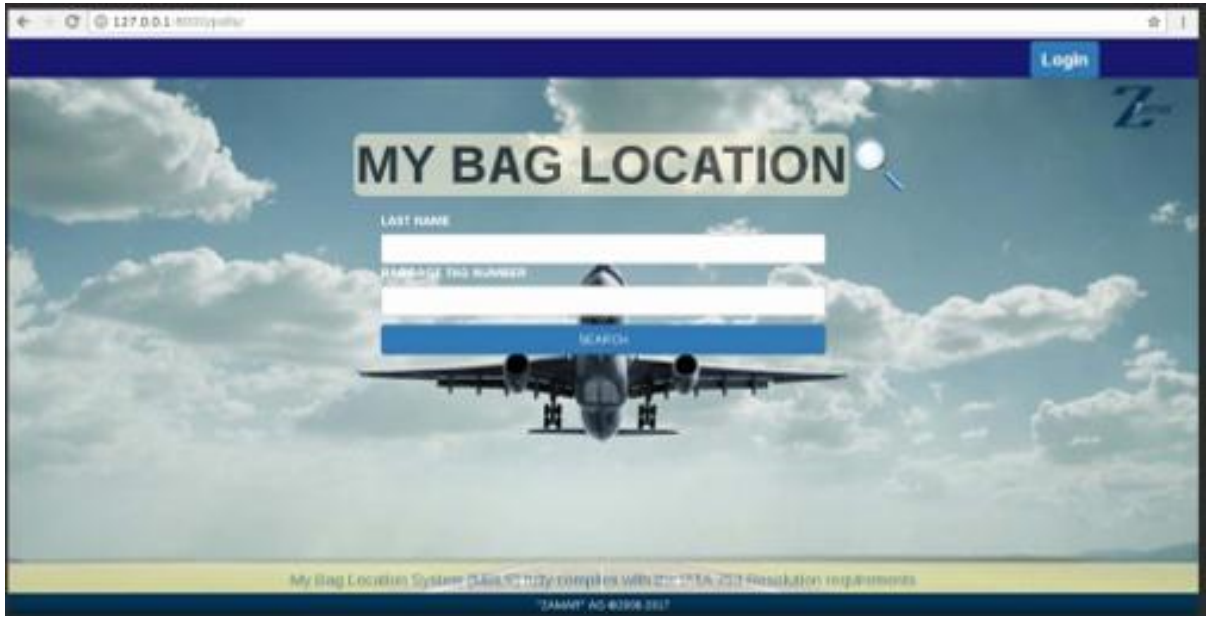
MBLS – MY BAG LOCATION SYSTEM

REAL-TIME BAGGAGE TRACKING SYSTEM IN ACCORDANCE WITH IATA RESOLUTION 753



ANALYSIS OF THE MARKET

3.77 BILLION
PASSENGERS ENPLANED IN 2016

ABOUT 4 BILLION PASSENGERS USED AIR TRANSPORT IN 2017

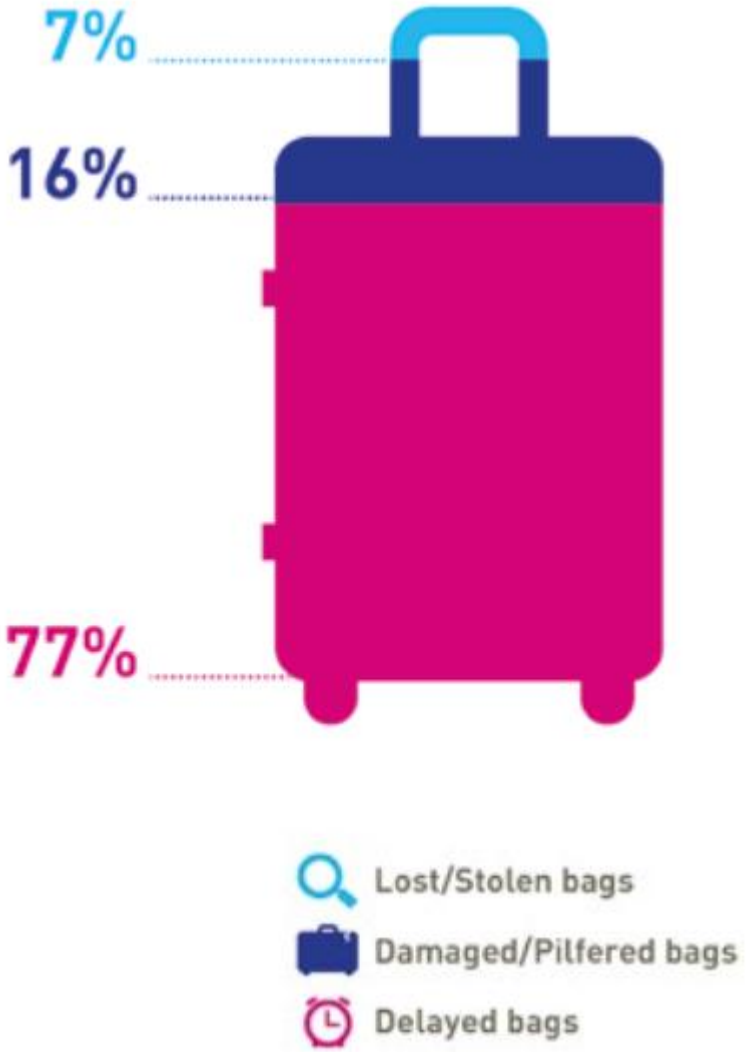
0.57% of transported baggage was not delivered in 2016

