



# Introduction to California Cannabis Track-and-Trace System

Scott Denholm  
Executive Director Metrc



# Agenda

- Who is Franwell?
- Introduction to Metrc
- Working with Metrc
  - Obtaining User Access
  - Tags and Tracking
  - Plants
  - Packages
  - Manufacturing
  - Transfers
  - Laboratory Testing
  - Retail Sales
  - Reports
- RFID, What and Why
- Integration with other Software
- Support



# Who is Franwell?

- 25+ years of business experience in (high flow & volume) supply chain processes & tracking
- 30+ years of experience in computer technologies
- 15+ years focused on auto identification technology (Bar-coding, RFID, etc.)
- Current Statistics:
  - Over **53,000** Industry users enrolled
  - Over **200** State users
  - Over **11,501,800** plants commissioned
  - Over **8,527,139** packages tracked
  - Over **1,421,585** travel manifests processed



MARYLAND  
**MMCC**

Natalie M. LaPrade  
Maryland Medical Cannabis Commission



# Introduction to Metric

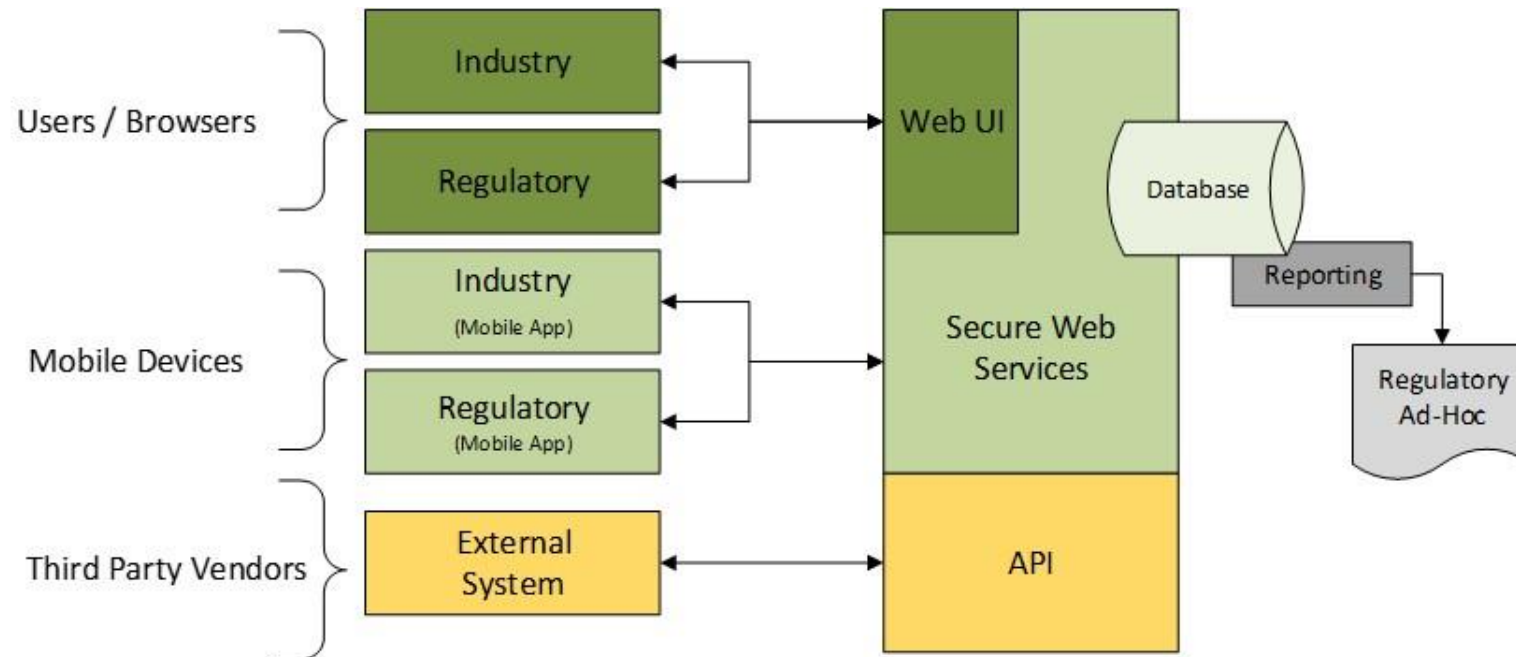
# Scope

- ✦ Metrc® is a compliance management solution used by regulatory bodies for the oversight of the cannabis industry.
- ✦ Metrc is a cloud hosted on-line software reporting system used by licensed cannabis businesses to manage and report supply chain activities as required by State rules.
- ✦ CCTT-Metrc is California's implementation of Metrc ([metrc.com/California](https://metrc.com/California))



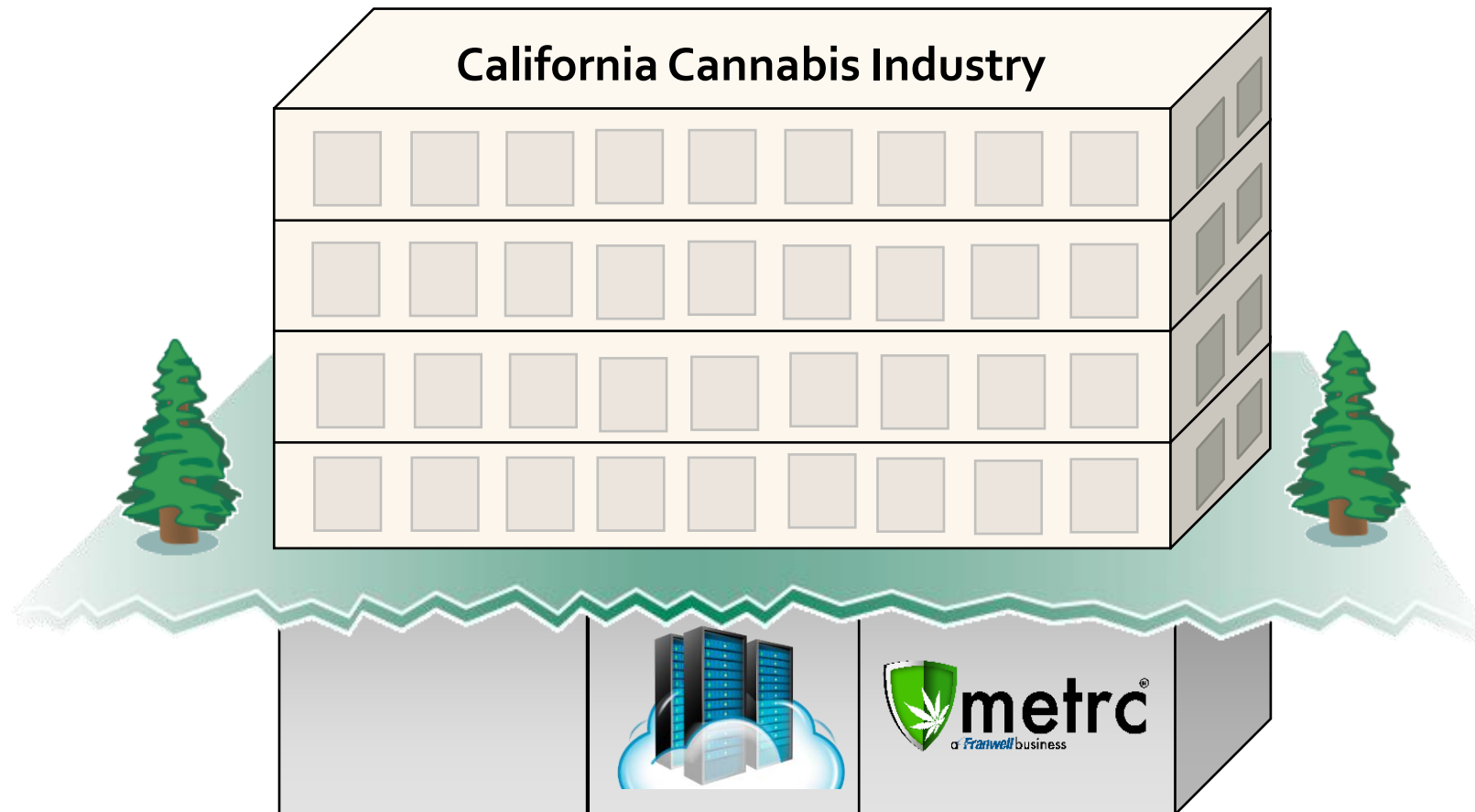
# What Makes up Metrc?

