

# RFID Journal Live! 2006

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Putting RFID to Work

May 3, 2006



# Case Study: Finding Internal ROI From RFID

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# Agenda

- Our Business
- Current RFID
- How & Why
- Architecture
- Finding ROI
- Lessons Learned
- Questions



# Spirit AeroSystems Locations



*Wichita, Kansas*



*Tulsa, Oklahoma*



*McAlester, Oklahoma*

# Wichita Core Products

10 Million Square Feet



**Fuselage**

- 737

**Section 41**

- 747 • 767
- 787 • 777



**Struts**

- 737 • 747 • 767
- 777 • 787



**Nacelles**

- 737 • 767
- 747 • 777



**Tooling**



# Interesting Facts

## Passive

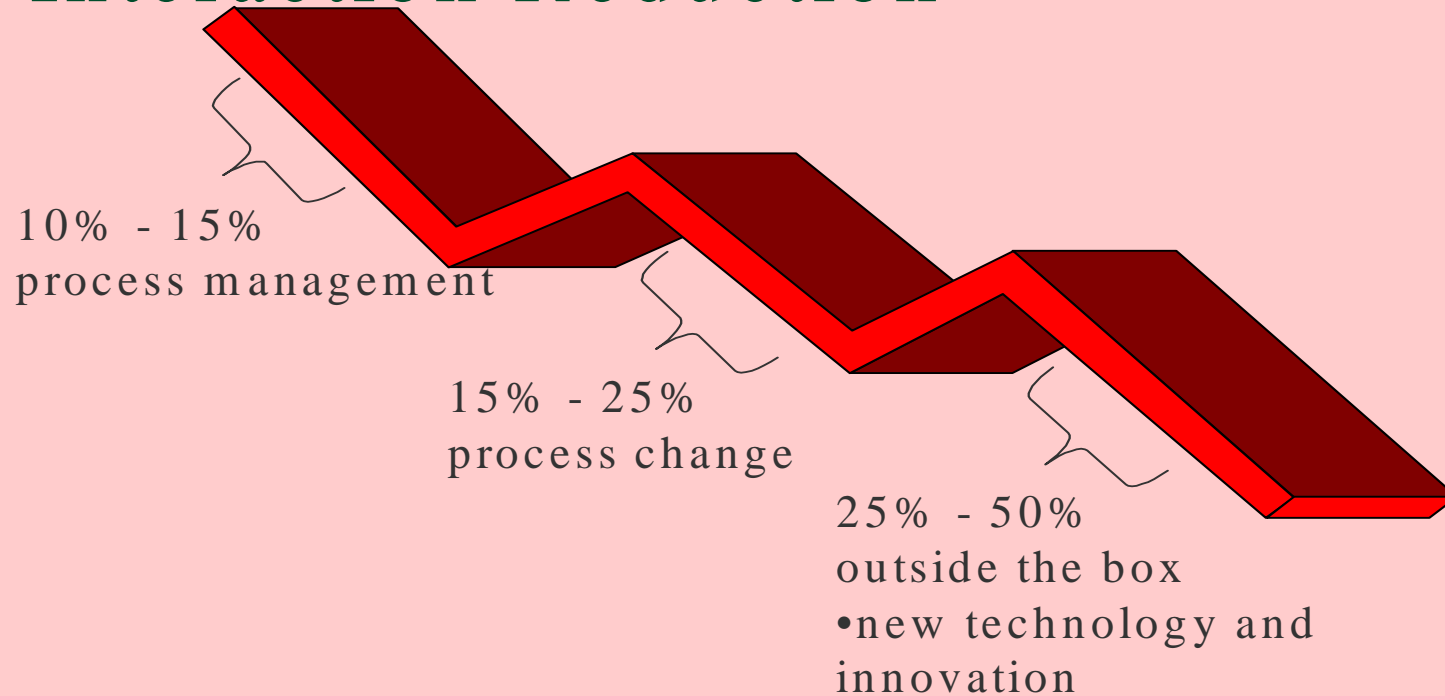
- In production since June, 2003
- 125+ passive antennas are in production
- 35,000 tags in process at any given time
- 600 on-line users; 500,000 total trans per week
- Process include: Decision Support, On-Load, Automated Logging, Historical Reference, ERP Transactions (Operations Complete, Location Updates, Inventory Transfer (IPAS), Material Receipt, Orders Complete --- 55,000+ per week)