5.73
MISHANDLED BAGS PER THOUSAND PASSENGERS IN 2016

10.2 million transfer bags mishandled in 2016

10.2 million pieces of Luggage was lost in 2016

ANALYSIS OF THE MARKET

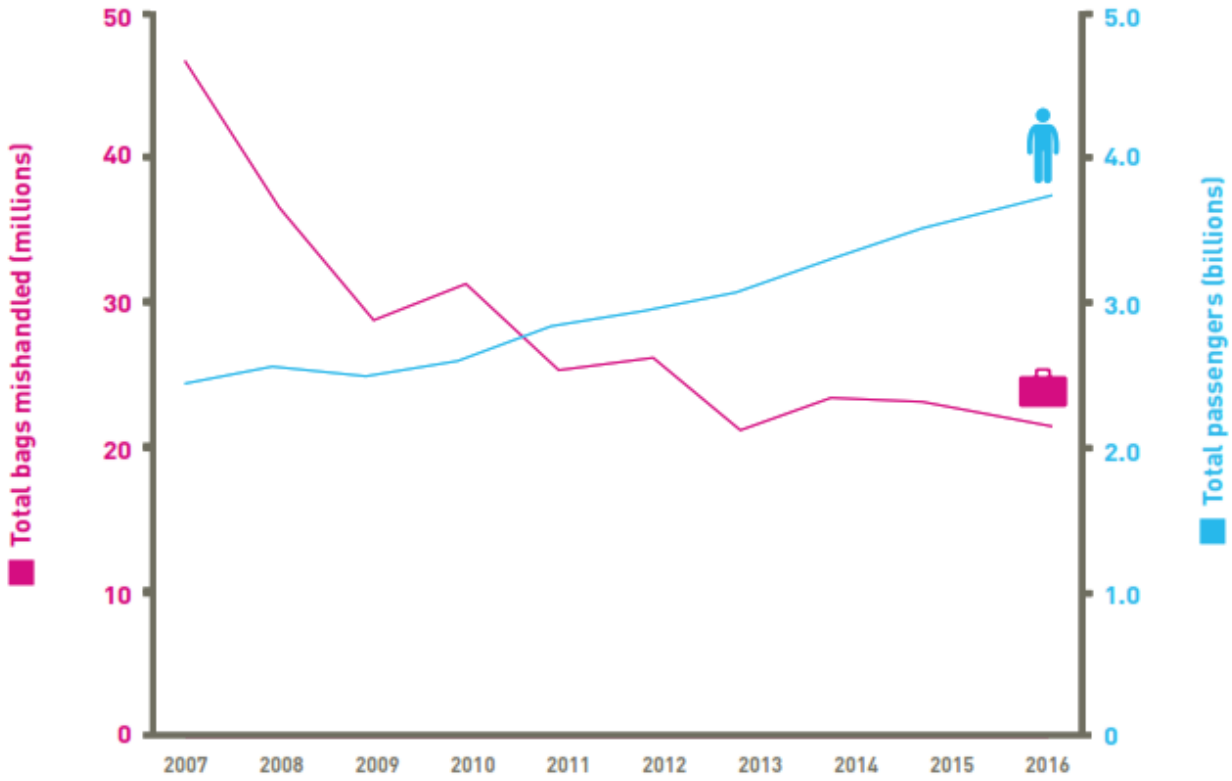


77% lost baggage was found and delivered to recipients

16% lost baggage was damaged

7% lost baggage was lost or stolen

ANALYSIS OF THE MARKET



Despite the fact that the volume of passenger traffic is steadily increasing, and the loss of luggage is reducing the airline's expenses for compensation for lost luggage in 2016 amounted to:

714,000 (7% of lost luggage) x 20kg (average luggage weight) x $20 (compensation for each lost kg of luggage according to IATA rules) = $285,600,000

RESOLUTION IATA 1

IATA 753 Resolutions obliges the carrier to inform the passenger about the location of luggage on any part of the transportation

RFID TECHNOLOGY PROVIDES A RELIABLE BAGGAGE TRACKING EXPERIENCE TO OUR CUSTOMERS

According to surveys, 76% of passengers would like to receive information about the location and status of baggage

76%

of passengers are interested in receiving baggage location status updates to their smartphones.

RESOLUTION IATA 2

For as little as

US$0.1

a RFID chip can be embedded in a bag-tag and generate savings of more than US$0.2 per passenger.

