



# *Growth Driven*

Fueling Your Mailing and Shipping Success

INDIANAPOLIS | 2019

## *Informed Visibility*

How Did We Get Here, Why Did We Get Here, and Where are We Going?

*Angelo Anagnostopoulos, VP Postal Affairs, Grayhair Software/ 5/5/2019*



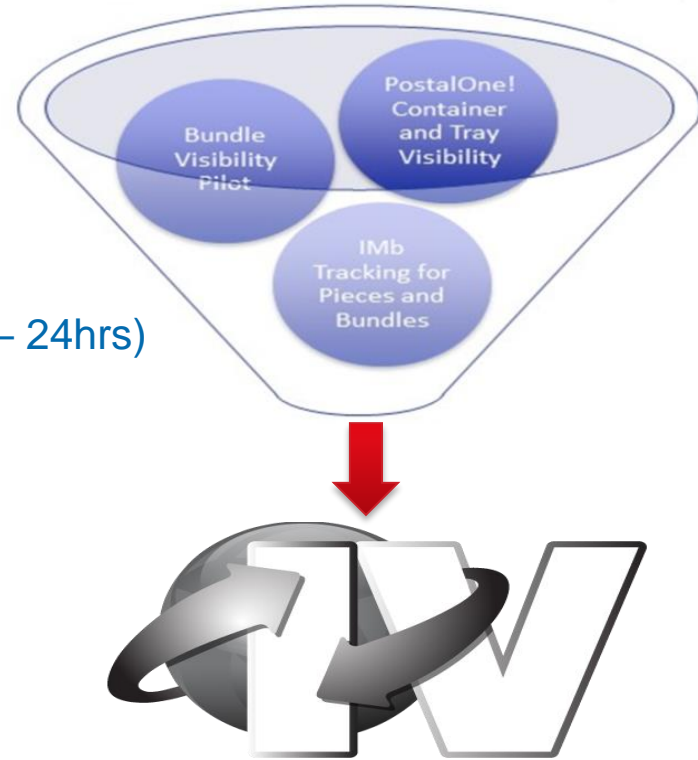
# ***Agenda***

- Brief history of IV
- Current status
- How is it used?
- Future of IV

# Confirm/ IMb Tracing

# Legacy Platforms

- Confirm/IMb Tracing (2000 – 2017)
  - Visibility for Letters, Flats, and Bundles (partial)
  - Bundle Visibility Limited to Automation Scans
  - Raw Data Download, or FTP Push Subscription (1 – 24hrs)
- PostalOne! and Mail.XML
  - Visibility for Trays and Containers
  - Push, Pull, or Download Data
  - Latency Issues
  - Retired 4/30/2019
- Bundle Visibility Pilot paved path to IV



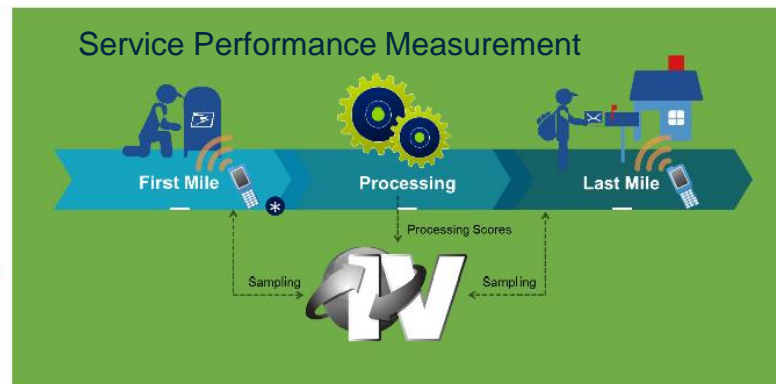
# IMb Tracing

- Piece-Level Data Available from Intelligent Mail Barcode scans
  - Facility ID (ZIP)
  - Operation Code
  - Scan Date and Time
  - Routing Code (ZIP)
  - Tracking Code

Provided as a Package File (.PKG) – FTP or Download

Facility ID (ZIP)	Operation Code	Scan Date & Time	Routing Code	Tracking Code
22081	896	10/03/2010 11:20:50	57401317223	00040012345990019102
22081	896	10/03/2010 11:20:51	57401246401	00040012345990019101
22081	896	10/03/2010 11:20:53	57446009797	00040012345990019103

# What Is Informed Visibility?



## Analytics University



**BlueTube** 92 Videos

300% Increased Daily Usage    744 Hours of Training Provided

# ***What Is Informed Visibility?***

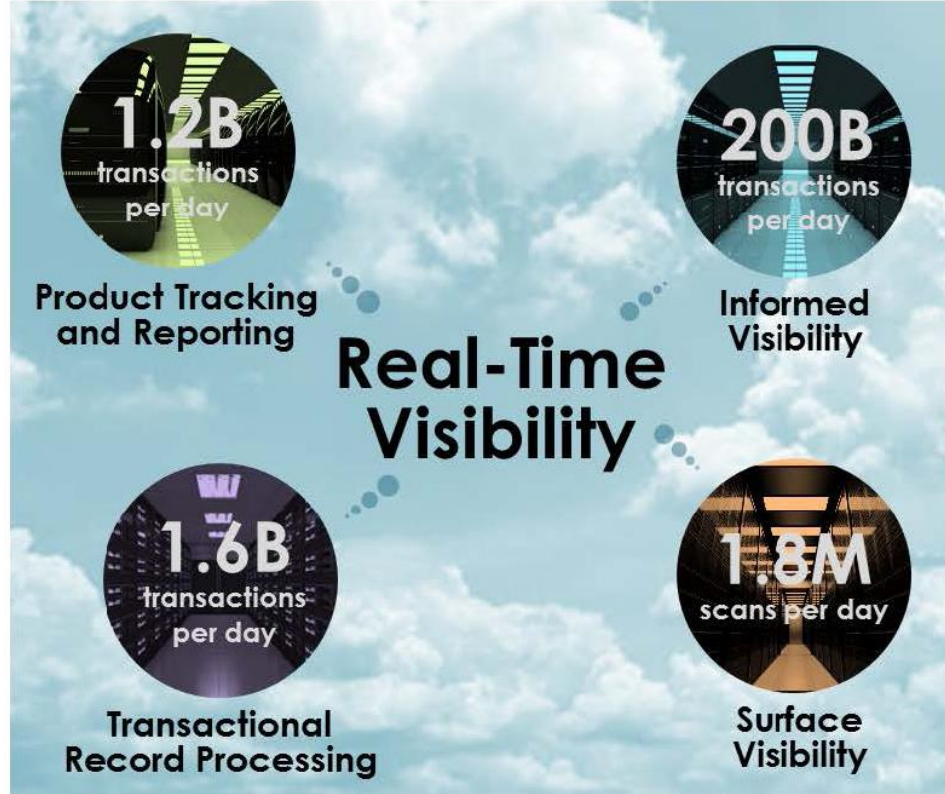
- Informed Visibility is an automated system that provides USPS and industry users with end-to-end visibility of letters and flat mailpieces as they move through the USPS network – from acceptance to delivery
- Internally, IV is critical to the U.S. Postal Service workforce to provide operational insight
  - Service Performance Measurement
  - Mail Inventory and Predictive Workload
  - Dynamic Route Optimization
- The external-facing **Informed Visibility Mail Tracking & Reporting (IV-MTR)** is available to the Mailing Industry for free
  - As a web application
  - And recently as an API
- Enables mailers to receive powerful, data-driven, near real-time information about the location of their mail

# ***What Is Informed Visibility?***

- In the simplest terms, Informed Visibility (IV) was originally envisioned as a single-source for mail tracking information for industry mailers
- Previously, to get broad spectrum insight into mail, industry mailers had to collect information from several systems
  - For example, piece and bundle visibility from the legacy IMb Tracing application, and container and tray visibility from *PostalOne!*
- A year and a half since its launch, IV provides mailers with end-to-end visibility as pieces, containers, handling units, and bundles travel through the mailstream, all from a single system