- The system consists of:
- A web application
- Web services
- A mobile application for site inspection
- A mobile application for industry use

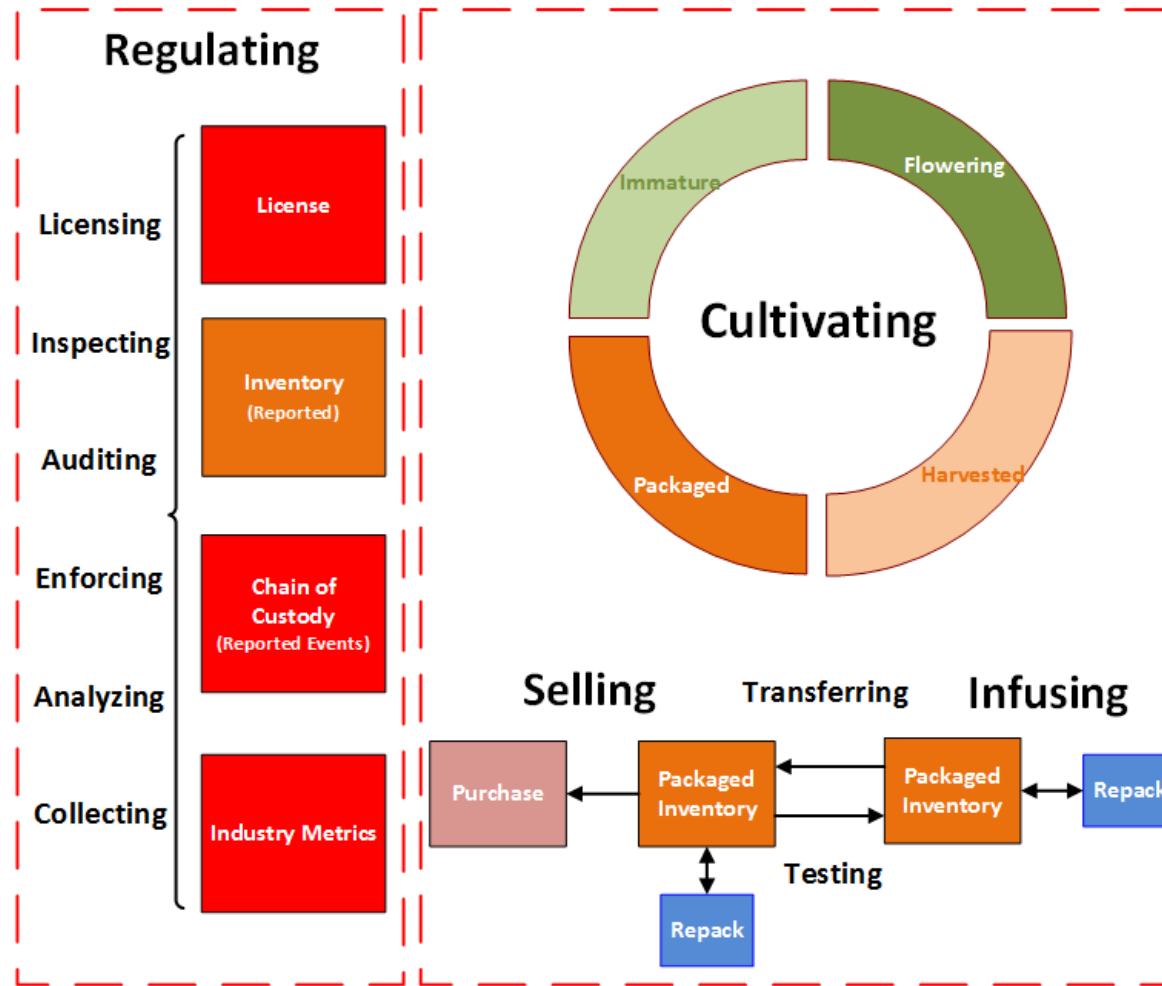


# How Metrc is Built

- Private dedicated hardware
- Secure on-line access
- Real-time with data backup and failover



# How Metrc is Organized



- “Immature plant” or “immature” means a cannabis plant that is not flowering.
- “Flowering” means that a cannabis plant has formed a mass of pistils measuring greater than one half inch wide at its widest point.



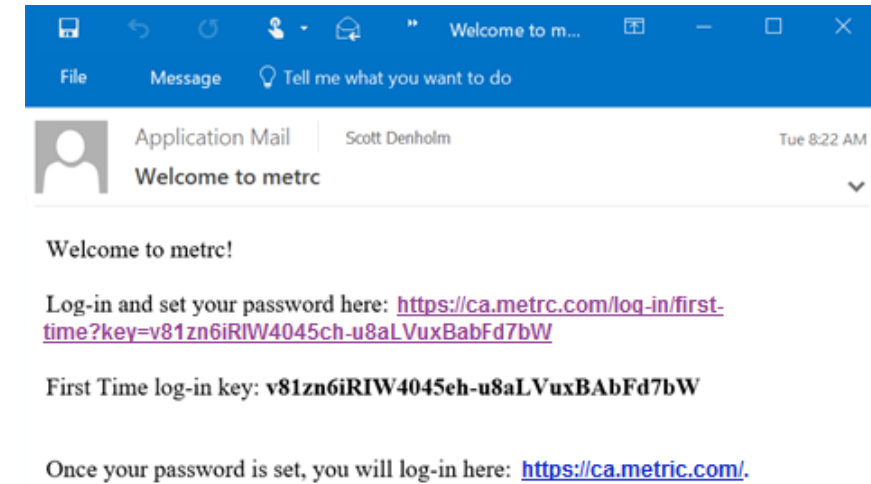




# Working with Metrc

# Obtaining User Access

- Submit your Annual license application and take the required training
- Obtain approval of Annual license
- Call or email Metrc Support to receive confirmation of Annual license and training completion
- Follow these steps to complete your login credentials upon receipt of welcome email:
  - Click on the first link in the "Welcome to Metrc" email. You will be directed to the website.
  - Accept State Attestation and Metrc Terms and Conditions
  - Setup a User Profile

A screenshot of the Metrc user profile setup form. The form is divided into 'Contact Info.' and 'Security Info.' sections. 'Contact Info.' includes fields for Full Name, Email, and Phone Number. 'Security Info.' includes fields for Username, Password, and Confirm Password. Below these is an 'Account Recovery' section with fields for Security Question and Security Answer, and a checkbox for 'View Security Answer'. At the bottom are 'Save Profile' and 'Undo Changes' buttons. A series of numbered blue circles (1-6) with lines pointing to specific fields indicate a sequence of steps: 1. Enter email address (points to Email), 2. Password (points to Password), 3. Enter Personal Security Question (points to Security Question), 4. View Security Answer (points to View Security Answer checkbox), 5. Occupational License Number - Badge Number (points to Phone Number), 6. Confirm password (points to Confirm Password). A legend at the bottom identifies the steps: 1. Enter Personal Security Question Answer, 2. View Security Answer, 3. Occupational License Number - Badge Number, 4. Save Profile button, 5. Undo Changes button, 6. Confirm password.