The introduction of RFID chips in the baggage tag will reduce the amount of lost baggage and, accordingly, pay compensation for it

RFID can potentially save the industry more than

US$3bn

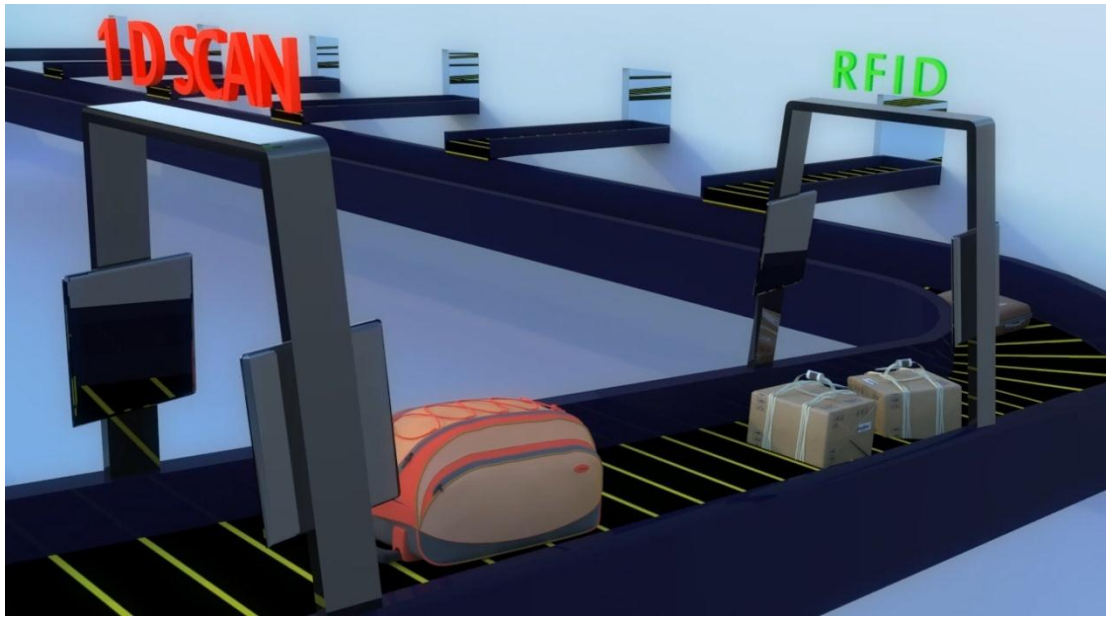
over the next seven years by helping to reduce mishandling during transfers.

According to IATA, this decision will save $ 3 billion for the industry over the next 7 years.

INDUSTRY EXPENSES

The implementation of RFID luggage tags increases the industry's expenses by $0.1 per luggage tag, which corresponds to $400,000,000 per year

It is also necessary to equip all airports with the necessary equipment for processing RFID baggage tags



However, the luggage tag is used only once. Every day, humanity throws 12 328 767 used baggage tags into the trash.