## *IV Processes Massive Amounts of Data Per Day*



# Why IV Was Built - In A Nutshell

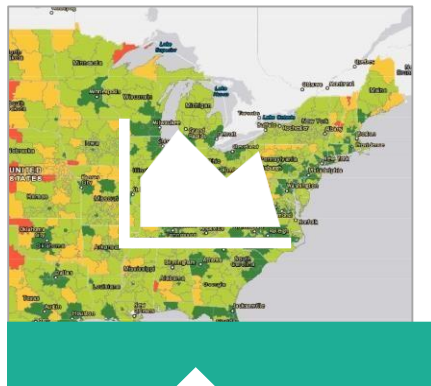


They needed an event-driven near real-time  
**Internal service  
performance measurement**  
for mail

Also to:

- Manage and improve USPS operations
- IMb Tracing was at end-of-life
- Improve the 24 - 96 hour latency of Container and Handling Unit data

# Service Performance Measurement



PRC approved use of Internal SPM as the official source of measurement, starting October 1, 2018

## End-to-End Measurement of Mail



One Consolidated Mail Measurement System (Single-Piece and Presort)



Measuring All Potential Mail (Census vs. Test Pieces and Limited Household Sampling)

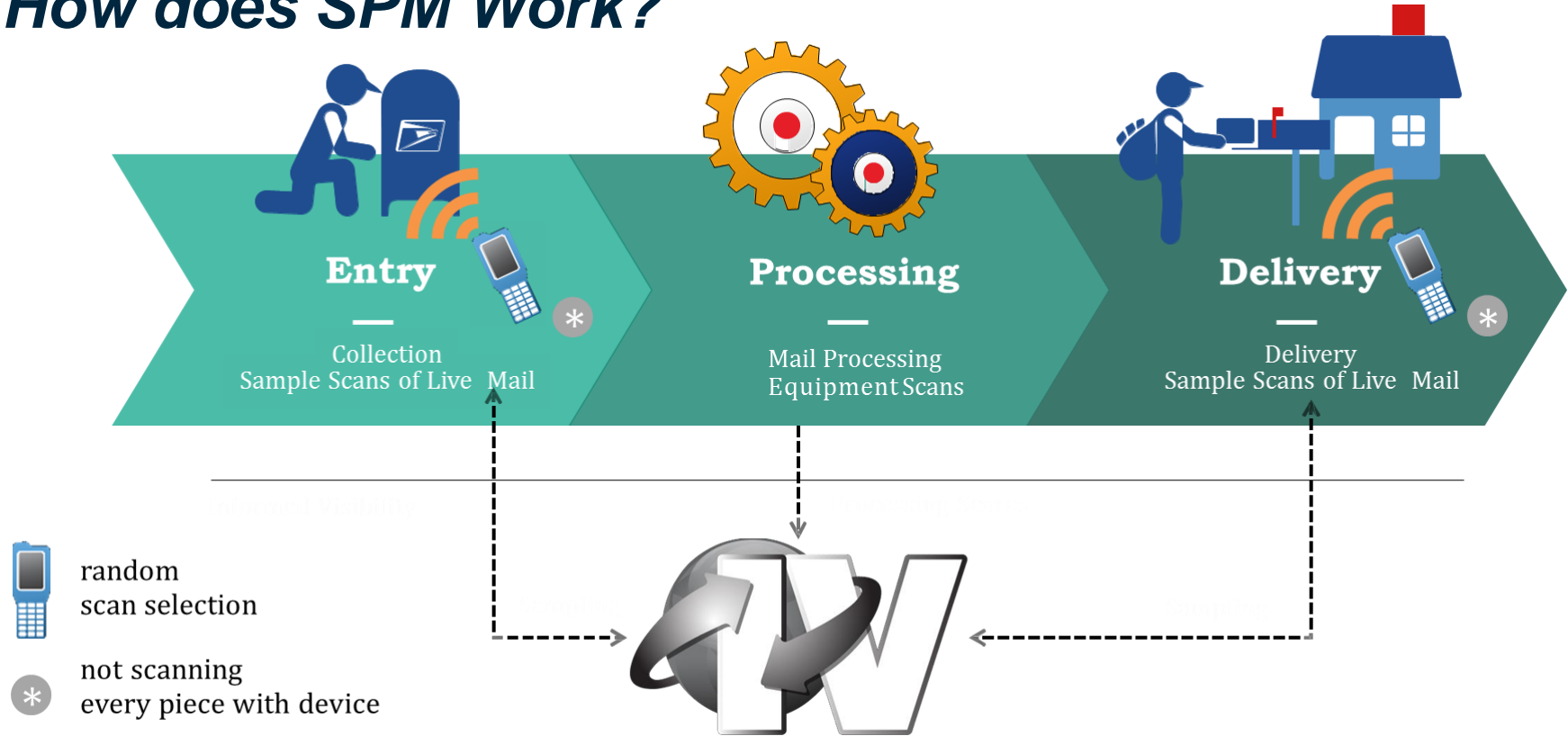


Same-Day Service Scores

**Internal  
Service  
Performance  
Measurement**



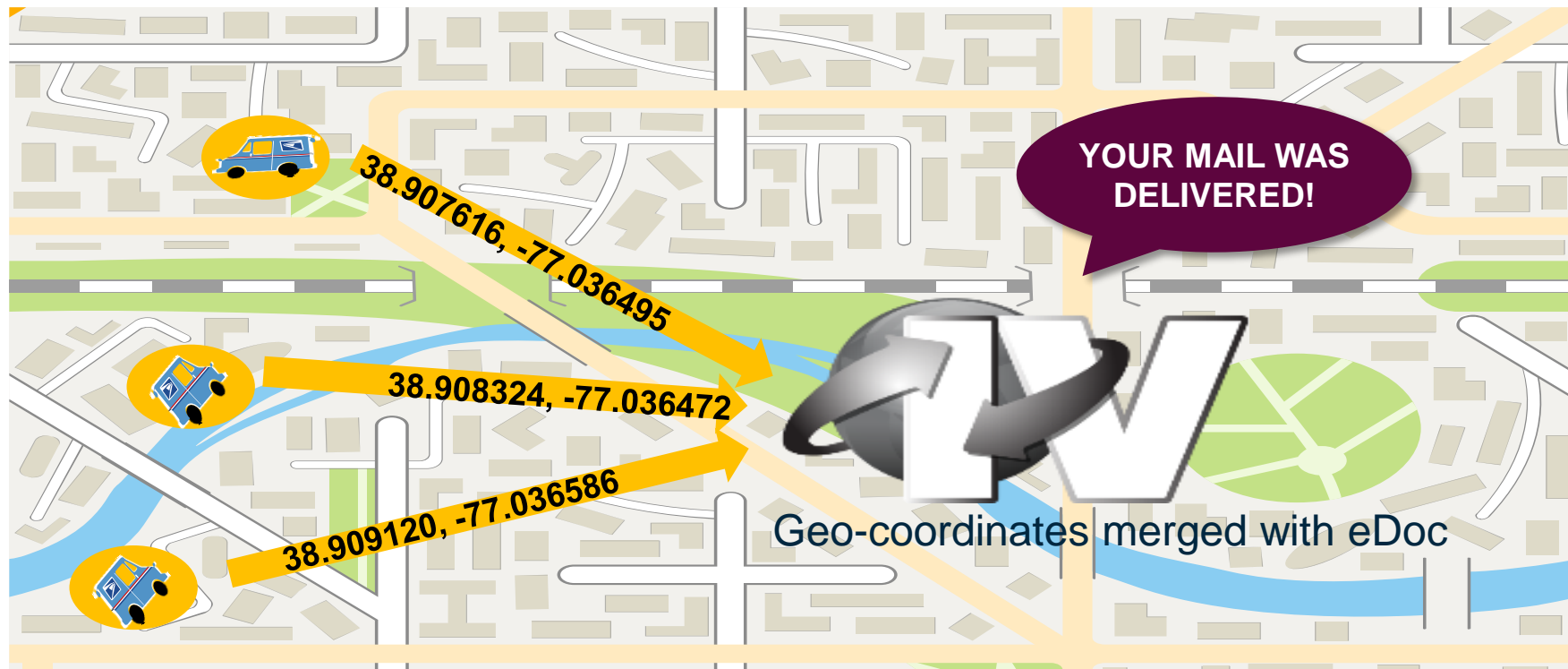
# How does SPM Work?