# Setup Business Profile

For each license (facility) add:

1. Employees
2. Strains
3. Items
4. Rooms (Cultivators Only)

California Regulations can be accessed at:

California Department of Food and Agriculture (CDFA):

<http://cannabis.cdfa.ca.gov/>

Cultivator licenses

Bureau of Cannabis Control (BCC): <http://www.bcc.ca.gov>

Distributor, Retailer, Testing Laboratory and Microbusiness licenses

California Department of Public Health (CDPH):

<https://www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/MCSB.aspx>

Manufacturing licenses

## Permissions for Each Type of License Facility

	Cultivator	Cultivator Processor Only	Distributor	Distributor Transporter Only	Manufacturer	Manufacturer Packager Only	Retailer	Testing Laboratory	Microbusiness
Plants	✓								✓
Packages	✓	✓	✓		✓	✓	✓	✓	✓
Packages - Remediation					✓	✓			✓
Packages - Test Product								✓	
Licensed Transfers	✓	✓	✓		✓	✓	✓	✓	✓
Transfers Hub			✓	✓				✓	✓
Sales							✓		✓
Admin	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reports	✓	✓	✓	✓	✓	✓	✓	✓	✓

# Setup Product Profile

## Categories

- Capsule/Tablet
- Concentrate (liquid)
- Concentrate (liquid each)
- Concentrate (solid)
- Concentrate (solid each)
- Edible
- Edible (each)
- Extract (liquid)
- Extract (liquid-each)
- Extract (solid)
- Extract (solid-each)
- Flower
- Fresh Cannabis Plant
- Immature Plant
- Kief
- Leaf
- Liquid
- Liquid (each)
- Pre-Roll Flower
- Pre-Roll Leaf
- Suppository (each)
- Tincture
- Tincture (each)
- Topical
- Topical (liquid)
- Topical (liquid-each)
- Topical (solid)
- Topical (solid-each)
- Vape Oil
- Vape Oil (each)

## Items

- Item names are used to identify what type of item is packed into a package.
- Category
- Type of product
- Quantity
- Unit of measure
- Used for traceability and recalls if necessary.



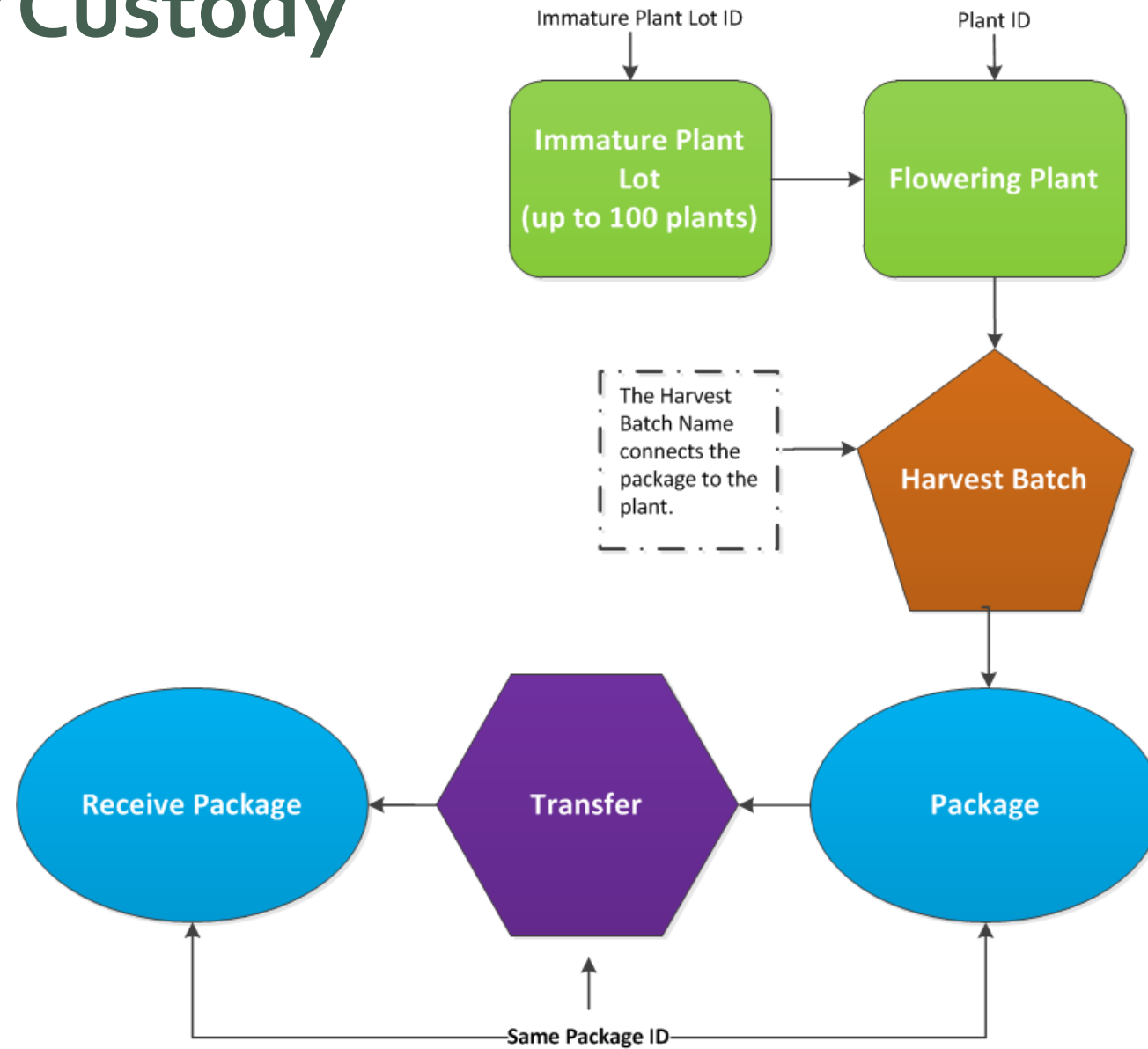
# Tags and Tracking

# Tagged Inventory in Metrc

- There are two types of tagged inventory in Metrc: Plants and Packages.
  - ✦ **Plants** are immature or flowering. All plants must enter the system through immature plant lots (up to 100 plants / lot).
    - ✦ Immature plant lots (up to 100 plants) are assigned a Unique Identifier Plant tag.
    - ✦ Each immature plant must be labelled with the lot Unique Identifier (UID).
    - ✦ Individual flowering plants are assigned a Plant tag.
  - 🛒 **Packages** are created from immature plants, harvest batches, testing lab samples, production batches, and other packages.
- Licensees order tags through Metrc (costs of tags are incorporated into the license fees).