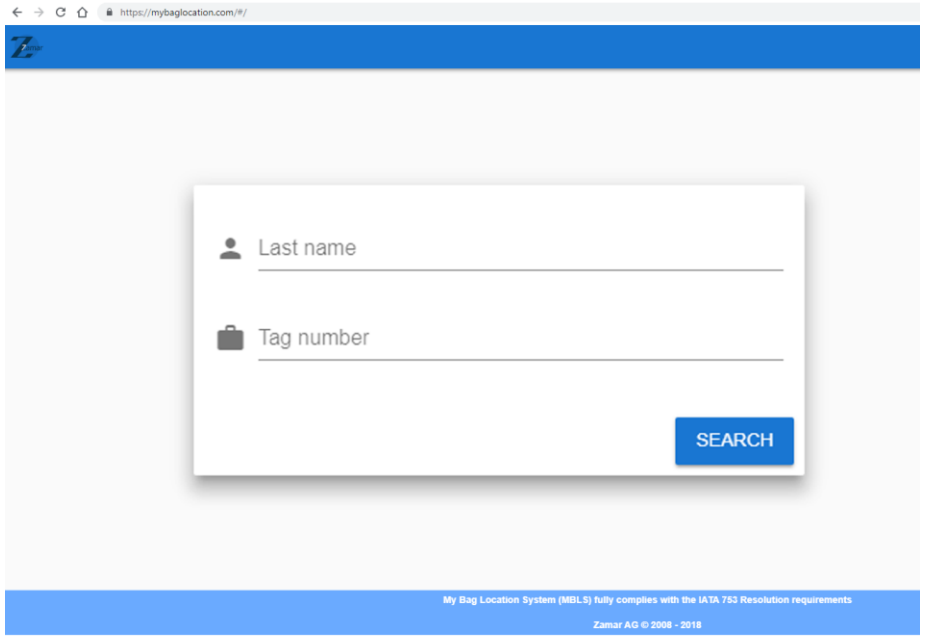
RESOLUTION ZAMAR 1

MBLS – MY BAG LOCATION SYSTEM

LUGGAGE TRACKING SYSTEM IN REAL TIME UNDER IATA 753 RESOLUTION

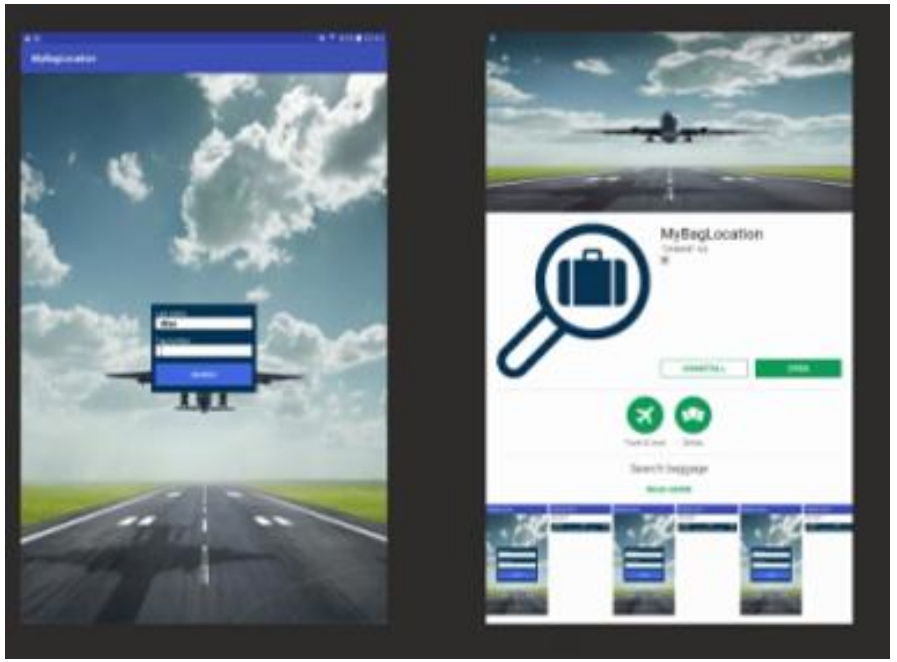
Available on web page

www.mybaglocation.com



MBLS Applications in

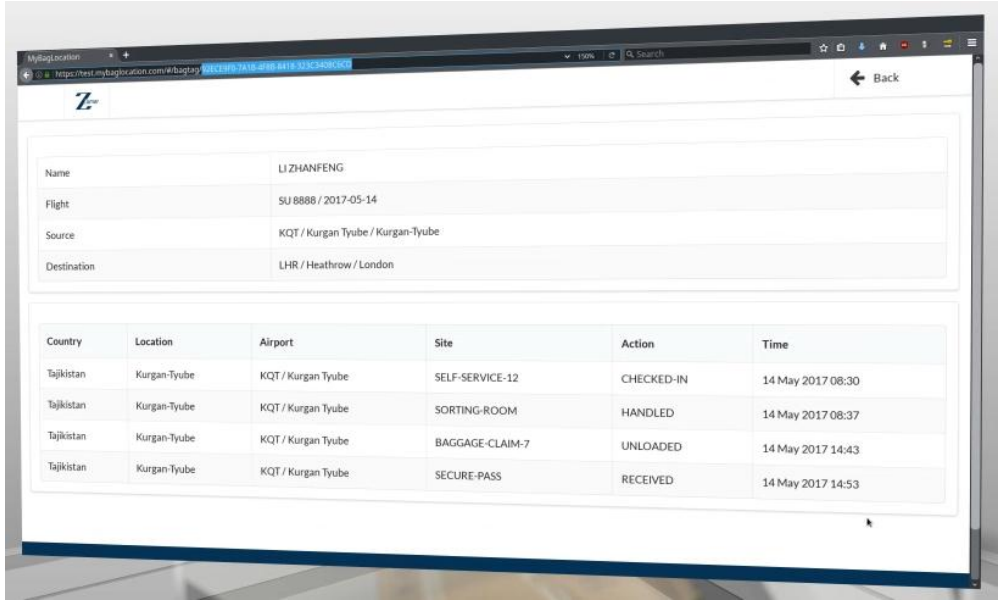
APPLE STORE and PLAYMARKET

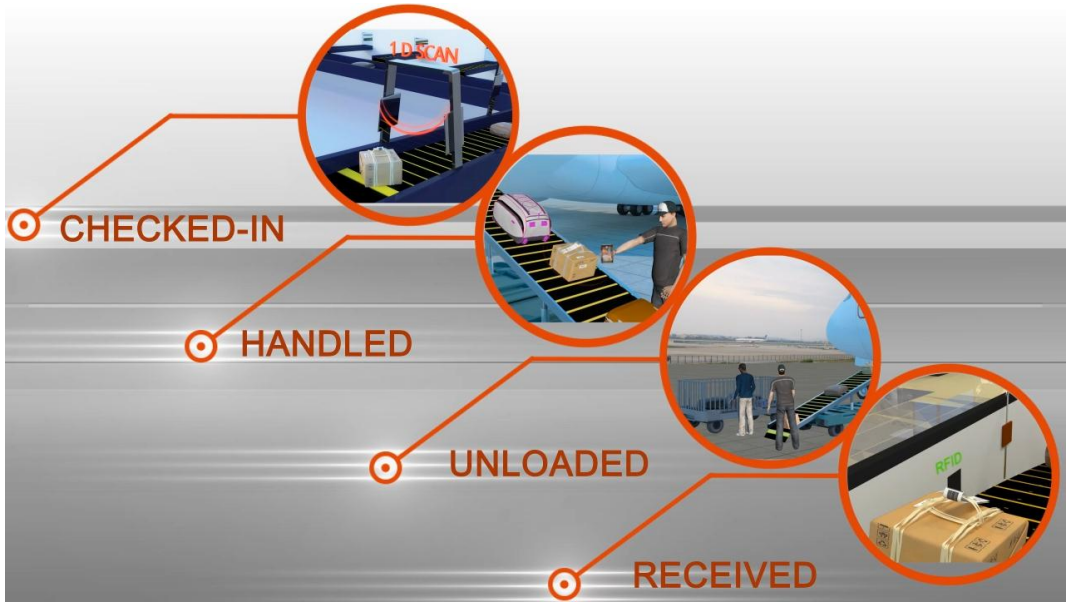


RESOLUTION ZAMAR 1

MBLS – MY BAG LOCATION SYSTEM

The Passenger Interface displays the entire journey of baggage in real time from the moment of check-in at the airport of departure to the moment of receipt at the transit and arrival airports