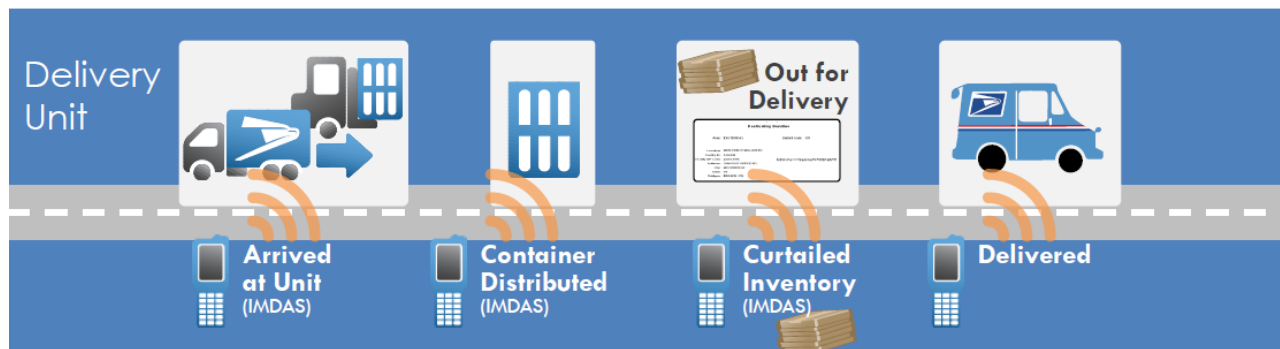
# How does IV Work?

- IV helps to fill in visibility gaps by providing insight into the USPS mailstream not previously available. Two primary ways is through assumed and logical handling events
- IV leverages nesting associations (from mailer eDoc aka Mail.dat) to provide **assumed handling events**
  - When a mail aggregate, like a container, receives a scan, IV creates assumed handling events for all nested handling units, bundles and pieces
- An example of a logical event is when IV uses GPS tracking information from carrier handheld scanners to create **logical delivery events**. This provides insight into when mail is delivered without the need for a physical scan
  - Based on the carrier's scanning device geo-location, when the carrier exits a ZIP+4 area a Logical Delivery Event is generated to mailers that the mailpiece was delivered

# Logical Delivery Events

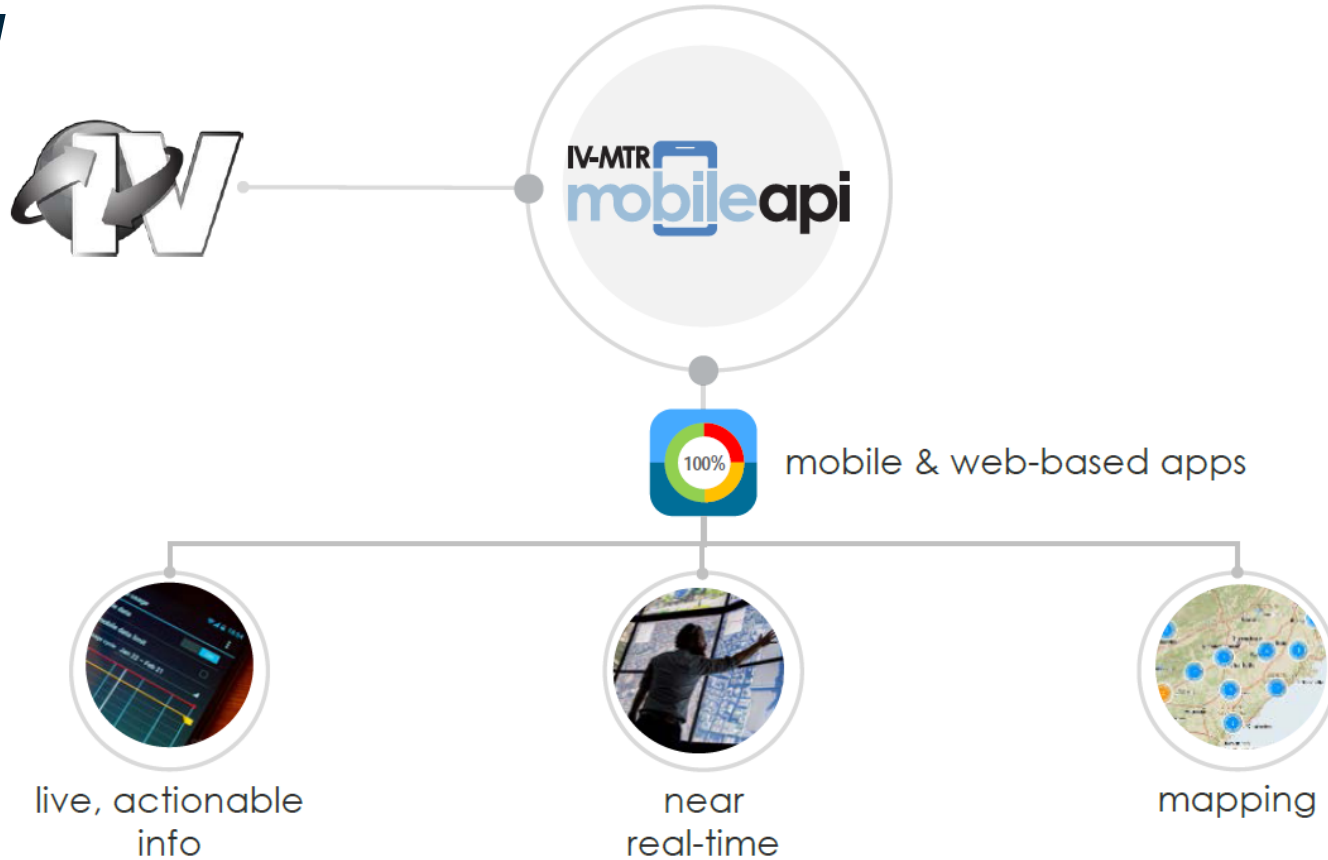


# Bundle Visibility



Challenge: Current visibility is  $\approx 60\%$

# IV API





# IV API Functionality

## Mail Tracking Web Services



- Piece level attributes and scan events based on Intelligent Mail Barcode (IMb)
- Container attributes and scan events based on an Intelligent Mail container barcode (IMcb)
- Handling unit (tray) attributes and scan events based on an Intelligent Mail tray barcode (IMtb)

## New Admin API Web Services



- Data Delegation
- Data Feed
- Saved Entity
- Data Feed File History
- Address Book

## Election Mail Web Services



- Return Ballot Tracking

IV-MTR  
mobileapi

# Who Has Access to IV Data?

Table 2.3: Default Permissions by CRID or MID Role

CRID or MID Role	Able to View or Receive Data For				Able to Share Data For			
	<i>Container</i>	<i>Handling Unit</i>	<i>Bundle</i>	<i>Piece</i>	<i>Container</i>	<i>Handling Unit</i>	<i>Bundle</i>	<i>Piece</i>
Mail Owner	X	X	X	X	X	X		
Mail Preparer	X	X			X	X		
eDoc Submitter	X	X			X	X		
FAST Scheduler	X				X			
MID on Piece	X	X	X	X	X	X	X	X
MID on Tray		X				X		
MID on Container	X				X			
Delegate*	X*	X*	X*	X*				

# What Does IV Provide?

- IV provides **multiple file formats**:
  - Legacy PKG (only for bundles and pieces)
  - Mail.XML messages (only for containers and handling units)
  - Delimited (not available in the PKG format)
  - JSON
- Users can also choose from a variety of **delivery methods**:
  - View one-time query data online
  - Download the data
  - Have data pushed through Secure FTP or a web service
- IV-MTR provides **data in near real-time**; users can decide at what **frequency** to receive IV mail tracking data—hourly, daily, weekly, monthly.
- Reports/Data available through IV-MTR: **Scan Data, Mail Quality Data, Enterprise Payment System and Package Platform (PPC) reports.**
- **Aggregated data** through the IV-MTR **API**

# Data Delegation Form

- USPS created a form to make it easy to delegate data
- Fill it out
- Send it to the USPS Helpdesk
- Your Service Provider can help you with this

<https://postalpro.usps.com/informedvisibility/DelegationRequestForm>

## Informed Visibility® Mail Tracking & Reporting (IV®-MTR) Data Delegation Request

Delegating Company (MID Owner) (Delegate FROM):	
Customer Registration ID (CRID) (if known):	
Primary Contact Name:	
Address:	
Phone:	
Email:	

Receiving Company (Delegate TO):	
CRID (if known):	
Primary Contact Name:	
Address:	
Phone:	
Email:	

**IMPORTANT:** By default, the IV Solutions Center will delegate visibility of ALL mail object types, handling event types, and data fields.

