NPF
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Growth Driven

Fueling Your Mailing and Shipping Success

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# Benefits of End-To-End Piece Visibility: Practical Application

*Lloyd Moss & Dylan Purse / Sunday, May 5, 2019*

# *Presenters*

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# *Agenda*

- Challenges to End-to-End Visibility
- Solutions Overview
- Dashboards Tell the Story
- Use Cases

# *Many Vendors in Supply Chain*

Service Bureaus

Lettershops

Binderies

Comminglers

Logistics Providers

USPS

# *Many Disparate Systems Capture Data*

Production
Imaging & Scanning

Logistics Scanning

Sorting Scans

Postal
Processing

# *Data is Inconsistent and Difficult to Piece Together*

Pieces are printed and addressed…

Then sorts and delivers individual pieces

Then stacked in trays

Then breaks pallets down to trays…

Then stacked on pallets…

USPS receives pallets…

USPS

# *Managing to an In-Home Date is Challenging*

- Full process from campaign conception to final delivery can be a months long critical path
- Coordinating vendors and avoiding common timing pitfalls can be daunting
- Many times when you hear that a delay has occurred it can be too late to react and still meet original planned dates

# *Chain of Custody Transitions*

- As a Mail Owner, Transitions are Key Milestones
- As a Service Provider, Evidence of Timely Transitions Builds Confidence and Trust

# *Solutions Exist to Help Mitigate these Challenges*

- Production monitoring systems provide job level data on how job is progressing through production process
  - These systems mostly rely on gathering machine counts from production equipment
  - Rarely does this data go to the individual piece level which is the level piece tracking takes place
- Intelligent inserting or auditing systems can provide piece level data on the inserting event but does not provide info on earlier or later events.
- Shop floor scanning of Intelligent Mail barcodes can provide piece level event data even when scanning pallet placards leveraging nesting data in eDocs.

# *Solutions Overview – End to End Process*

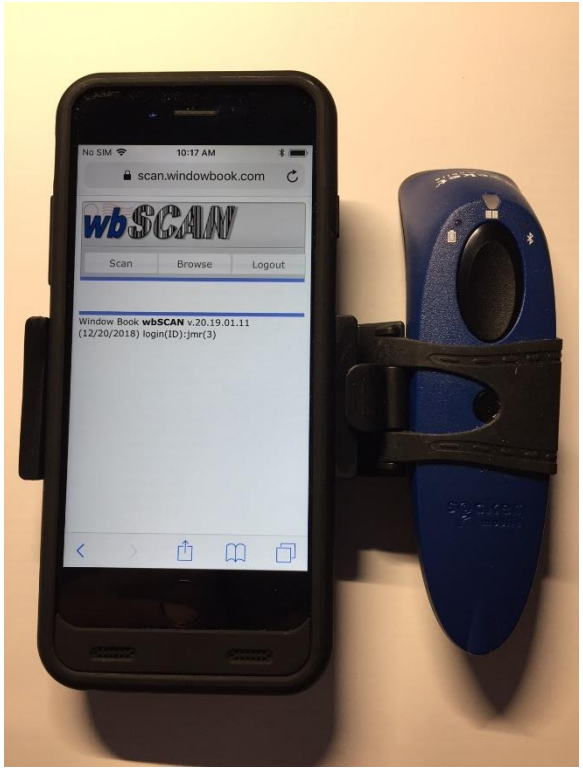
- Shop floor scanning system allows mailers to scan pallets to record production events related to the pieces on each pallet.
- eDOC data is used to provide piece level event data based on pallet placard scans
- Scan event data is sent to tracking system that ordinarily would only have events related to transportation and delivery.  That system can now provide end-to-end data from printing through delivery

# *Solutions Overview – Data Capture Points in Process*

- Typical shop floor pallet scan events:
  - Printing (scan placard as you start printing pieces that end up on that placard
  - Folding
  - Inserting
  - Palletizing – scan placard when pallet is built and wrapped.
  - Warehousing
  - Staged for Acceptance
  - Accepted, ready to load
  - Loaded on trailer – this scan can also be used to verify pallet is loaded on correct trailer