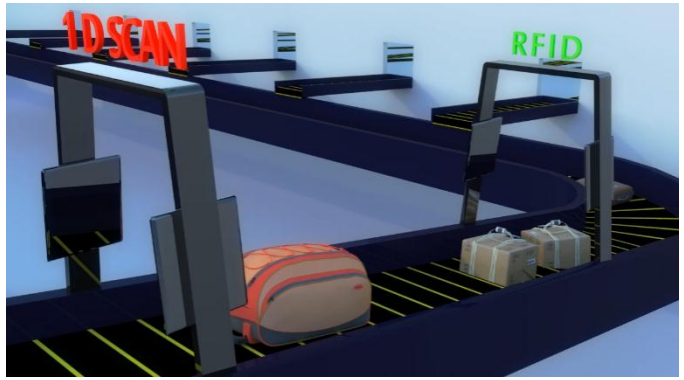
The only innovation in airport luggage handling systems required to start the system is the scanning of the luggage tag at the airport of arrival

RESOLUTION ZAMAR 1

The principle of the system

Step 1 - Baggage check-in, sending BSM messages to the system

Step 2 - Baggage handling in BHS sorting, sending BPM messages to the system



Step 3 - Loading BRS baggage, sending BPM messages to the system

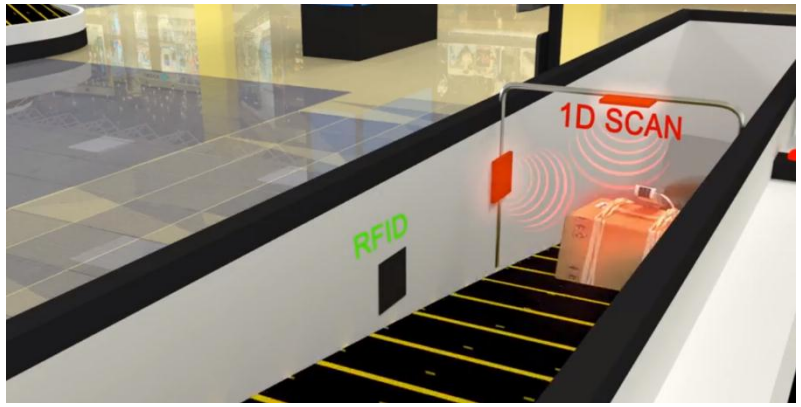
After receiving each of the messages, the system displays the luggage passing through each of the stages

RESOLUTION ZAMAR 1

The principle of the system

Step 4 - Unloading baggage, sending BPM messages to the system

Step 5 - Unloading baggage on the luggage carousel, sending a BPM message to the system



Step 6 - baggage claim

After step 4, the responsibility for the luggage lies with the airport of arrival, additional scanning up to the luggage carousel objectively proves the fact of luggage unloading for receiving by the passenger

RESOLUTION ZAMAR 1

The principle of the system

Using the system will reduce the waiting time for luggage, as the passenger will be accurately informed whether his luggage is delivered or not

Lost luggage check-in time will also be reduced. It is enough for an employee of the airline to mark the status of the luggage and drive the address of the passenger into the system

The Lost and Found service will be equipped with industrial tablets with an integrated 1D code scanner for luggage tags

RESOLUTION ZAMAR 2

Introducing a reusable electronic baggage tag

The cost of using a disposable luggage tag with an RFID chip eliminates the airline's savings in compensation for lost luggage.

According to SITA BAG REPORT, 7% of baggage from undelivered baggage is lost or stolen and the introduction of the chip into the baggage tag does not solve the problem of theft in any way .

From the same source it is known that 16% of baggage from undelivered baggage is damaged or unidentified, i.e. there was no baggage tag with a chip or without.

RESOLUTION ZAMAR 2

Introducing a reusable electronic baggage tag

Existing analogues of reusable RFID tags or electronic ink technology are very expensive to implement and require significant re-equipment of airport baggage handling infrastructure

RESOLUTION ZAMAR 2

Introducing a reusable electronic baggage tag

The technology developed by us allows the simultaneous use of both a classic paper baggage tag and electronic. The fundamental difference between our electronic baggage tags is their reusability. Our electronic chip is sewn into the luggage once and for the entire service life of the suitcase, etc. At the same time, we provided for the possibility of printing a classic luggage tag, for example for disposable luggage such as cardboard boxes.