Please delegate all available IV-MTR data for the following CRIDs and/or MIDs:

*Note:* Add rows or additional pages as needed. You may attach a spreadsheet.

CRID	MID(s)
Example: 20783992	901864159, 901872596
Example: 20784068	All MIDs

The delegation is to be in effect from the Start Date until the End Date, as specified below:

Start Date	
End Date	

**Note:**

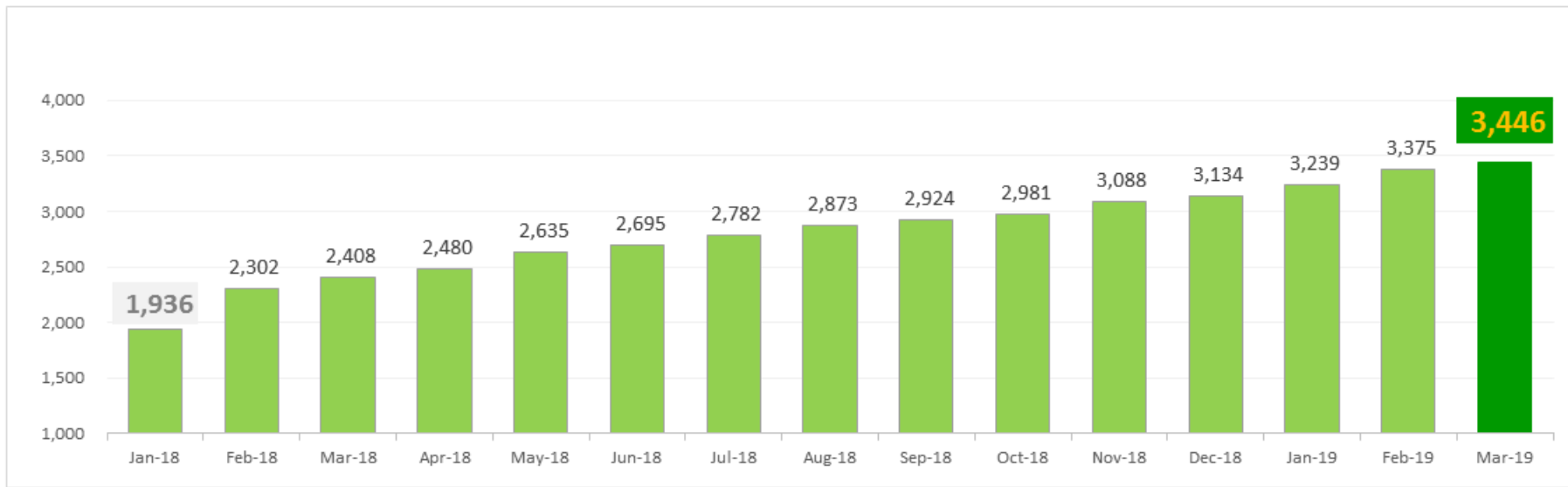
- The Start Date cannot be prior to today's date.
- You may leave the End Date blank. The End Date can be changed in the future if needed.

The Receiving Company is authorized to receive mail tracking data for these CRIDs and/or MIDs as specified through IV-MTR until the Delegating Company withdraws authorization.

Signature:	
Print Name:	
Title:	
Company:	

# ***Mailer CRID Activations***

78% Growth (Since IV MTR Went Live in January 2018)



# ***Why Should I Use IV?***

- IV is increasing the value of mail and enabling Mailers to better plan their mailing campaigns, staffing, and product inventory
- IV connects customers to their data through web apps and APIs, delivering access to mailing information whether in the office on a computer or in the field on a mobile device
- IV creates multi-channel marketing opportunities that enable mailers to engage with customers in near-real time, creating event-driven transformative “mail moments,” where the digital experience and the physical world are connected in powerful new ways

# Two Of The Other Available IV Data

# Mailer Quality Data Through IV

- Create and Manage Feeds
- Create a New Mail Quality Data Feed
- View Existing Feeds

Informed Visibility®

View Data Create & Manage Data Feeds

Data Delegation Requests Pending Approval for My CRD

**Your Feeds**

Feed Name	Mail Object Type	Target	File Format	Frequency	Active	# of Failed Files	Output History	Details
CH Daily Feed Seamless Se...	Mail Quality Data		DELIMITED (del...	Daily	Active	-		
CH Daily Feed Seamless Se...	Mail Quality Data		DELIMITED (del...	Daily	Active	-		
CH Daily Feed Seamless Se...	Mail Quality Data		DELIMITED (del...	Daily	Active	-		
CH Daily Feed Seamless Se...	Mail Quality Data		DELIMITED (del...	Daily	Active	-		
CH Monthly Feed E-Inductio...	Mail Quality Data		DELIMITED (del...	Monthly	Active	-		
CH Monthly Feed E-Inductio...	Mail Quality Data		DELIMITED (del...	Monthly	Active	-		

21 - 31 of 200 items

**Create a New Feed**

Subscription Owner CRD

Feed Data Type  
☐ Scan Data  
☒ Mail Quality Data

File Format  
Delimited File

Delimiter  
Other - Please

Define Target  
Add a server Go to address book  
Email Notification  
☐ On Transfer Success  
☒ On Transfer Failure  
Select Email Address  
Add a contact Go to address book  
File Transfer Format  
Zipped

TEST SERVER CONNECTION

Source Frequency  
Monthly

Frequency  
1 Days

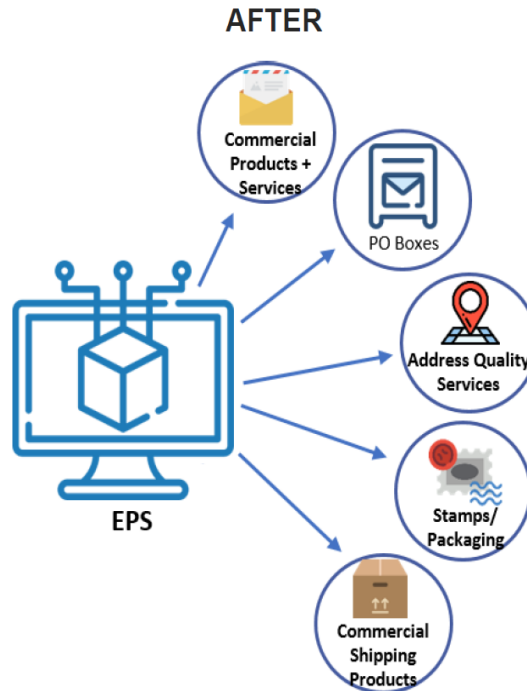
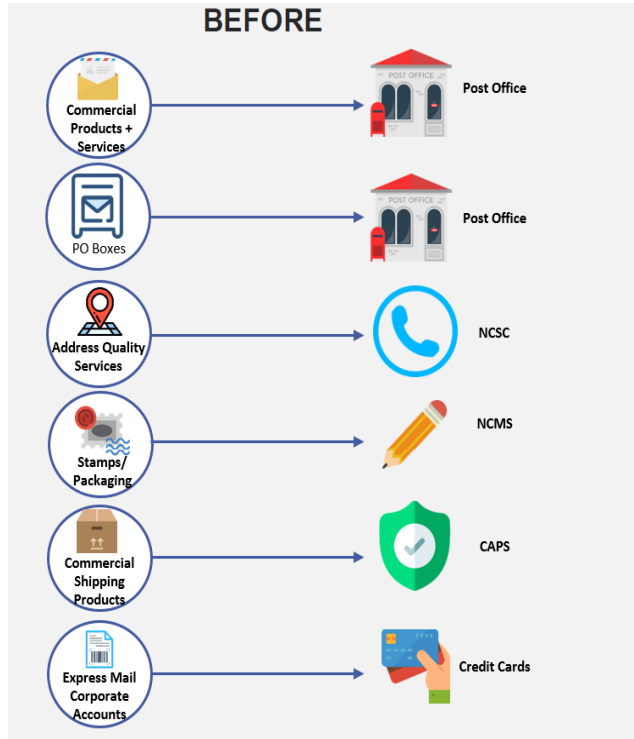
Start Time / Time Zone  
06:00 AM Central (UTC-6)