# Chain of Custody



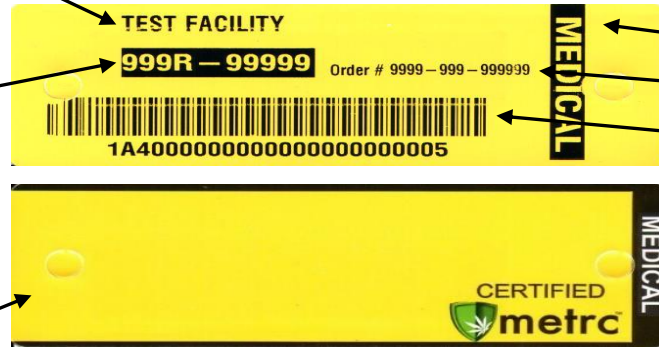
# Tag Explanation

# Plant

License  
(Facility) Name

License  
Number

Strain Name  
Can be written



- Identifier

## Order Information

- Unique Identification Number (UID)

Metrc Seal

# Package

- Peel and stick – adhesive backing.
- Package tag is used for transferring packages and tracking of finished product for each licensee in the chain of custody.
- The package tag is perforated with the “Package ID #” printed on the upper and lower sections. (example: can be used for jar labeling in order to identify associated package).





# Immature Plant Lot Tagging



- One UID (plant tag) is assigned to an Immature Plant Lot (up to 100 plants per lot).
- Each plant in the lot must be labelled with the corresponding UID.

# Tag Attached to Flowering Plant

- Plant Tags are assigned to individual plants when moved to canopy or when plant flowers
- Must be attached to main stem at the base of each plant using a tamper evident strap or zip tie
- Must be visible and within clear view



## Reminder

- “Immature plant” or “immature” means a cannabis plant that is not flowering.
- “Flowering” means that a cannabis plant has formed a mass of pistils measuring greater than one half inch wide at its widest point.



Plants

# Plant Tracking

**Each phase of plant life captured**

**Ability to replace tags, change rooms, record destroyed plants, record additives, record waste, and create plantings.**

**Each plant location captured**

**Each plant uniquely serialized**

**Complete event history**

**Plants**

Immature Inactive **Flowering** On Hold Inactive Additives Waste Harvested On Hold Inactive

Replace Tags Change Room Changes by Room Destroy Record Additives Record Waste Create Plantings Manicure Harvest

Tag	Strain	Room	Hold	Group Date	Phase Date
1A4FF0000000002000000133	9 Lb. Hammer	Flower Room 3	No	11/06/2017	11/19/2017

Description	Employee	Date	Reported
Planted	John Jones (Jones5...)	11/06/2017	11/06/2017 03:05 pm
Plant moved to room "Immature Room 3"	John Jones (Jones5...)	11/18/2017	11/19/2017 09:17 pm
Changed Growth Phase to Flowering	John Jones (Jones5...)	11/18/2017	11/19/2017 09:17 pm
Attached tag 1A4FF0000000002000000133	John Jones (Jones5...)	11/18/2017	11/19/2017 09:17 pm
Moved to room "Flower Room 3"	John Jones (Jones5...)	11/19/2017	11/19/2017 09:29 pm

Page 1 of 1 20 rows per page

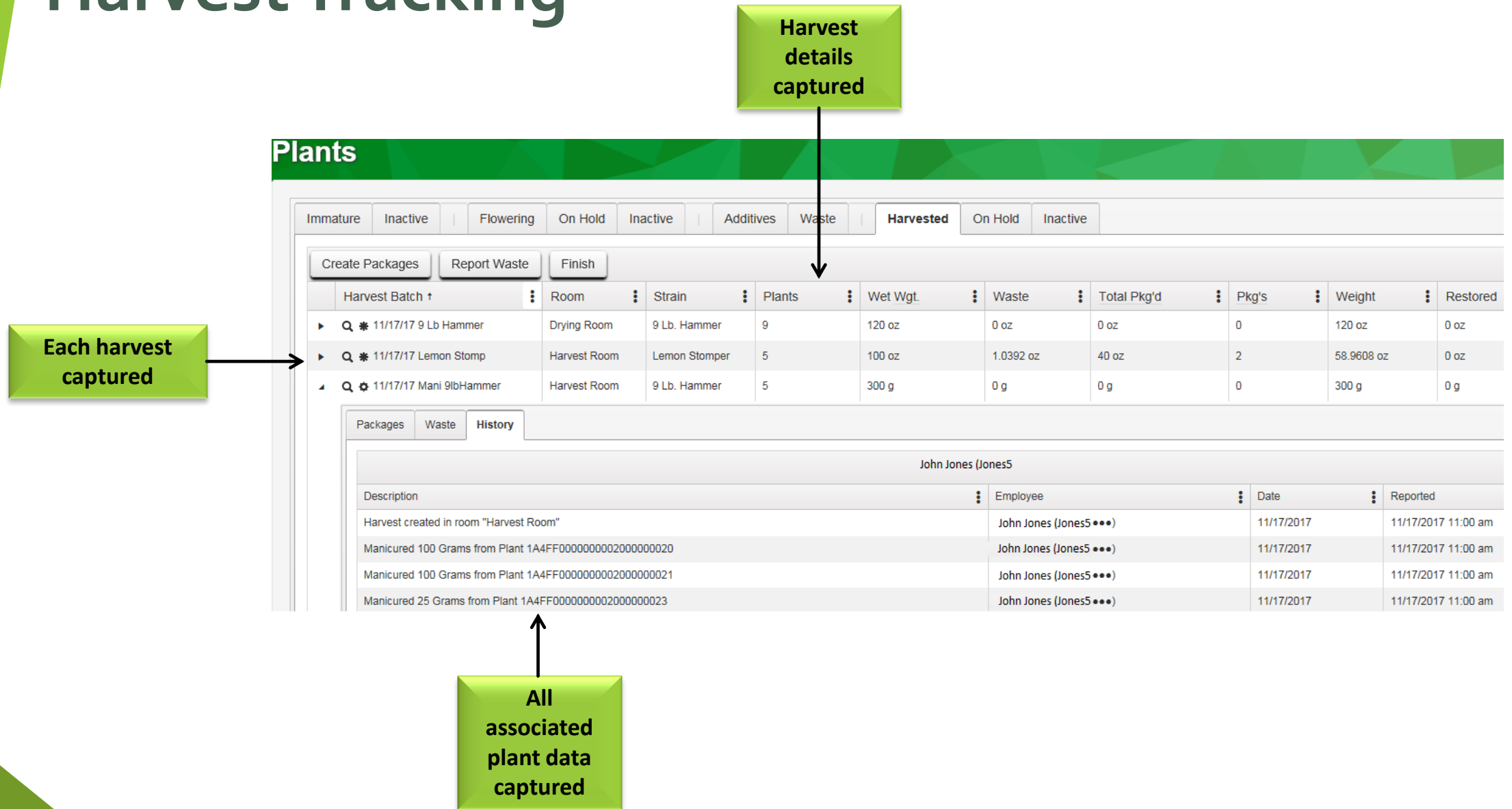
Page 1 of 1 20 rows per page

# Harvest Steps - Cultivator

- **Harvest Name** – Harvest name is required to be a unique name. Strain Name & Harvest Date is recommended best practice.
- **Weight** – the plant in its entirety after being cut from root ball (stems, stalk, flower, leaves, trim, etc.).
- **Waste** – can be multiple entries but must be reported within 3 days after it is created. Waste may include stems, stalk, flower, leaf, trim, etc.
- **Package** – package with unique identifier (flower, leaf, kief, fresh cannabis plant, or pre-rolls).
- **Finish** – when Harvest Batch (HB) is completely done (packages created and waste calculated), click 'Finish'. Any remaining weight associated to the HB is considered moisture loss. Harvest must be completed within 60 days.
- **Transfer** – must create transfer manifest to move product (by a Distributor) to a Processor or Manufacturer or to a Distributor for testing and quality assurance prior to retail sale.



