RFID-solution

for baggage labeling

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In June 2018, the World Aviation Transport Summit was held in Sydney, where the development of the aviation industry was discussed, including in the field of IoT, and a decision was made on the mandatory labeling of all baggage tags with RFID tags.

01.06.2018

Resolution of the International Air Transport Association (IATA) No. 753 entered into force

The resolution places luggage tracking obligations on IATA and A4A at four key points: baggage transfer to the airline, loading onto the plane, delivery to the arrival area, return to the passenger.

To fulfill the obligation, airlines will seek support from stakeholders involved in baggage transportation, such as airports and ground handlers. *

01.01.2020

All baggage tags purchased by airlines must contain an RFID tag

According to Resolution 753, airlines must provide baggage tags with RFID tags by 01/01/2020. If this order is not followed, the airline will be expelled from the International Air Transport Association.

* IATA, Baggage Tracking

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Statistics for 2018

4,36 (billion)
Total passengers

5,69 (pieses)
Mishandled bags per 1000 passengers

24,8 (million)
Total mishandled bags

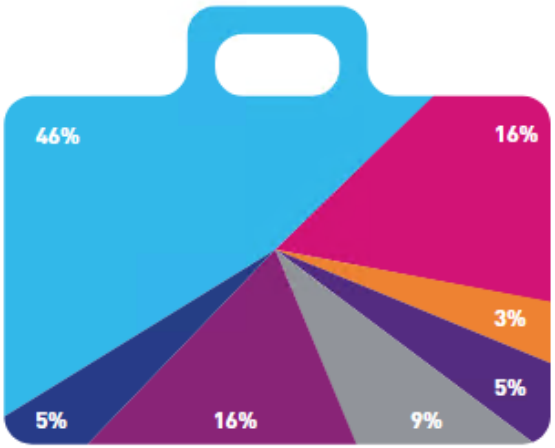
2,4 (billion $)
Industry losses related to lost baggage

REASONS FOR DELAYED BAGS

5% Total number of carried bags

18% Lost/Stolen bags

77% Delayed bags



- **Transfer mishandling**
- **Ticketing error/Bag switch/Security/Other**
- **Loading error**
- **Arrival mishandling**
- **Airport/Customs/Weather/Space-weight restriction**
- **Failure to load**
- **Tagging error**

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The aviation industry suffers significant losses due to high customer dissatisfaction. One of the reasons is problems with the baggage of passengers: they send it on another flight or lose it altogether.

A large part of this problem is that the barcode tag is easily damaged (wrinkle, tear, wet). As a result, the code becomes unreadable and it is impossible to identify baggage.

The advantages of RFID tags over old paper luggage tags with a printed barcode are the improved readability without “line of sight” required for optical scanning of the barcode, the reduced chance of damage and the ability to store data in the tag itself.

RFID system ensures accuracy baggage identification not less than 95%

Benefits of implementing RFID

- **Fewer baggage handling errors and faster handling**
- Baggage handling speed increases by 90%*
- Reducing the amount of lost baggage, potential savings of about $ 100 per piece of baggage
- Online baggage monitoring
- Identification accuracy will be at least 95%
- Improving the quality of passenger service, the ability to inform about the status of their baggage

** - according to IATA*

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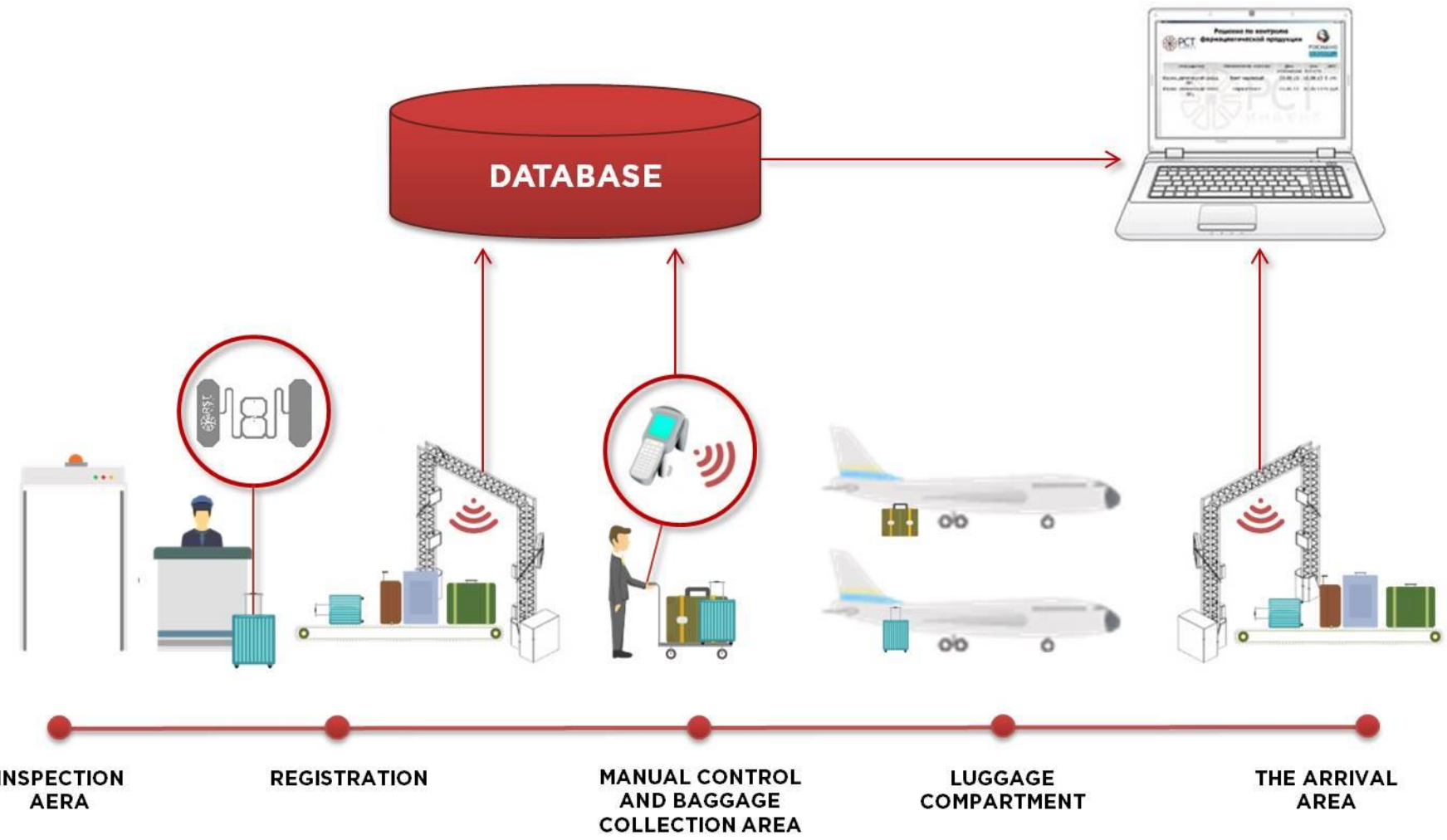
RFID baggage accounting system