Name This Feed  
Full Service Monthly Feed

CONTINUE



# Enterprise Payment System (EPS) Data Through IV



- Pay for all Products and Services with one account
- Manage accounts online
- Establish permits online
- Manage postage spent
- Convenient payment options
- Access data through EPS or IV

# Current and Future Enhancements

# ***April Released Functionality***

- API Enhancements
  - Provide aggregated Pieces Delivered counts by Delivery State, ZIP3 and ZIP5
  - ESRI map for Pieces Delivered (map showing percentage of pieces delivered)
  - Provide aggregated Expected, Accepted, In Processing/Processed, and Delivered counts for Containers, Trays, and Pieces

# ***May Release Functionality***

- Add ability to re-enable profiles and to provide additional contact information
- Correct issue when drilling to Tray Detail in Mail Object Navigator
- Add Vote by Mail Key Code functionality and integrate with USPS.com
- Suppress Op Code 873 (Assumed Appointment Arrival)
  - Using Op Code 874 instead (Actual Appointment Arrival)
- Mailer Quality Data Enhancements (MQD)
  - Create single datafeed for multiple CRIDs
- BlueTube Updates (training videos)

# ***Future Functionality (in no particular order)***

- Transportation Visibility Pilot (In progress)
  - MVA – USPS will provide APP to transportation carriers who don't have a way to scan pallets and provide the USPS with dropship information
  - Exchange Industry GPS breadcrumb data with USPS to determine arrival times
  - Look at other GPS technologies
  - Expand pilot to additional transportation providers, create a standard data exchange format and then roll out
- Ballot Mail
  - Provides a way for a voter to track USPS possession of their ballots
- Manual Bullpen Scans - Pilot
  - Closes the gap on flat mailpieces processed in manual operations

# ***Future Functionality***

- **Parcels**
  - IMpb Compliance Report via IV (package barcode quality report)
  - Package Visibility
- **IMpb Format Barcode Visibility**
  - Enhance tracking of Certified Mail for Letters and Flats
- **Mail Disruption Events**
  - Provide intelligence into unexpected events/weather/redirects with Operational Status indicator
- **Service Performance Measurement Indicator**
- **Bundle Irregularity Indicator**

# ***Future Functionality***

- Predictive Delivery Date (PDD)
- IMb Planning Tool download option
- Mail on Hold
- Informed Delivery Post Campaign Data through IV
- ACS and Secure Destruction data through IV
- Additional visibility into manual operations
- Additional API functionality

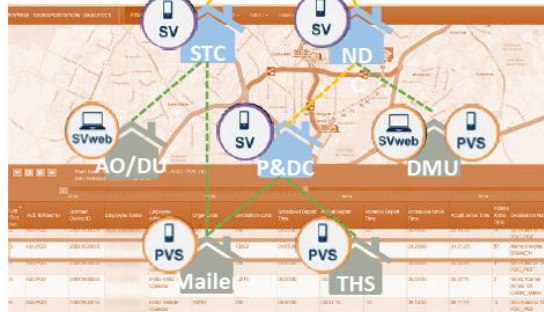
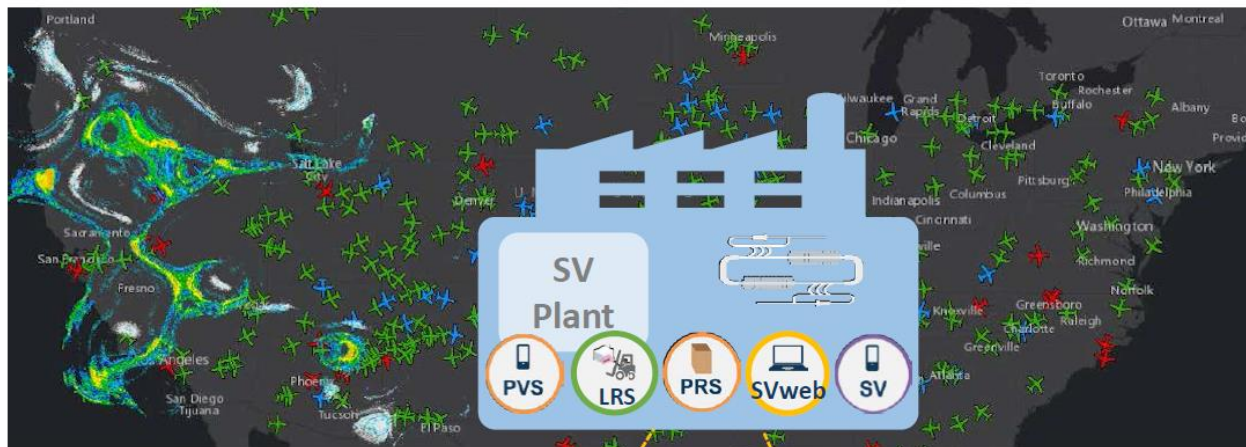
# Different Delivery Date Definitions

Expected Delivery Date (EDD)	IV calculated date that indicates when the mailpiece is expected to be delivered. This date is determined based on the published origin entry and destination entry service standards. We will provide the LAST date of the service standard pair. This will be a static date based on the start the clock event to the origin and destination 3 digit pair
Predicted Delivery Date (PDD)	IV calculated date that predicts when the mailpiece is likely to go out for delivery based on historical and recent service performance data for that mail profile (mail class and shape) for that origin and destination pair. It will be calculated when the first manifest or scan is available to IV and updated with a revised prediction for each subsequent visibility event.
Anticipated Delivery Date (ADD)	IV calculated date that indicates when the mailpiece will be out for delivery based on the expected last processing scan (or last mile operations scan) for that 5 digit mail class and shape. It will not be calculated prior to a finalized scan occurring.

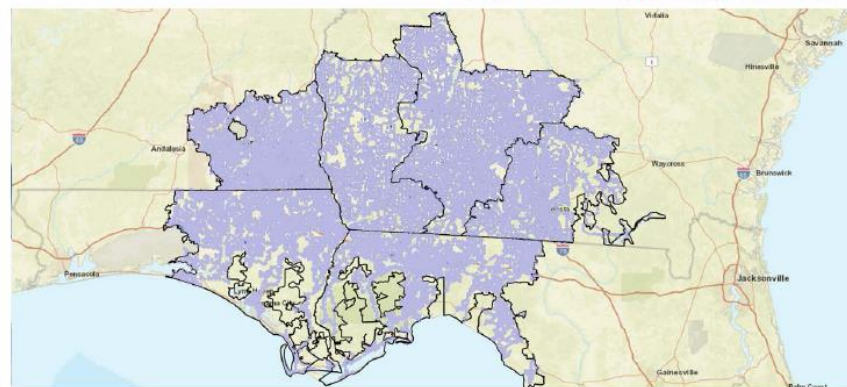
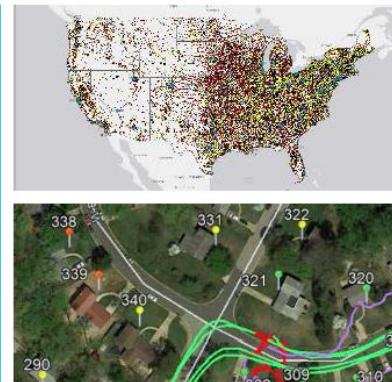
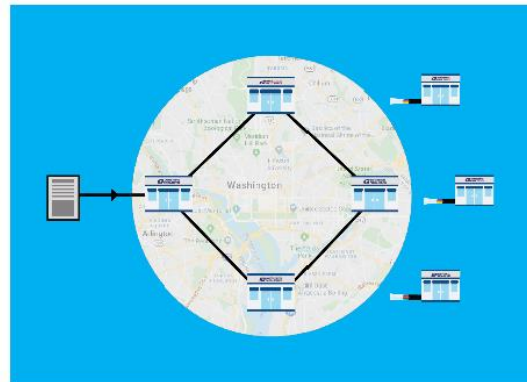
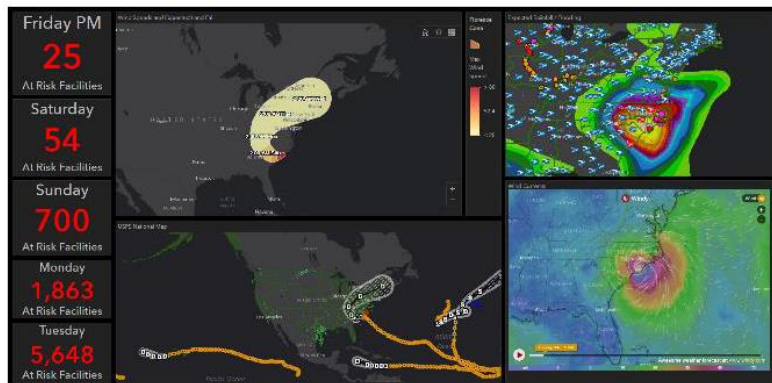