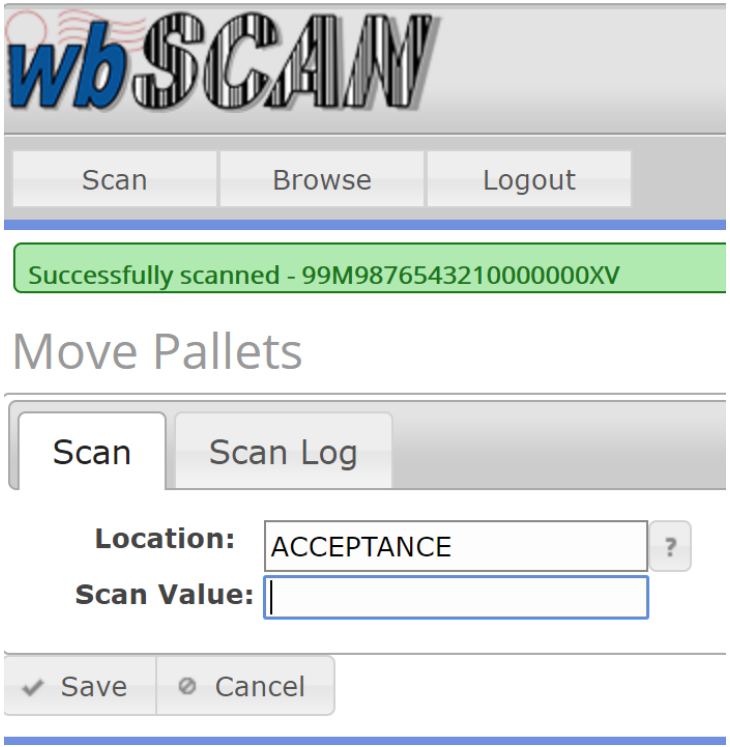
# *Solutions Overview – Data Capture Points in Production*

- Shop floor scanning can utilize a variety of different devices
  - Desktop or tablet computers located on each inserting line fitted with Bluetooth wireless scanner
    - Good for recording production events like printing, inserting, finishing, etc.
    - Can be used to record completion of pallet though handheld device might be better
  - Handheld devices using shop floor wi-fi network
    - Provides realtime visual feedback of exceptions and can also be used for other functions like QA and trailer manifest verification during loading.
    - Ideal for managing pallet location, movement to staging locations, trailer loading,



# *Solutions Overview – Data Capture Points at Acceptance*

- Record when pallets have been staged for USPS acceptance
- After acceptance scan again to indicate ready to ship but in some operations next event may be move to warehouse location or loading directly on trailer



# *Solutions Overview – Data Capture Points in Transportation*

- If mailer has trailer manifesting software, they can plan their trailers in advance.
- When mailer scans the pallet during trailer loading, not only can they record that this happened but verify that the pallet went on the right trailer.
  - Loader can also easily see if all planned pallets have been loaded
- Besides tracking the loading event, mailer can be sure that the wrong pallets don't end up on the trailer and that all were loaded!

# *Solutions Overview – Pulling all the data together*

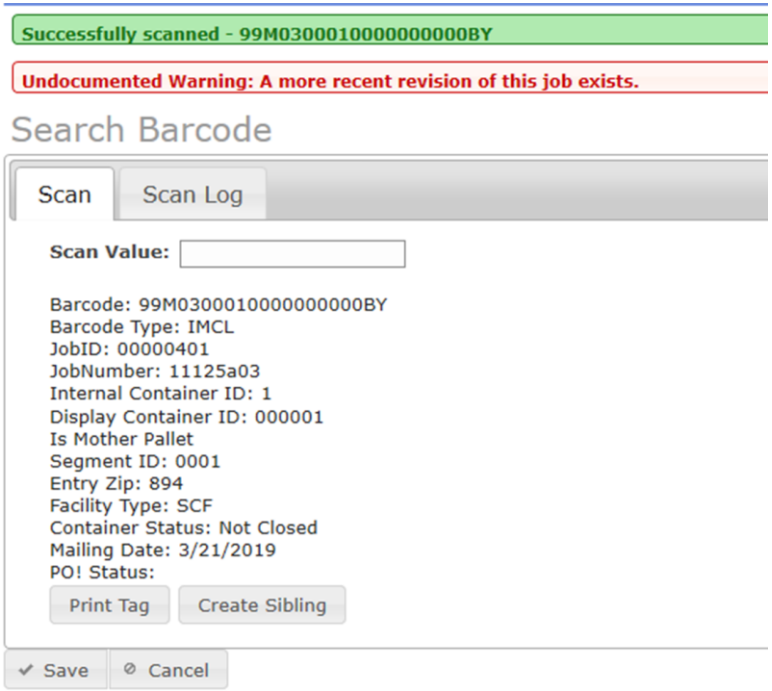
- Systems like those described usually have their own mail production dashboard that provides an overview of what is happening with each job
  - This does not usually provide end to end data going right to delivery
- Pushing these events to a system that already has logistics, USPS processing and delivery events provides end-to-end visibility
  - Helps mailer and mail owner see if logistics or processing exceptions also had production exceptions
- Can also use other data posted to eDocs like spoilage removed from mailing.

