Preparing for the Technology Enabled Future of Aviation
Topics for today

- RFID Lab? Who are you?
- RFID in aviation – State of the industry
- Future of aviation
- Preparing for the technology enabled future of aviation
Focus on business case and value

Established 2005 at University of Arkansas

Moved to Auburn University in 2014
Our role

- Education
- Research
- Support
Focus Areas

- Retail
- Aviation
Strategic Investments from Aviation

DELTA

BOEING
Current Projects

- Industry education and support
- Business case and best practices
- Spec2000 Data Conformance Program
- Tag Quality and Performance
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RFID in aviation

1. Flyable parts
2. Baggage/Cargo
3. Logistics
4. Workflow management in Factory/MRO
5. Asset tracking
Flyable Parts

- Eri Hokura @ Delta
- Chad Moran @ United
Baggage so far…

- Delta - All bag tags since 2017
- Las Vegas, Newark, Hong Kong – Chose RFID over barcode when selecting a new system
- A lot of pilot and trials happening
IATA Resolution 753

- All bags must be tracked and shared at 4 key points
  - Passenger handover to airline
  - Loading to aircraft
  - Deliver to transfer area
  - Return to the passenger

- RFID, Barcode, Pen/Paper
RFID tags

June 2018

IATA board of governors vote to mandate RFID in all baggage tags by 2020
Bag tags

- What has been done so far?
  - Data standards
  - Published performance & quality requirements
  - Option to use non-encoded tags
    - Scan-Scan
    - No need to upgrade printers
  - Luggage manufacturers integrating tags
Logistics

- Accurate Inventory
  - Warehouse
  - Line stations
- Tracking
  - Distribution
  - Logistical operations
- Locate inventory
- Inbound audit
- Outbound audit
Workflow management in Factory/MRO
Asset tracking

- GSE
- Hangar equipment
- Tools
- Etc…
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Airlines – Who is your competitor?

We have a new generation who prefers texting across the room.
Future of aviation…

1. Consumer experience, we need to make flying cool again.
2. Drive efficiency, reduce cost
3. Happy employees

- Bring aviation to the 21st century
  - Technology is a tool to get there
Digitalization

Data Capture
Visibility into what is happening

Data Analysis
Insights from data that drives decision

Data Sharing
Efficiency and Scale
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Characteristics of New Technology

1. No single technology is going to solve all your problems
2. Transformation takes time, be patient.
3. Execution matters
New trend every year

- 2013 – **Cloud** is going to solve everything
- 2014 – **Big data** is going to solve everything
- 2015 – **RFID** is going to solve everything
- 2016 – **Augmented reality** is going to solve everything
- 2017 – **Blockchain** is going to solve everything
- 2018 – **AI** is going to solve everything
- 2019 – **?** is going to solve everything
It is going to be a team effort
Transformation takes time

- Speed of adoption?
  - Barcode: 20 years to critical mass
  - Credit cards: 30 years to critical mass
- RFID: 10 years
  - 16 billion tags in 2018; 20% of retail items
  - Great momentum in aviation
Transformation takes time

- Delta’s RFID program
  - 10 years
- United’s RFID program
  - 5 years
Execution

- How well do you do the above?
  - Competence
  - Process
  - People
  - Change management
Thank you!

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