# Interesting Uses of IV Data

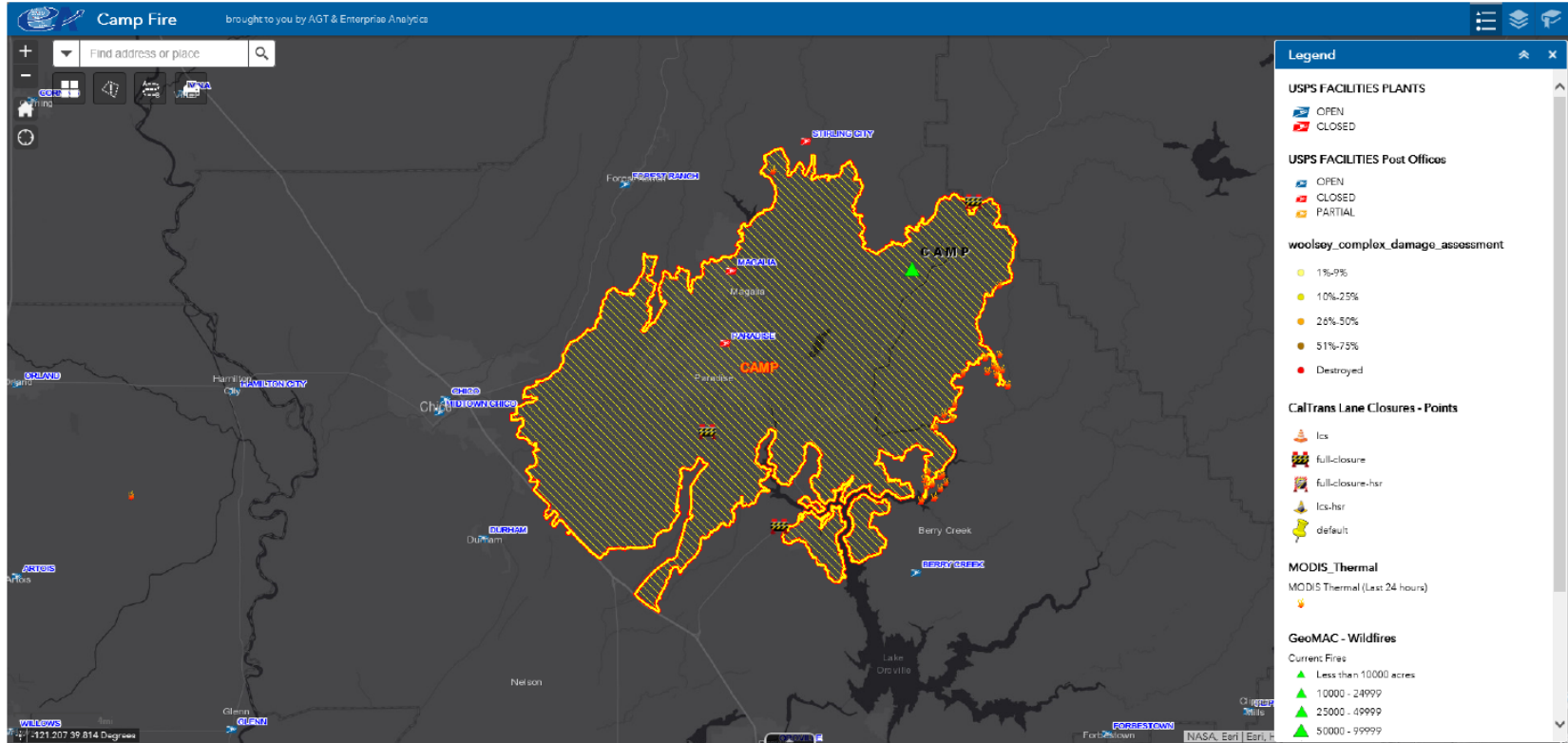
# Logistics Analysis



# Geospatial Analysis

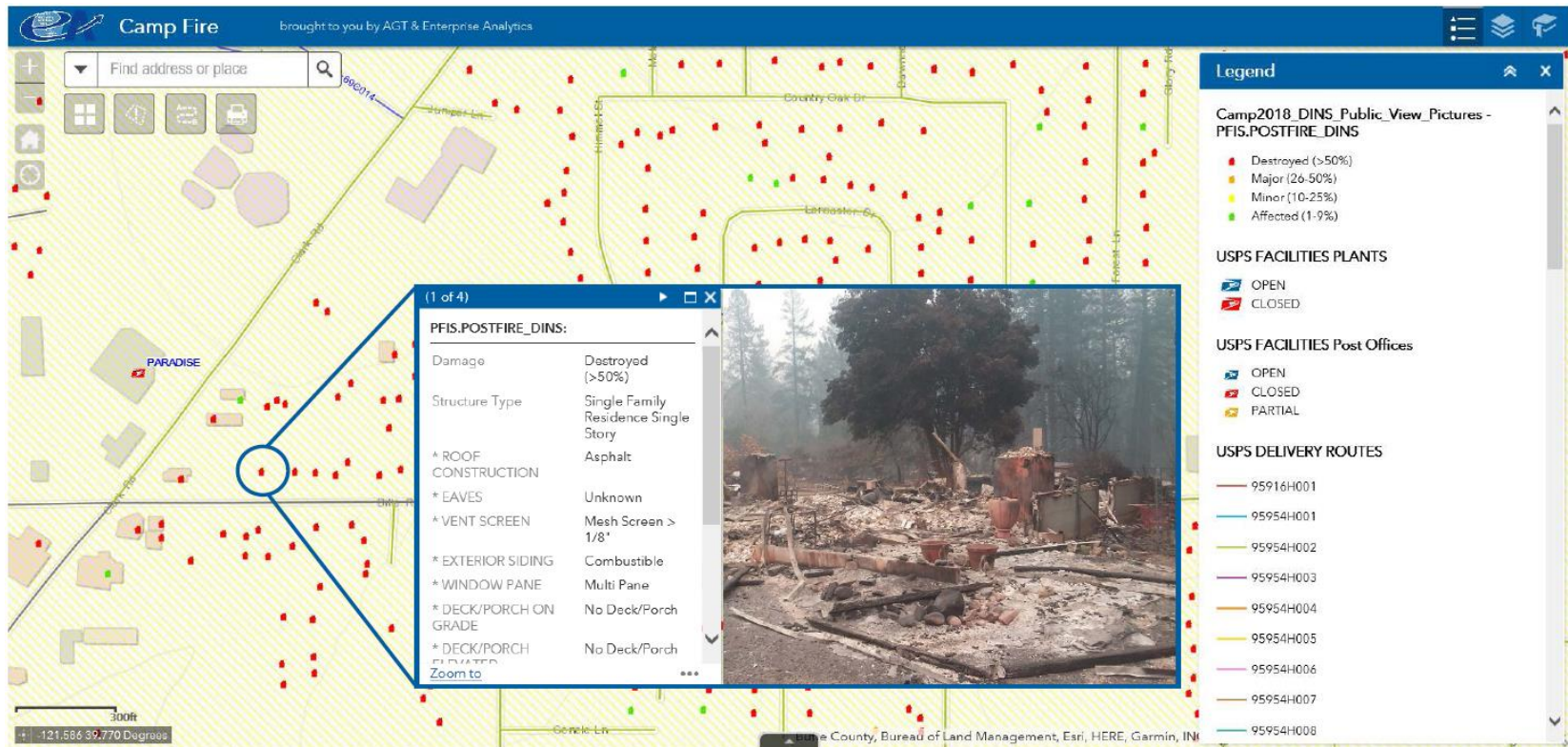


# Last Year's California Wildfires



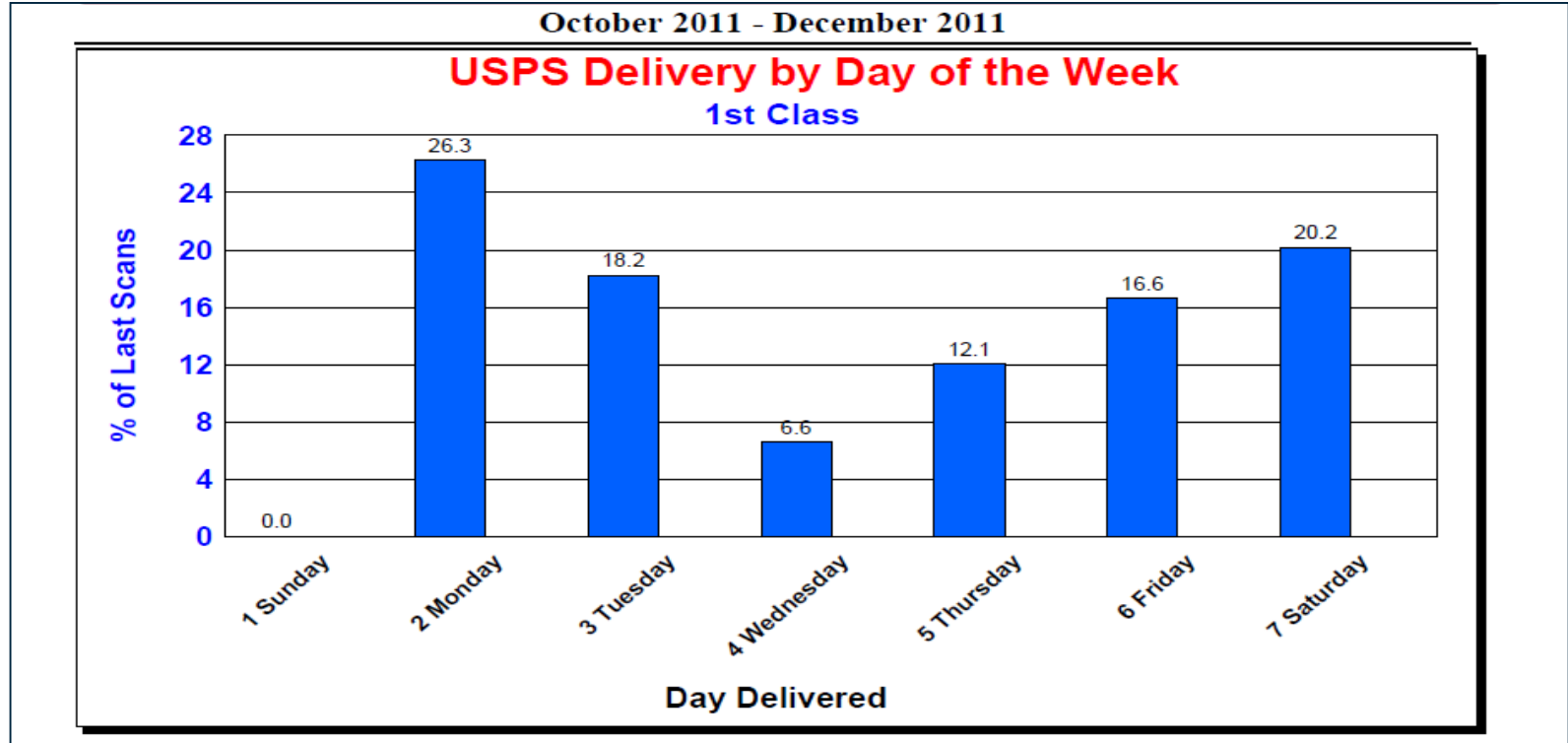


# California Wildfire Drilldown View



# Sample Industry Reports Using IV Data

# Mail Delivery by Day of Week



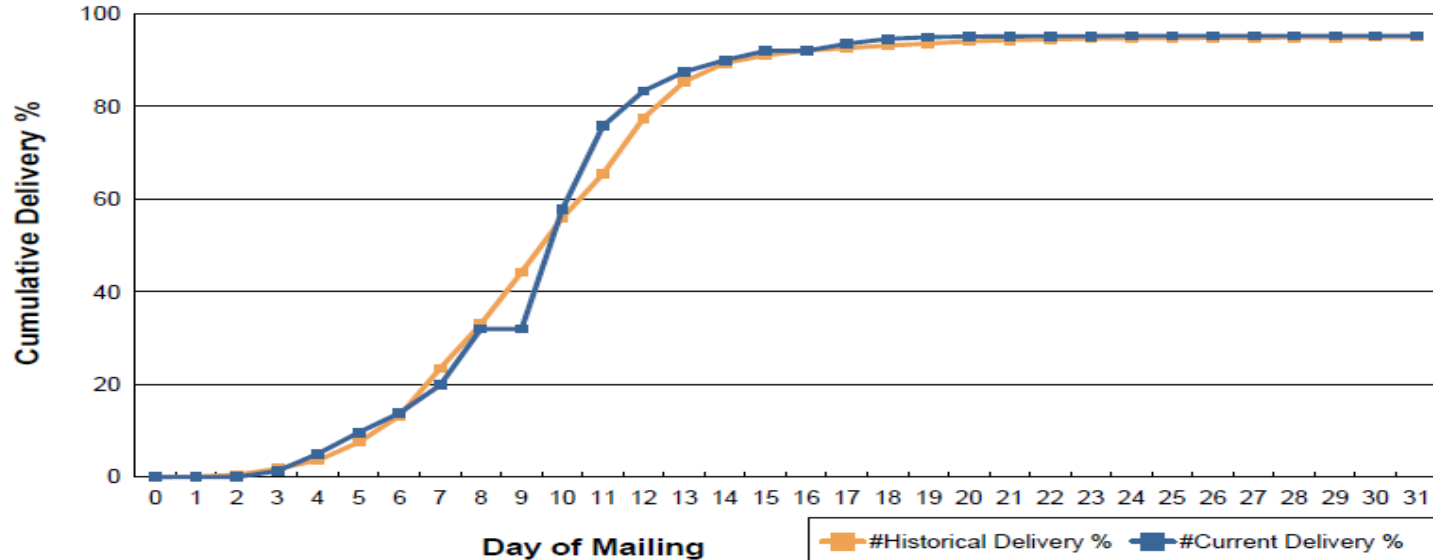
# High-Level Delivery Curve

Campaign: Sample Campaign

Campaign Quantity: 10,544,636

First Mail Date: 01/20/2012

Last Mail Date: 01/24/2012





# Single Piece Lookup

## Customer Information

Name: JOHN CORD  
 Business Name: COLUMBUS SCHOLARSHIP AWARD FD  
 Unique Record Id: 002QX4WXQWXPXZQGK8  
 Address: 2145 BOARDWALK  
 City, State ZIP: ATLANTIC CITY, NJ 08401 [Map It!](#)

## Mailing Information

Mail Date: 03/25/2011  
 Job Name: Annual Sale Mailing 2010  
 Branch: 035  
 Package #: 0373  
 Customer/Division: A1 Direct Marketing