# Harvest Tracking





Packages

# Packages in Metrc - Definition

- 🛍 Any amount of cannabis or cannabis product that may be sold, manufactured or transferred, must be placed into one or more packages, each package having a UID (package tag) created in Metrc.
- 🛍 Any product that you intend to transfer from one licensee to another must have a UID which must be physically attached to the package.
- 🛍 Metrc allows you to repack any package into a new package.





# Package Tracking

Each package  
uniquely serialized

All associated plant or  
product data captured

**Packages** Freedom Farms Cultivation | CML17-000001 California

Active On Hold Inactive

New Packages Submit for Testing Create Plantings Unpack Plants New Transfer Change Items Adjust Finish

Tag	Harvest	Item	Category	Quantity	P.B.	P.B. No.	Lab Testing	A.H.	Date	Rcv'd
1A4FF0100000020000000025		Afghan Haze Trim	Leaf	11 g	No		NotSubmitted	No	11/17/2017	
<div>DescriptionEmployeeDateReportedSourcesExternal App</div> <div>Packaged 11 Grams of Afghan Haze Trim from another PackageJohn Jones (Jones5●●●)11/17/201711/17/2017 02:20 pmUser</div> <div>- Took 11 Grams of Afghan Haze Trim from Package 1A4FF0100000020000000022John Jones (Jones5●●●)11/17/201711/17/2017 02:20 pmUser</div>										
Page 1 of 1 20 rows per page Viewing 1 - 2 (2 total)										
1A4FF0100000020000000012		Immature Pineapple Express	Immature Plant	5 ea	No		NotRequired	No	11/14/2017	
1A4FF0100000020000000010		Immature Pineapple Express	Immature Plant	5 ea	No		NotSubmitted	No	11/13/2017	
1A4FF0100000020000000005		Immature Pineapple Express	Immature Plant	0 ea	No		NotSubmitted	No	11/09/2017	11/09/2017
1A4FF0100000020000000009		Immature Pineapple Express	Immature Plant	12 ea	No		NotSubmitted	No	11/08/2017	
Page 1 of 1 20 rows per page Viewing 1 - 5 (5 total)										

Complete package  
status & history



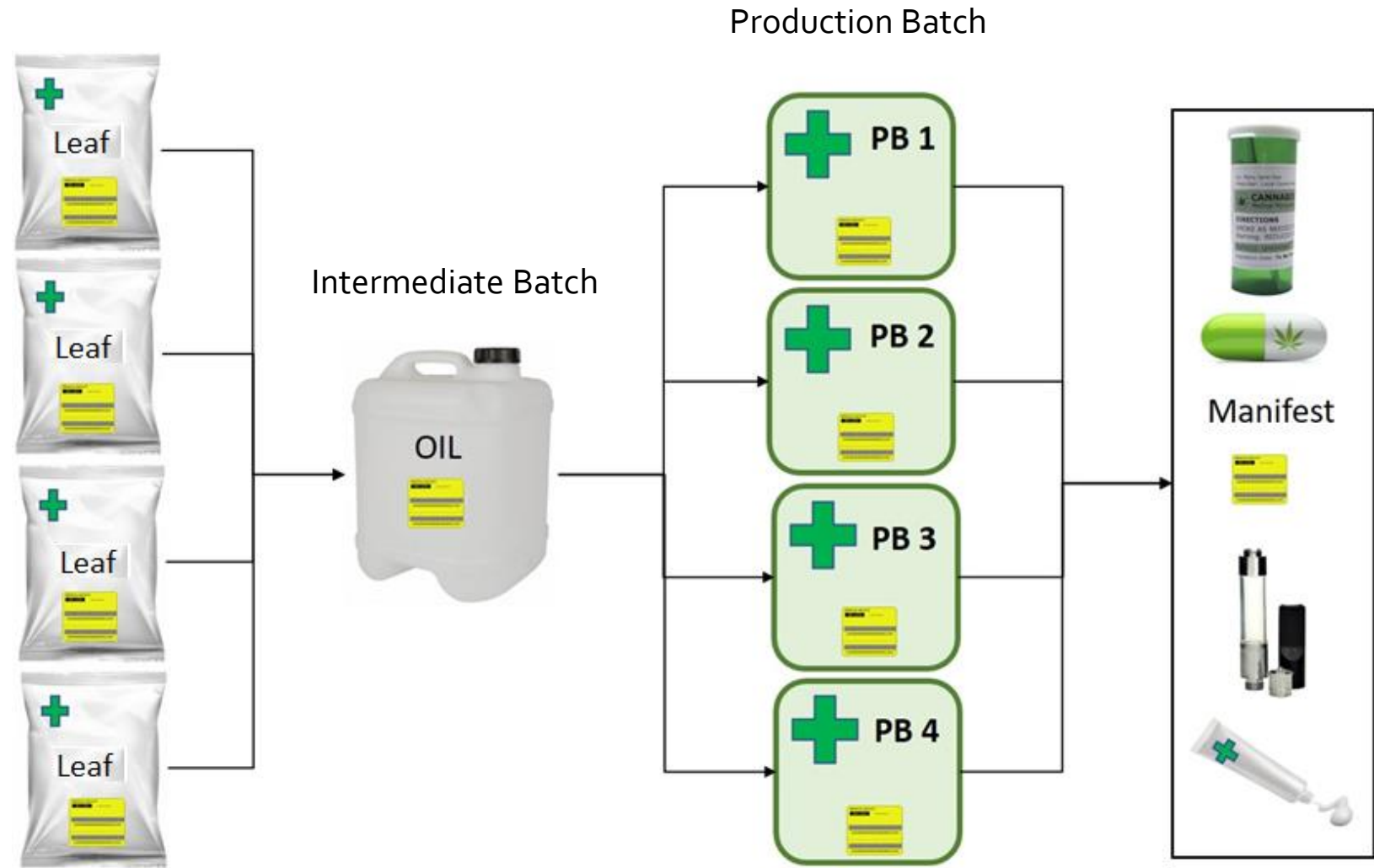
Manufacturing

# Packages, Intermediate Batches and Production Batches

- Incoming packages can be used in an intermediate batch such as making **concentrate**.
  - Pull from existing packages to make an intermediate batch of **concentrate**.
  - Create a new package for the **concentrate**.
  - The newly packaged **concentrate** may then be partially used in a production batch to make an infused product such as an Infused Edible or Infused Non-Edible or another Concentrate.



# Manufactured Product Process





# Transfers

# Transfers

- A transfer must be created anytime a package moves from one licensed facility to another (even on same property).
- A transfer can be rejected by package or wholly reject all packages.
- A rejected package will require the originating Licensee to receive the rejected package back into inventory.
- You can only transport packages if you have a Distributor license or a Laboratory with samples.
- Transporters are required to record actual departure and arrival times in Metrc.

