, UBI, SHA, UK
The Concept of Baggage Dissociation:
- Main Challenges.
- Potential Benefits.

End-to-End Baggage Dissociation
- Baggage Delivery Network
- Case Study of London Airports and Greater London.
The New IATA Resolution 753 Created A Major Milestone Towards Improving Baggage Services At Airports
INTRODUCTION

Dissociation Of Passenger Travel & Baggage Delivery Can Be Considered As One Of The Radical Innovations In The Future Of Air Transportation.
**Baggage Dissociation**

Baggage Dissociation Can Be Considered In Two Senses Broad Or Strict

**Baggage Dissociation in Broad Sense:**

- Luggage Picked up by 3rd Party Courier Service Company

**Ground Segment Only**

The Major Challenge Preventing Unauthorized Tampering With The Baggage Contents
Key Challenge Is The Violation Of Current IATA General Conditions of Carriage For Passengers & Baggage.

Baggage Dissociation In Strict Sense:

Aims To Deliver Baggage Independently From Passengers Including The Air Segment.

Air Segment
Obstacles Facing Baggage Dissociation

Extra Service Not A Norm
- Selected Airports Terminals
- Selected Flights Routes
- Selected Passengers

IATA Rules
The IATA Rules Are Required to Govern The Dissociation Whether It Is Implemented Locally Or At Large Scale

New Infrastructure & Associated Processes
- It will Increase:
  - Capital Expenditures
  - System complexity

No Economic Analysis of The Baggage Dissociation
- It Is Not Clear How To Cover The Operational & Capital Costs Who Would Be Paying For The New Dissociation Services.
- These Expenses Would Outweigh The Offered Benefits Or Not.
**Additional Handovers**
- AddiPassengers May Collect & Drop Off Their Baggage At Suitable Points Throughout The City.
- This Increases The System Complexity as many handovers Need To Be Clearly Defined

**Reconciliation of Passengers With Their Luggage**
- Dissociation Must Be Ended by Reconciliation of Passengers With Their Luggage At Given Point In Time & Space.
- This May Turn Out To Be Difficult When The Dissociation Enabled In The Air Segment.

**Passenger’s Expectation**
- The passenger expectations about the new dissociation services may be vastly different

**3rd Party Providers & Baggage as a Cargo**
- The baggage dissociation could be completely outsourced to the 3rd party providers.
- The providers may request baggage as a cargo (BaaC) delivery from the airline companies.
The Anticipated Benefits of Baggage Dissociation

**Public Transport**
- A Hassle Free Travel To And From Airports Encourages The Use of Public Transport.
- Relieve The Current Curb-Side Congestion At Many Busy Airports.
- Improve Passenger Experience.

**New Aircrafts**
- The Opportunity To Develop New light, Fast and Fuel Efficient Aircraft That Could Reduce Travel Times By A Large Margin.
- Reduce the boarding and aircraft turn-around times at the gate.

**Renovate Airports**
- Passenger Terminals Only
- Baggage Terminals Only.

**Avoiding Baggage Transfers**
- Route Baggage Directly To The Destination Airports.
- Baggage Transfers At Intermediate Hubs Is The Main Source Of Delayed Or Losing Baggage.

**Extending The Current Parcel Deliver Service**
- Remove The Distinction Between Baggage & Parcels.
- Baggage Delivery Would Be Truly Independent From Whether The Passengers Actually Undertake The Journey or Not.
Passengers & Their Luggage Are Likely To Arrive at The Destination Airport At Different Times, Which Significantly Complicates Luggage Reconciliation.
Baggage Delivery Requires Using BHS At All Airports.

The BHS Perform 1st Level Sorting Of Arriving Baggage.

The BSC Shared Among Multiple Airports.

BSC Feed Directly To The Local Baggage Delivery Stations BDC.

The links Assumed To Have Large Transport Capacity.

Defining The Admissible End-Points Such As Homes, Local Shopping Malls, Stores, Post Offices & Hotels.
Our Case Study

- Assessing the volumes of luggage being delivered between the 4 main airports (Heathrow, Gatwick, Luton & Stansted) & the Greater London Area.

- Our results indicate that the largest source of baggage to and from the Greater London area is Gatwick Airport. No. of terminating passengers at Gatwick are about 50% larger than at Heathrow.

- The variability of luggage at departures seems to be always larger than at arrivals.

- The cumulative flow baggage for arrivals is about, 4,000 (EGKK) + 3,000 (EGLL), 2,500 (EGSS) and 1,000 (EGGW) = 10,500 of arriving bags every 2 hours or, (10,500/2/12) 440 bags/hour during the day.

- While for departures 7,000 (EGKK) + 4,000 (EGLL) + 4,500 (EGSS) + 1,500 (EGGW) = 17,000 every 2 hours, or (17,000/2/12) 710 bags/hour during the peak hours of the day.
The Idea of Baggage Dissociation Enabling Baggage Free Travel

Dissociation in Ground Segment Has Minimal Effect On The Existing Processes

The Scale of Dissociation Affects its Feasibility

The Involvement 3rd parties To Achieve The Dissociation is Inevitable.

Dissociation Can Make Revenue, But How Much Can Be Captured By Airports & Airlines, How its Going To Affect Passengers Travel Cost.

Is Important To Understand Cost Implications & Passenger Attitudes Towards This New Service
20 - 21 November 2018, Hainburg an der Donau

THANK YOU!

Sarah A. Hilti