



RFID: Revolutionizing Ground Handling

Boston Logistics Group, Inc.

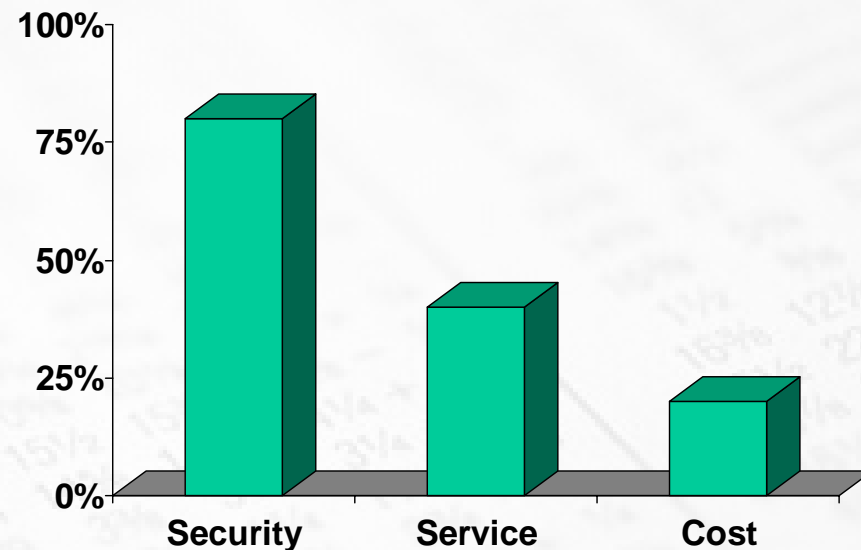
2006



Security and Service Are Key Drivers

- **Ensure security**
- **Enhance service to customers**
 - Asset utilization
- **Reduce cost of lost baggage**
 - Claims
 - Manpower

Objectives of Implementation



Source: Boston Logistics Group survey

Pilot Deployments

Airports

- Amsterdam Schiphol
- Atlanta
- Boston
- British Airports
- Emirates
- Hanover
- Hong Kong
- Honolulu
- Jacksonville
- Las Vegas
- Narita
- San Francisco

Airlines

- Air Canada
- Air France/KLM
- British Airways
- Continental
- Delta
- FedEx
- Japan Airlines
- United

San Francisco Airport

■ Scope of application

- Since 2001
- International terminal
- Selected passengers
- 4 portals = 5-10% of bags
- 60,000 bags/day

■ Tags and readers

- SICK Stargate dual barcode/RFID portal
- EPCGlobal tags
- Singulation with validation

ROI

- **Capital paid-in by DHS**
- **Low operating expenses**
- **Could be justified on labor savings**

Las Vegas Airport

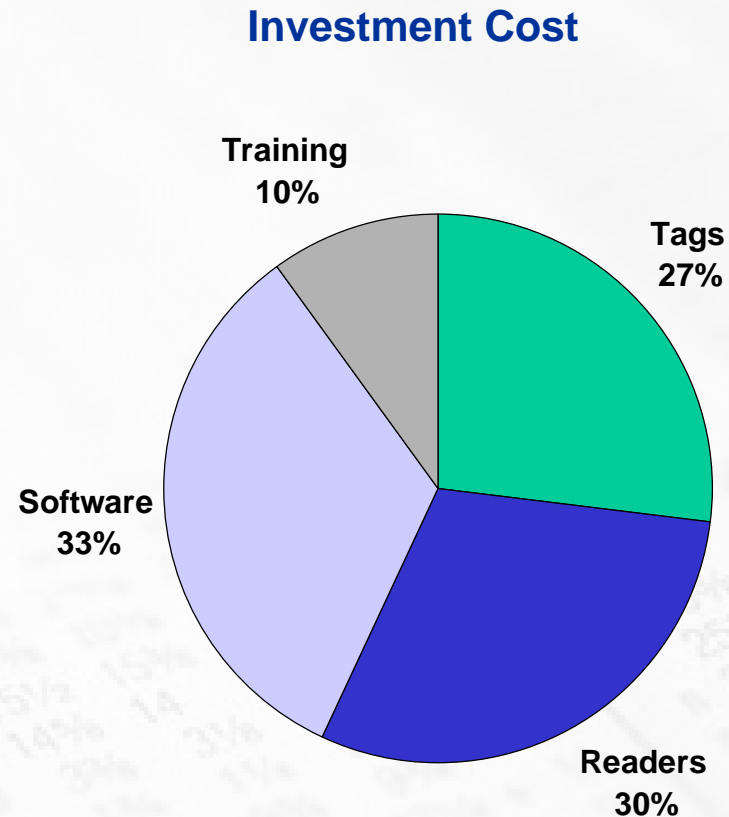
- **73,000 bags per day**
- **35,000 on RFID today**
- **\$125 million program**
- **\$94 million from Transportation Security Administration**
- **100 million Matrics tags**
 - Symbol tag
 - Not EPCGlobal
- **Cooperation with Amsterdam and Narita**
- **99%+ read rate**

Opportunities Propelling Growth

- **Technically superior to barcodes**
 - Better read rates
 - More durable
- **Improving economics**
 - Economies of scale based on IATA 1740C
 - More suppliers and competitive price pressure
 - Improved asset utilization from less aircraft delays
 - New funding models
- **Synergies with other programs**
 - Customer satisfaction
 - CRM potential

Challenges in Showing a Positive ROI

- Investment cost
- Interference
- Privacy
- RFID won't solve all the reasons for lost baggage
 - Bag fell off the belt
 - Bag pilfered
 - Human errors
 - Mis-application of the label
 - Etc.



Source: Boston Logistics Group survey

Recommended First Steps

- 1. Conduct a preliminary ROI assessment to verify that volume and scale warrant a pilot**
- 2. Launch a pilot to establish accurate cost and operational baselines**
- 3. Independently validate pilot success and expansion potential**
- 4. Deploy based on IATA standards**
- 5. Target and measure improvements in customer satisfaction and loyalty**

About Boston Logistics Group

Boston Logistics Group helps supply chain executives make critical supply chain decisions that involve investment and risk by forecasting the evolution of supply markets and technologies. Our mission is to help our clients develop globally competitive supply networks that maximize Supply Chain Value.™ Our products and services include:

- **Market Forecasts** that help operations executives decide how, where, and when to buy critical externally-purchased materials and services
- **Technology Investment Evaluations** that help investors and policy makers quantify the benefit of emerging technologies and decide whether or not to invest in them
- **Custom Research and Planning** that supports high-stakes decisions such as acquisitions, outsourcing, off-shoring, and make-or-buy

Industries Served:

- **Transportation:** Railroads, Ocean Shipping Lines, Airlines, Trucking Companies, Package Delivery, Intermodal
- **Logistics:** Dedicated and Third Party Logistics, Ports, Stevedoring, Storage, Material Handling, Distribution, Maintenance, Retail
- **Discrete Manufacturing:** Machinery, Equipment, Vehicles, Parts, Mechanical and Electrical Devices
- **Process Manufacturing and Conversion:** Paper, Pulp, Energy, Packaging, Processed Minerals/Aggregates, Plastics, Metals, Chemicals