**New Licensed Transfer**

Destination 1: Type part of the License Number [Q] [clear]

Planned Route: [Text Area]

Type: [Select] [v]

Est. Departure: 11/22/2017 today  
10:42 AM

Est. Arrival: 11/22/2017 today  
10:42 AM

Transport # 1: Type part of the License Number [Q] [clear]

[LookUp] [v] [LookUp] [v] [Layover] [checkbox]

Employee ID: [Text Field] Vehicle Make: [Text Field]

Driver's Name: [Text Field] Vehicle Model: [Text Field]

Driver's Lic. No.: [Text Field] License Plate: [Text Field]

Phone No.: 831-728-9772 [use default]

Package # 1: Type part of Package number [Q] [clear]

[LookUp] [v]

[Register Transfer] [Cancel]

**metrc®** **METRC® CANNABIS TRANSPORTATION MANIFEST**

All sales transactions are to be completed prior to transportation of any cannabis. The receiving entity may reject product delivered, but amount delivered must be limited to amount agreed upon in prior sales transaction.

Manifest #:	0000001101	Date Created:	11/17/2017 5:31 PM
Originating Entity:	Freedom Farms Cultivation	For Agency Use Only	
Originating License Number:	CML17-0000001		
Address of Originating Entity:	1702 Freedom Blvd Suite 25 Freedom, CA 95019		
Phone No. of Originating Entity:	831-728-9772		

Destination # 1:	Harvest Moon Manufacturer	Destination Phone No.:	530-987-6298
Destination License Number:	CDPH-0000003	Date and Approximate Time of Departure:	11/17/2017 5:23 PM
Address of Destination:	13500 Cement Hill Rd Nevada City, CA 95959	Actual Date/Time of Departure:	11/17/2017 5:34 PM
		Date and Approximate Time of Arrival:	11/17/2017 7:22 PM
		Actual Date/Time of Arrival:	11/17/2017 5:38 PM
Route to be Traveled:		Notes: details for estimating circumstances (e.g., road closure, flat tire, etc.)	
1233			

Transporter # 1:	Cannabis Connection Distributor	Non-Inventor	
Transporter License Number:	A11-0000002		
Address of Transporter:	4260 MILLPORT WAY Sacramento, CA 95823		
Contact Phone No. for Inquiries:	831-728-9772		
Name of Person Transporting:	Skip McGee	Employee ID of Driver:	1234
State Driver's License No.:	B1234567	Signature of Person Transporting:	
Make, Model, License Plate No.:	Honda Civic 7ABCD123		

Package Label	Harvest Name	Item Name	Weight/Quantity
1A4FFD100000020000000022		Alghan Haze Trim (Loaf)	Shp: 14.0000 g Rev: 14.0000 g

**PRODUCT REJECTION (if only a portion of shipment is rejected, circle that portion above)**

Name of Person Receiving or Rejecting Product:

I confirm that the contents of this shipment match weight records entered above, and I agree to take custody of those portions of this shipment not circled above. Those portions circled were returned to the individual delivering this shipment.

Signature: [Text Field] Date: [Text Field]

Signature of individual taking receipt of rejected portion of this shipment: [Text Field]

# Transfer Tracking

Transfer manifest created, and monitored by the system

Licensed Transporter and estimated and actual departure and arrival times

Manifest package details

**Licensed Transfers** Cannabis Sales | M10-000004-LIC California

New Transfer View Manifest

Incoming Outgoing Rejected

Manifest	Origin	Type	Pkg's	ETD	ETA	Received
0000001201	CML17-0000001 Cannabis Farms	Transfer	4	01/03/2018 11:42 am	01/03/2018 12:42 pm	

Transporter

Transporter	ETA	ATA	ETD	ATD
M13-0000010-LIC Cannabis Transport				

Page 1 of 1 20 rows per page Viewing 1 - 1 (1 total)

Package	Harvest	Item	Category	Shipped Qty.	Gross Wgt.	Ship Whsle. Price	Received Qty.	Rcv. Whsle. Price	Status
1A4FF0100000022000000025		Immature Strawberry	Immature Plant	5 ea		N/A		N/A	Shipped
1A4FF0100000022000000026		Immature Girl Scout	Immature Plant	10 ea		N/A		N/A	Shipped
1A4FF0100000022000000027		Immature FOG	Immature Plant	20 ea		N/A		N/A	Shipped
1A4FF0100000022000000028		Immature Shark	Immature Plant	25 ea		N/A		N/A	Shipped

Page 1 of 1 20 rows per page Viewing 1 - 4 (4 total)

# Notes to Remember about Transfers

- A package must exist in order for it to be selected for transfer. Transfers are real-time inventory-dependent.
- If you receive a package that doesn't match the weight, volume or count on the manifest (but varies only slightly) you must adjust the package in your inventory to report the actual, adjusted weight, volume or count.
- If you have any question at all about the transfer; then you need to reject it.







# Transfer Procedures – Annual vs. Temporary Licenses

# Transfers Involving Temporary Licensees

- After completing required training, an approved Annual licensee will be credentialed into Metrc and report supply chain activities (Metrc Enabled).
- Temporary licensees will not be provided access to Metrc to report supply chain activities (non-Metrc Enabled).
- Transfers between temporary and Annual licensees require some manual paper process.
  - The paper process is also required for transfers between two temporary licensees.



# Manual Manifest Transfer Process

If the **originating** licensee is a Metrc enabled Annual licensee and the destination entity is a temporary licensee:

- ✦ The originating licensee creates an external manifest in Metrc by manually entering the temporary licensee information on the external transfer manifest.
- ✦ The Distributor keeps the manifest during transport, and documents the departure and arrival information.
- ✦ The destination licensee receives the transfer and follows the paper process prescribed by the Licensing Authority.

# Manual Manifest Transfer Process

If the **destination** licensee is a Metrc enabled annual licensee and the sending entity is a temporary licensee:

- ✦ The originating temporary licensee creates a paper transfer document (per the paper process prescribed by the Licensing Authority) that contains the required package details.
- ✦ The Distributor keeps the paper transfer document during transport, and documents the departure and arrival information.
- ✦ The destination licensee enters the paper transfer document details and assigns a package tag UID from Metrc using the external transfer function.






# Distributors

# Lab Test Results

**Record Tests**


**Test Package # 1** (clear)


Package  1A4FF03000000260000000004 


Result Date  01/03/2018 today

Test Batch - Select -


**Mini-template**


Status ☐ Passed ☐ Failed 


**Result # 1** Escherichia coli. (pass/fail) 

Test Result ex. 100.2345 


Status ☐ Passed ☐ Failed


Notes Additional notes... 

**Result # 2** Salmonella spp. (pass/fail) 

Test Result 0.0001 

Status ☐ Passed ☐ Failed

Notes Additional notes... 