RESOLUTION ZAMAR 2

Introducing a reusable electronic baggage tag

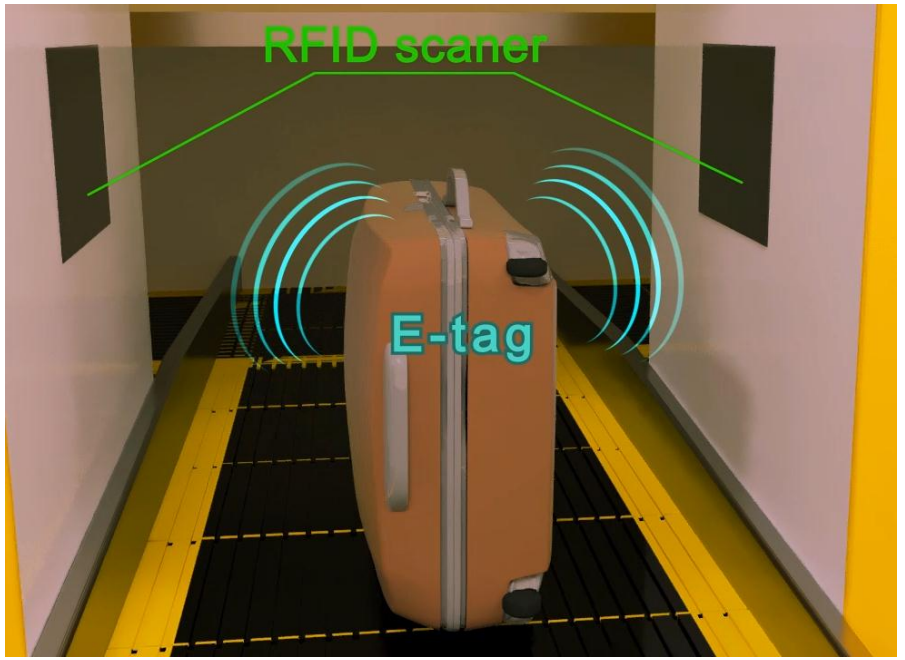
The cost of a reusable W&R chip is 0.1-0.2 $, and we have developed a system for recognizing the chips of the "own-alien". In addition to the unique number of the RFID chip, an additional number generated by a random set of numbers / symbols will be assigned, when checking baggage with the E-Tag, a preliminary check will be carried out on the originality of the chip. So, the possibility of unauthorized duplication of the E-tag is completely excluded.

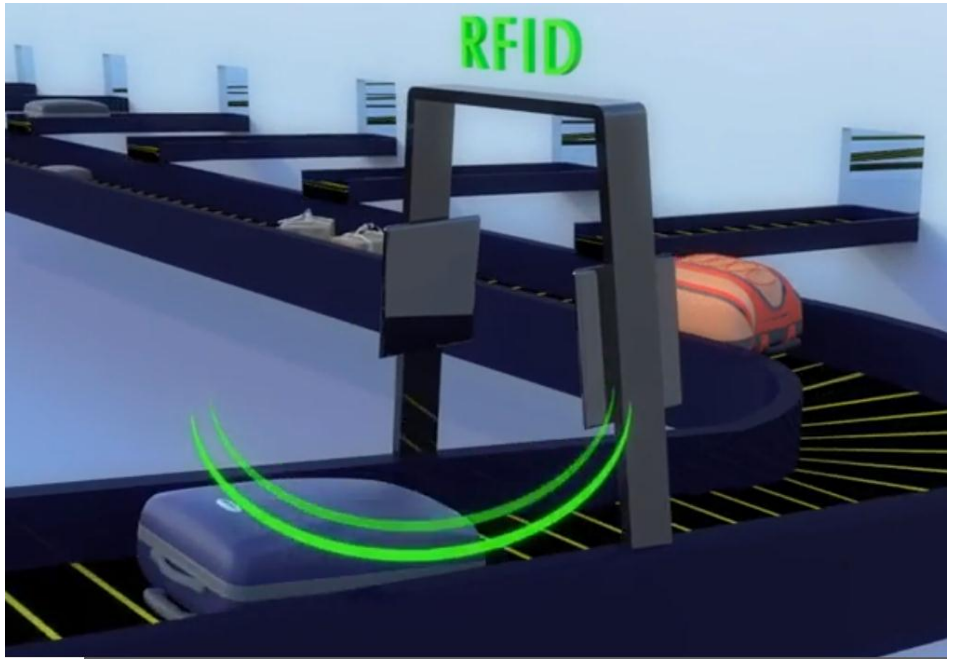
It is planned to implement a pool of numbers (or certification) for manufacturers of suitcases, bags, etc.

РЕШЕНИЕ ЗАМАР 2

Introducing a reusable electronic baggage tag

Step 1 - Baggage check-in, our system does not imply any changes to the airline's DCS. After the issue of the tag, the tag number is recorded on the chip and in the future all baggage tracking is performed only on this number. Writing a tag number on the chip and sending a BSM message to the system





Step 2 - Processing the E-Tag in the sorting BHS, involves the installation of additional equipment for reading RFID chips. Read E-Tag and send BPM messages to the system