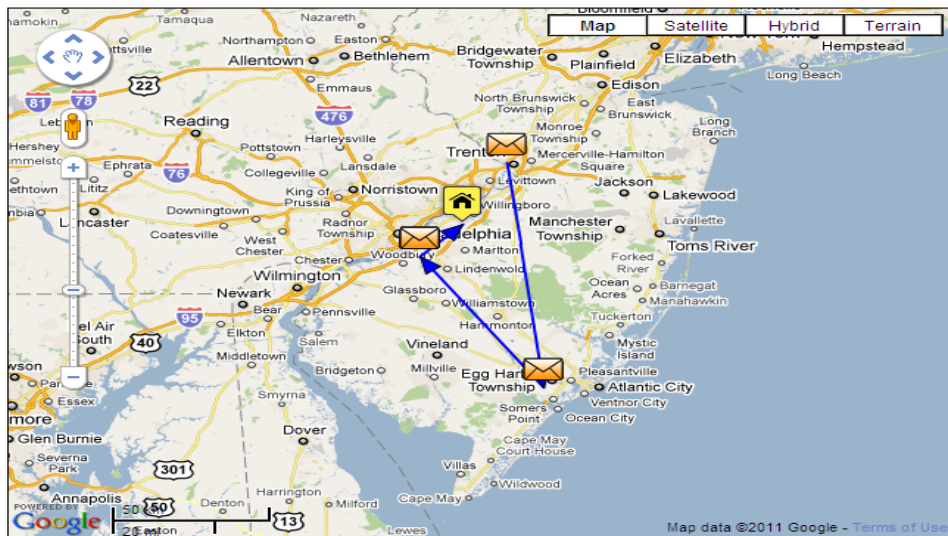
## ACS Delivery Info: New address provided



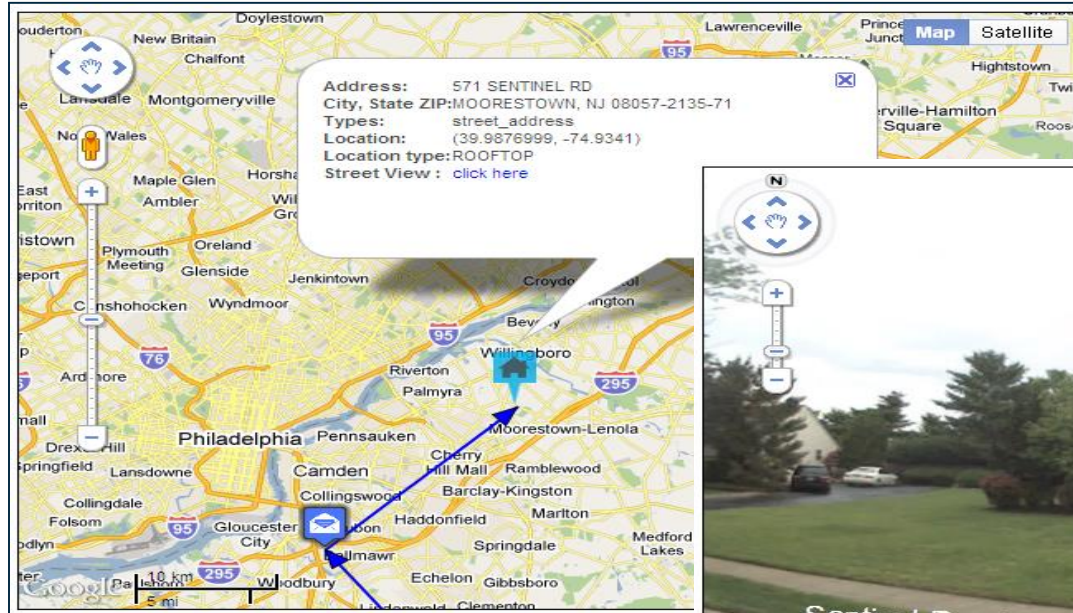
Address: 571 SENTINEL RD  
 City, State ZIP: MOORESTOWN, NJ 08057-2135-71

## Mailing Details:

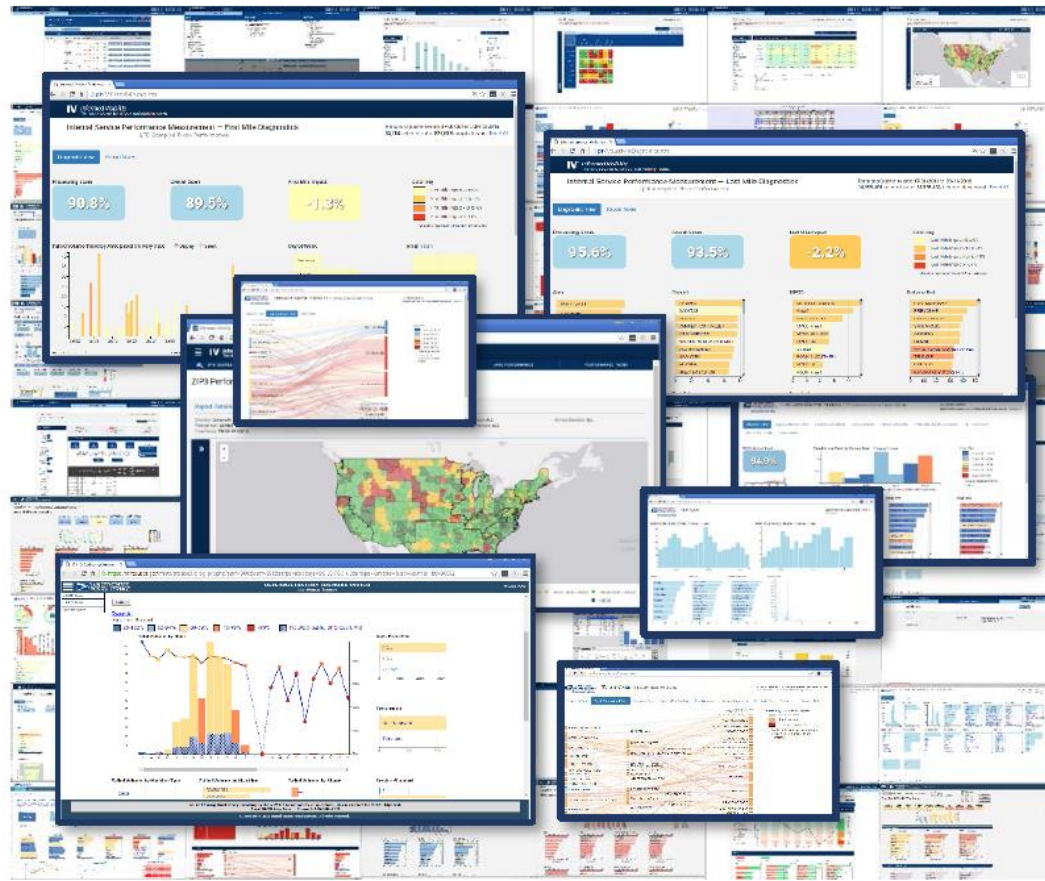
Mail Piece	Destination	Scan Date/Time	Scan Site	ZIP	Scan City/State	Activity	Travel Days
Atlantic City NJ 08401-7305-45		Mar 28 2011 4:24PM	08650		Trenton NJ	In Transit	3
Atlantic City NJ 08401-7305-45		Mar 30 2011 12:25AM	08234		Egg Harbor Township NJ	Sorted for Delivery	5
Atlantic City NJ 08401-7305-45		Mar 30 2011 4:47AM	08234		Egg Harbor Township NJ	Out for Delivery	5
Atlantic City NJ 08401-7305-45		Apr 1 2011 9:24PM	08031		Bellmawr NJ	Potential Redirect	7



# Map View and Street View



# Today, It Is More About Data Visualizations



# *In Summary*

- Informed Visibility is more than the old Legacy system
- It is a central repository for all kinds of high volume USPS data, not just scan events
- As Debbie Pfeiffer once said, “Data is the new Bacon”
- Usage is a must in an Omnichannel world
- Try it yourself or partner up with one of the vendors in the Exhibit Hall

# Helpful Information

# *Helpful Information*

## IV Information on PostalPro

- <https://PostalPro.USPS.com/visibility-and-tracking>

MTAC User Group 4 (Steve Jones – new USPS Leader)