 (results)

**Record Tests** **Cancel**

**Test Result Tracking** →

**Selecting a Test Batch Adds One or More Tests** →

**Test Results recorded by Quantity and Status.** →

**Notes can also be recorded.** →

- Select -
- Cannabinoids
- Category I Residual Pesticides (required)
- Category I Residual Solvent or Processing Chemicals
- Category II Residual Pesticides
- Category II Residual Solvents and Processing Chemicals
- Foreign Materials (optional)
- Heavy Metals (optional)
- Homogeneity (edibles)
- Microbiological Impurities (Aspergillus)
- Microbiological Impurities (required)**
- Moisture Content and Water Activity
- Mycotoxins (optional)
- Terpenoids (optional)



Retail Sales

# Sales

- Recording of Sales in Metrc is “reporting last event in chain of custody” and are entered **by transaction** per California requirements
  - Total quantity
  - Unit of Measure
  - Date and time
  - Total dollars of the sale
- Transactions must be entered within 24 hours
- There is sales data import functionality currently with POS companies
  - CSV File upload





# Sales Reporting

## Sales Receipts

Record Receipts

Edit Receipts

Import

Daily Sales (read-only)

Receipt

Sales

Customer Type

Patient

Record Receipts

×

Sales Receipt # 1

(clear)

Sale Date/Time

10/30/2017

today

02

:

46

PM

Customer

☐ Consumer

☐ Patient

Package # 1

ABCDEF012345670000025183

⌕

(clear)

Available 6.9251 oz

Quantity ex. 100.23 - Select -

Total Price \$ ex. 100.23

+

(package)