RFID baggage accounting system

1. Each check-in baggage unit is marked with a baggage tag with an integrated RFID tag

2. RFID readers are installed at checkpoints and record all baggage movements (in the passenger check-in area, on baggage tapes, etc.)

3. The tracking data of each piece of baggage collected from all readers is accumulated in a single database (DB) and transferred to a single accounting system for air baggage

4. Data received from RFID readers in the arrivals area is also transmitted to the accounting system. If a violation is detected, the system will notify the operator

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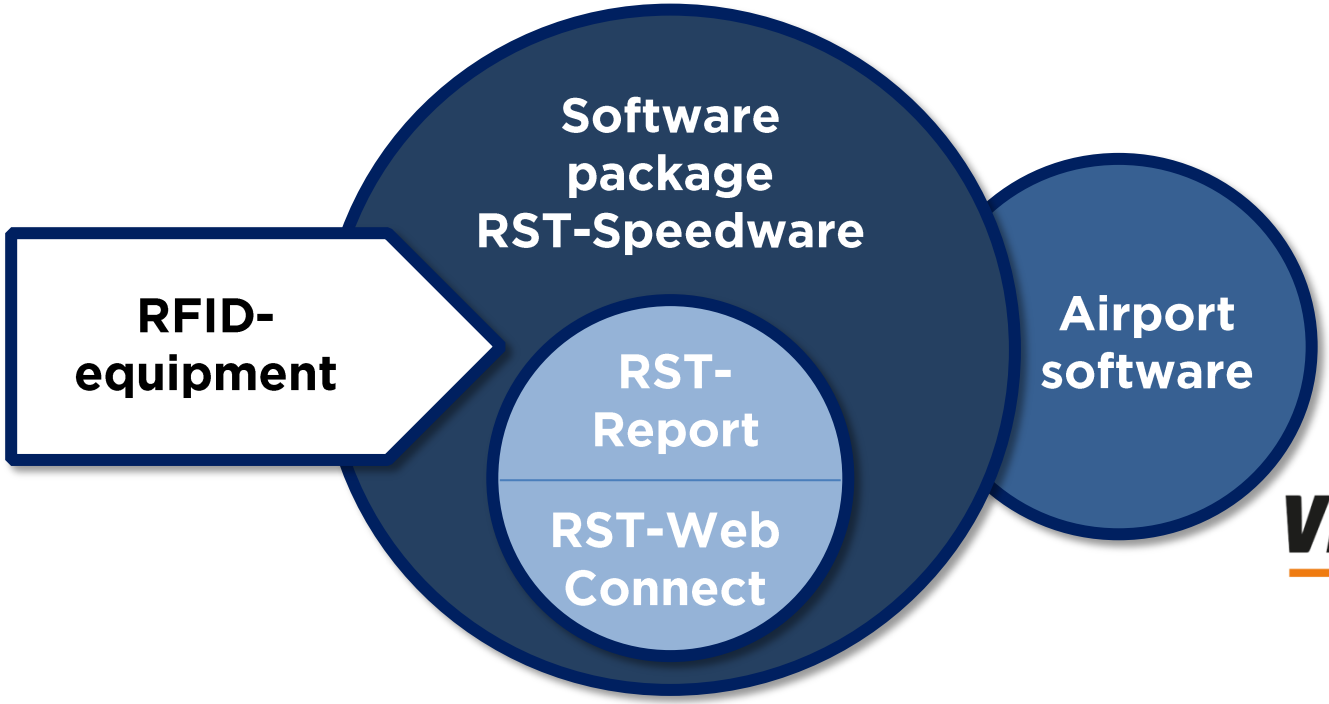
Software architecture of the RFID solution

The proposed solution includes modules that automate all processes of the air baggage accounting system.



SITA

ZAFIRE

VANDERLANDE

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Company introduction

RST-Invent – is a Russian RFID-tags and equipment vendor, RFID-system and software developer.

Work experience since 2005

Own RFID-tags and equipment facilities in the Leningrad region

Geographic reach:
RF, USA, Asia, Europe

A full cycle of competencies in RFID: from the development of the element base to the implementation and maintenance of ready-made solutions

"RST-Invent" company - is part of the Group of "Systematic"

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