RESOLUTION ZAMAR 2

Introducing a reusable electronic baggage tag

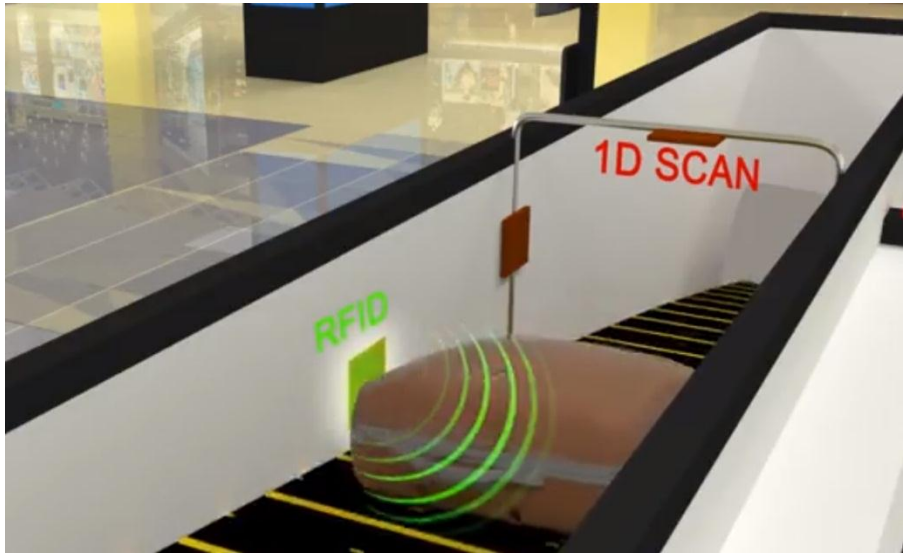
Step 3 - Loading baggage on board an aircraft involves upgrading the BRS data collection terminal to read 1D bar codes from classic baggage tags and an RFID reader for E-Tag. Read E-Tag and send BPM messages to the system

Step 4 - Unloading baggage at the airport of arrival, involves upgrading the BRS data collection terminal to read 1D bar codes from classic baggage tags and an RFID reader for E-Tag. Read E-Tag and send BPM messages to the system

RESOLUTION ZAMAR 2

Introducing a reusable electronic baggage tag

Step 5 - Unloading luggage on the luggage carousel, involves installing additional equipment for reading 1D bar codes from classic luggage tags and an RFID reader for E-Tag. Read E-Tag and send BPM messages to the system

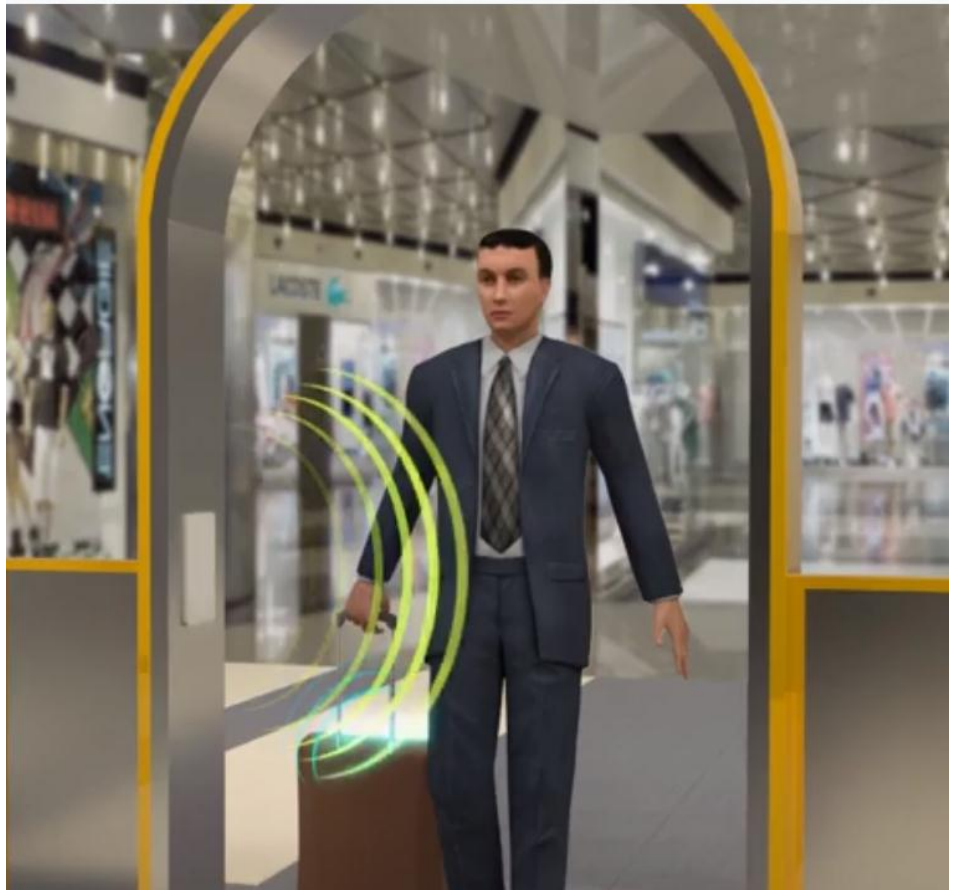


Step 6 - Unloading luggage on the luggage carousel, involves installing additional equipment for reading and transmitting E-Tag data. Read E-Tag and send BPM messages to the system

RESOLUTION ZAMAR 2

Introducing a reusable electronic baggage tag

Step 7 - Identification and baggage claim with E-Tag.



Step 8 - Passenger and baggage with E-Tag leave the sterile area of the airport. Read E-Tag and send BPM messages to the system

РЕШЕНИЕ ЗАМАР 2

Introducing a reusable electronic baggage tag

Step 9 - Passenger and Baggage Identification with E-Tag.