## Active

- In production March 2006

# Process Improvement

## Interaction Reduction



7/30/2002

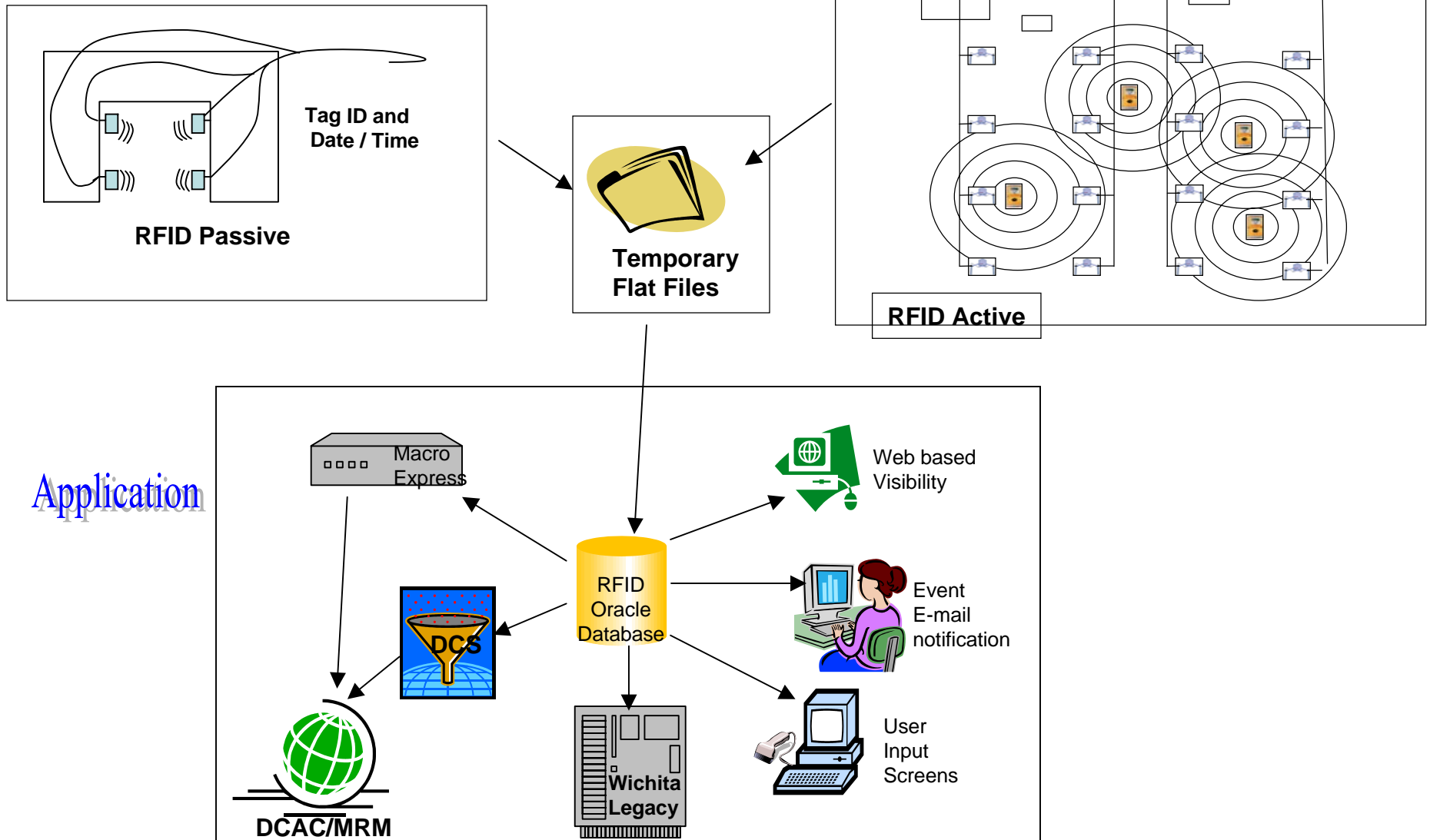
# Anticipated Benefits

- Reduce Non-Value Added Activities/Transactions
  - Status and updates
  - Side systems
- Reduce Cost
- Reduce Flow
  - Queue time

# Analysis of RFID

- Industry Analysis – Nov, 1999 – April 2000
- Market Research – Jan, 2000 – June, 2002
- Active Tag Pilots Sept, 2000 - Jan, 2002
- Passive Tag Pilots Sept, 2000 – Jan, 2002
- FrontLine Technical Show/Seminars –
- Cross Divisional Interaction
- Conduct technology reviews in support of system solutions
- Initial Implementation– July, 2002-Implemented June 2, 2003
- Reviews of other vendors via conferences and shows

# Architecture



# Details of Process Analysis

## Process Development Steps

- Develop a vision for RFID Supply chain
  - Understand RFID potential benefits & limitations
- Study customer processes, mission, goals & objectives
- Educate process owner about RFID technology
- Build “AS-IS” & “TO-BE” process flows
  - Keeps the team on track
- Include sure thing improvements & stretch goals
  - Use least expensive options to accomplish improvements
    - Existing ERP Bar Code terminal screens
    - Wireless Bar code transactions
    - Already developed RFiD transactions
- Ensure the TO-BE plan fits the customers long range vision

# Business Case Development

## Business Case Elements

- IS labor to provide code
- Labor to install cable, electricity & hardware
- Training for employees, support staff & management
- Equipment
- Software
- Maintenance agreements
- Tags (prep, association, redistribution, loss, damage)
- Labor savings
- Ongoing IS & IT support

# Business Case Development

## Results

Easy to perform business case based on before and after processes.

Easy to evaluate future opportunities based on extrapolation of initial implementation.