# *Solutions Overview – Expectations and Exceptions*

- Having access to scan data is important but it only identifies the knowns
- Understanding the gaps or unknowns is arguably more important
- Using eDoc and mailfile data to build expectations of events and then using scan data to fill in the details is imperative for getting a true full picture

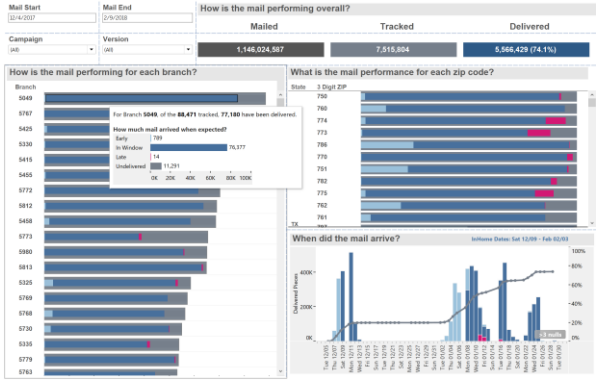
# *Alerts and Exceptions Can Drive Decisions and Actions*

- Some production level scans can detect exceptions in time to correct them
  - Attempt to load the wrong pallet on a trailer
    - Prevents e-induction mis-shipped pallet assessments for direct trailers
  - Can provide visibility if all pallets that were supposed to be loaded, were loaded
- QA scans can detect whether barcodes are likely to be undocumented and give mailer opportunity to correct the problem



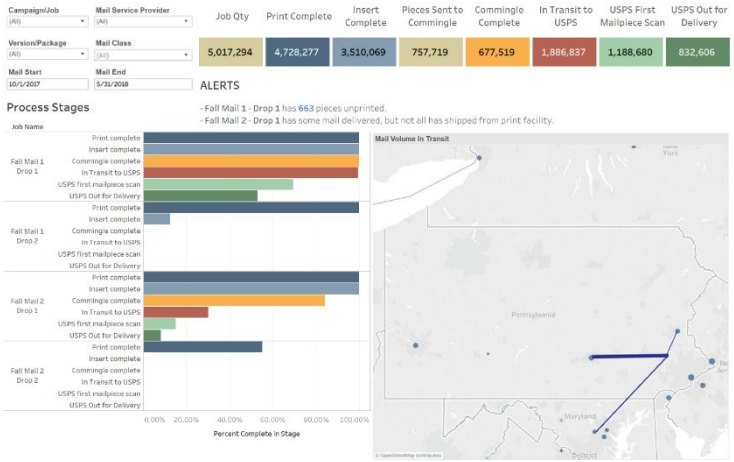
# *Dashboards Tell the Story with the Data*

- Access to Data Visualizations allow you to analyze the data and find answers to questions
- Dashboards provide high level summaries and drill down capabilities



# *Drop Ship Mailer Use Case*

- Third party logistics scan events become very important in understanding end-to-end mail flow.



# *Transactional Mailer Use Case*

- Transactional mail usually requires every piece to be mailed.
- Spoilage plays a big part in this use case.  PDR/PBC in mail.dat file must reflect spoils.
  - But there is not likely to be separate events for reprints, though that is possible.  This is a big challenge for providing end-to-end visibility for ALL mailpieces.

# *Thank You for Your Attention and Participation!*

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