There is a very common type of fraud - when a passenger's luggage (2 pieces of 23 kg) is received by an accomplice, and the passenger declares his loss and receives compensation from the airline ($ 46 * 20 = $ 920)

Using MBLS and E-Tag systems will help airlines and airports to prove the fact of baggage delivery to the airport of arrival as well as baggage claim by its owner objectively.

INVESTMENT PLAN

Stage 1 - Implementation of the MBLS system in the airline's route network. For these purposes it is necessary to:

- **a) receiving BSM messages from DCS airlines**
- **b) receiving BPM/BTM messages from BHS/BRS of the airport of departure**
- **c) receiving BPM/BTM messages from BHS/BRS of the transit airport**
- **d) reading baggage tag numbers at the airport of arrival**
- **e) organization of own Lost & Found system**
- *** Airline's route network is 50 airports in Russia. Approximate calculation of the required equipment :**
- **1) 124 data collection terminals (average market value of terminals 1700 euros)**
- **2) 124 industrial tablets (average market value of terminals is 1200 euros)**
- **3) rent of at least six servers in various data centers.**
- **Estimated investment requirements for the first stage of the project are 375 thousand euros.**

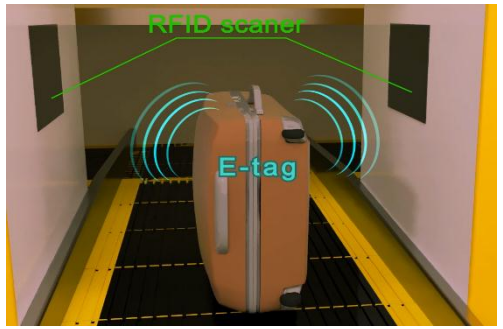
INVESTMENT PLAN

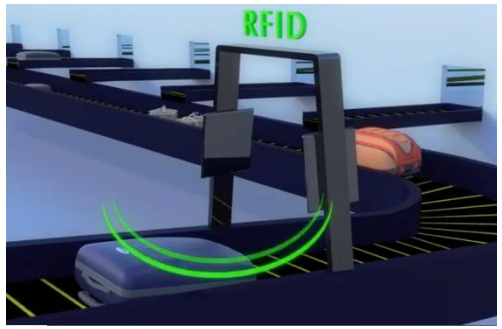
Stage 2 - Implementation of the MBLS system in all airports of the Russian Federation. For these purposes it is necessary

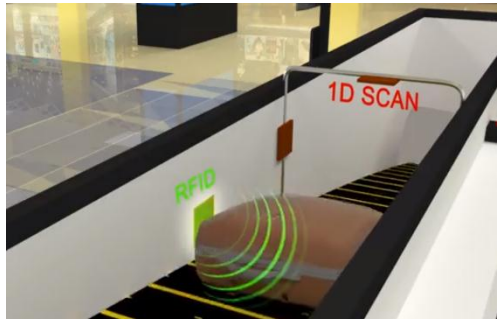
- **a) receiving BSM messages from DCS connected to the airline system**
- **b) receive BPM/BTM messages from BHS/BRS of the airport of departure**
- **c) receiving BPM/BTM messages from BHS/BRS of the transit airport**
- **d) reading baggage tag numbers at the airport of arrival**
- **e) organizing its own Lost & Found system**
- *** total operating airports in the Russian Federation - 224. Approximate calculation of the necessary equipment:**
- **1) 388 data collection terminals (average market value of terminals 1700 euros)**
- **2) 388 industrial tablets (average market value of terminals is 1200 euros)**
- **3) rent an additional minimum of six servers in various data centers.**
- **Estimated investment required for the second stage is 1.150 thousand euros.**

INVESTMENT PLAN

- **Stage 3 - Preparation and modernization of Russian airports for processing E-Tag (RFID baggage tag)**
- **a) RECORDER RFID check-in counter equipment**
- **b) retrofitting BHS / BRS airport systems for E-Tag processing**
- **c) retrofitting and upgrading airport baggage carousels for E-Tag processing**
- **d) retrofitting and upgrading the “city exits” of airports for E-Tag processing**
- **e) organization of own Lost & Found system**
- *** investments only in airports via the S7 route network - 1.150 thousand euros, the modernization of the remaining airports of the Russian Federation must be paid for by the system's customers - airports and airlines**







INVESTMENT PLAN

Additional sources of income:

1. **Savings on compensation for lost luggage, using S7 as an example and SITA's calculation formula of over $1 million per year.**
2. **Savings on payments in WORLD TRACER (there is no publicly available data on this item of airline and airport expenses).**
3. **Manufacturers of suitcases and other travel accessories - selling chips or certifying ready-made ones - the minimum rate of $1 won't significantly affect the final cost of a suitcase, but within the whole airline market it is MILLIARDS of luggage units and, accordingly, billions of contributions to the project budget.**

Connection to the financing of the project of various environmental funds such as https://www.greenclimate.fund/home. As mentioned above, humanity uses more than 4 billion luggage tags per year, the cheapest RFID tag costs $0.1 million, which is thrown away after a single use - $400 million. The average weight of a luggage tag is 5.2 grams, a total of about 21 million kilograms of paper/plastic/adhesive per year, assuming 80% of this volume is paper, we get 16.8 million kilograms of paper or 290,000 trees (725 hectares of forest) per year.