# Business Case Development

## Findings

Lots of manual, labor intensive process exist that can be eliminated or minimized.

Many side records & dBases were used.

Read rate accuracy was better than predicted.

Largest savings are from process improvements, systems integration and finally, hardware.

Follow on applications provide significantly better business cases due to use of existing tags, association, coding and infrastructure.

# “Finding the ROI in RFID”

*From an AMR Research, Inc publication ( Report #16660, October 2003):*

- *RFID must be business case/business process driven:*
  - “The Bottom Line: In order for companies to find value in RFID, it needs to be viewed as more than a bar code replacement; successful companies have overhauled their business processes to take advantage of the process automation capabilities it offers”
  - “RFID will not cure a bad business process. Achieving the transformational potential of this technology requires creative thinking, often from cross-functional areas of your enterprise.”
- *Infrastructure is a major consideration in RFID implementations*
  - “The back end is the key; there is too much focus on tags and readers and not enough on the impact on the software infrastructure and systems integration required to support RFID. Our research shows that this is the area that present the most risk of unexpected cost and project overrun.”

# Lessons Learned

- All stake holders committed to plan – involved in planning/execution and control
- Process Re-engineering with RFID as an enabler drives biggest cost savings
- RFID is not the technology for all processes
- Understand what vendor will and will not support - Do not believe everything they say or everything you read
- Define who pays for what and who sustains what
- RFID is not plug and play – takes integration
- Hardware maintenance plan required
- Tag packaging and distribution plan required