+

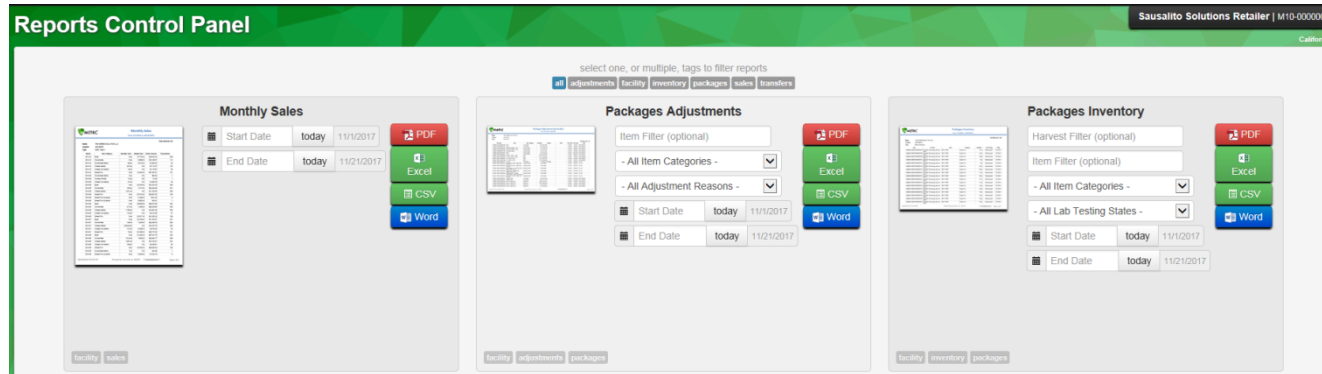
Record Sales Receipts

Cancel



# Reports

# Reports

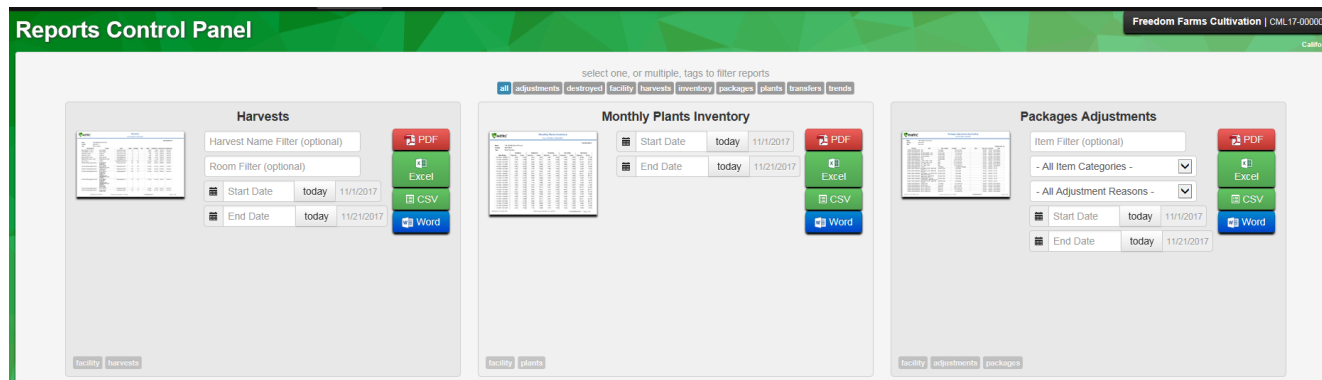


Sales

Cultivation

Transfer

Package



Reports  
configured with  
trend analysis

Exportable to  
MS Word, MS  
Excel, CSV and  
PDF formats



# RFID, What & Why

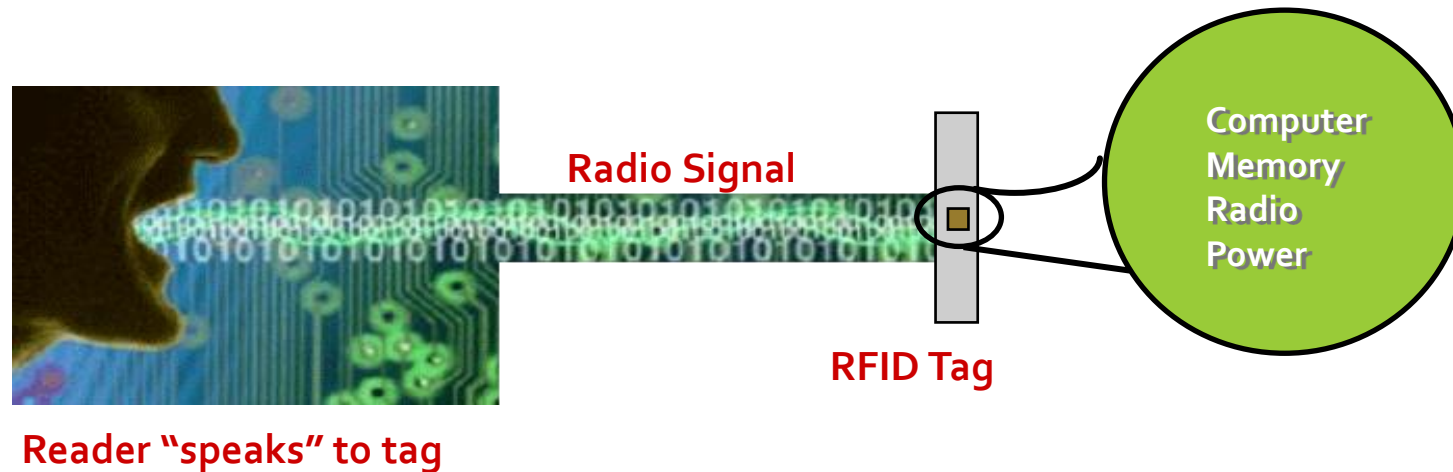


# Speed / Accuracy / Precision



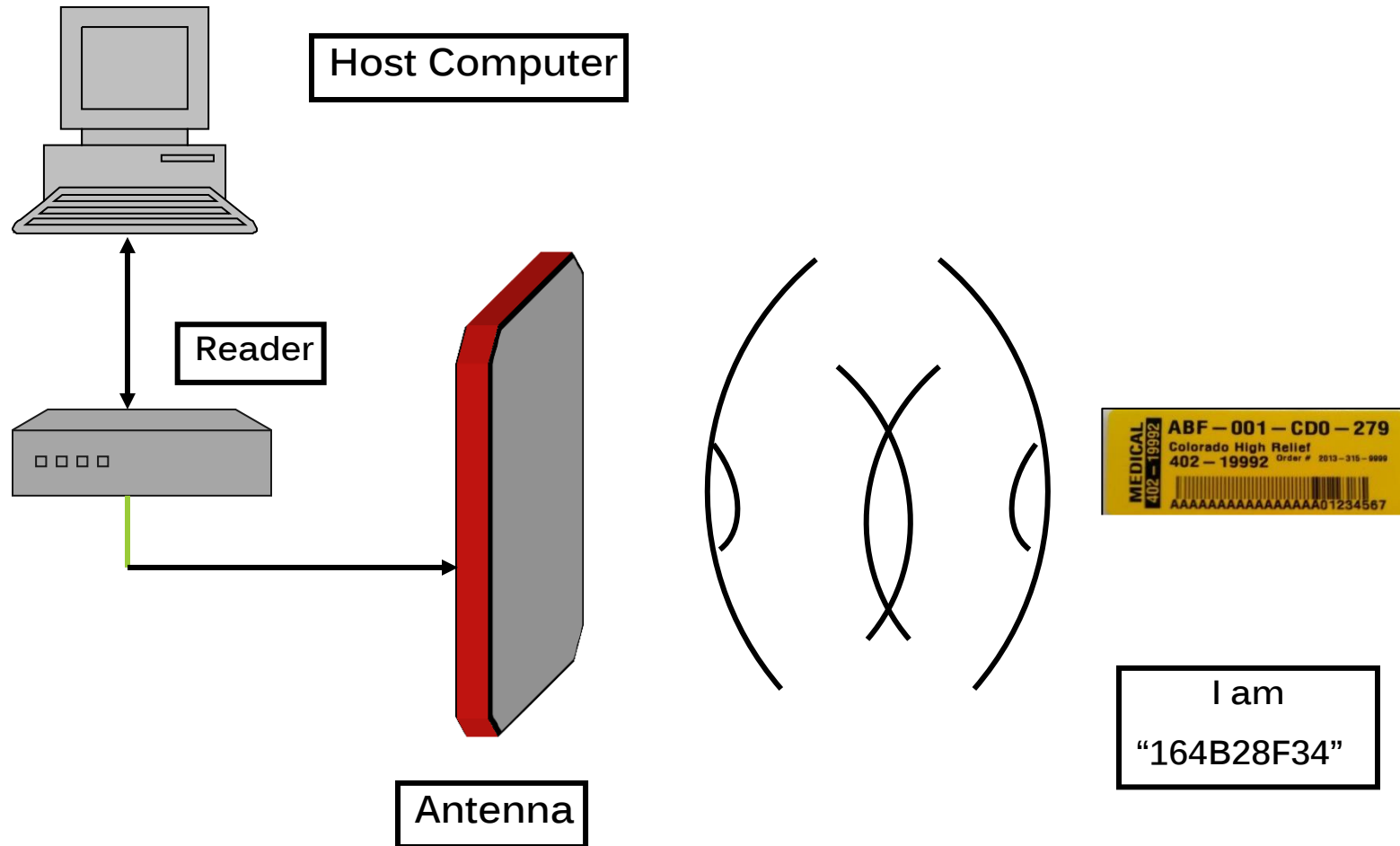
# What is RFID?

- Radio Frequency Identification
  - A technology that identifies objects using low-power radio frequency technology.
- RFID Solutions consist of three components:
  - Hardware (Reader and Antenna)
  - RFID Tag
  - Software



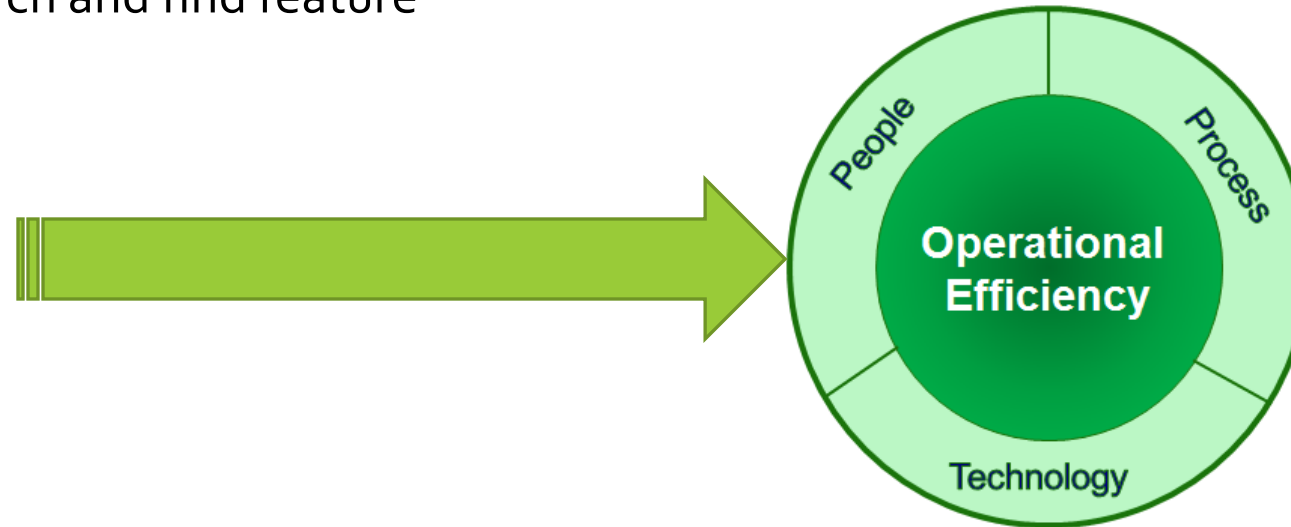


# How Passive RFID Works



# Why RFID?

- Read Range – 10+ Feet
- No line of sight
- Speed 8 to 10 times faster than bar-code
  - Improved Accuracy
  - Faster compliance
  - Search and find feature







# Integration

# Application Programming Interface

- The API supports data transfer FROM third party vendor (TPV) applications to METRC
- Not all aspects of Metrc are available in the API
- The API supports data transfer TO TPV from METRC
- CA POS / API Integration training will begin on January 24<sup>th</sup>.





Support

# Support Resources

## California Licensing Authorities

- California Department of Food and Agriculture (CDFA): [cannabis.cdfa.ca.gov](http://cannabis.cdfa.ca.gov)
  - Cultivator licenses
- Bureau of Cannabis Control (BCC): [www.bcc.ca.gov](http://www.bcc.ca.gov)
  - Distributor, Retailer, Testing Laboratory and Microbusiness licenses
- California Department of Public Health (CDPH): [www.cdph.ca.gov/mcsb](http://www.cdph.ca.gov/mcsb)
  - Manufacturing licenses

## Support Tab

- Metrc Manual/User Guide
- State Supplemental Guide
- Training
- **Interactive Support**
- E-mail
  - [Support@metrc.com](mailto:Support@metrc.com)
  - Metrc support line - 877-566-6506





### Contact Information

**Support Desk**

877-566-6506

Support@metrc.com

**[www.metrc.com/california](http://www.metrc.com/california)**