



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



Natalie M. LaPrade
Maryland Medical Cannabis Commission



Introduction to Metric

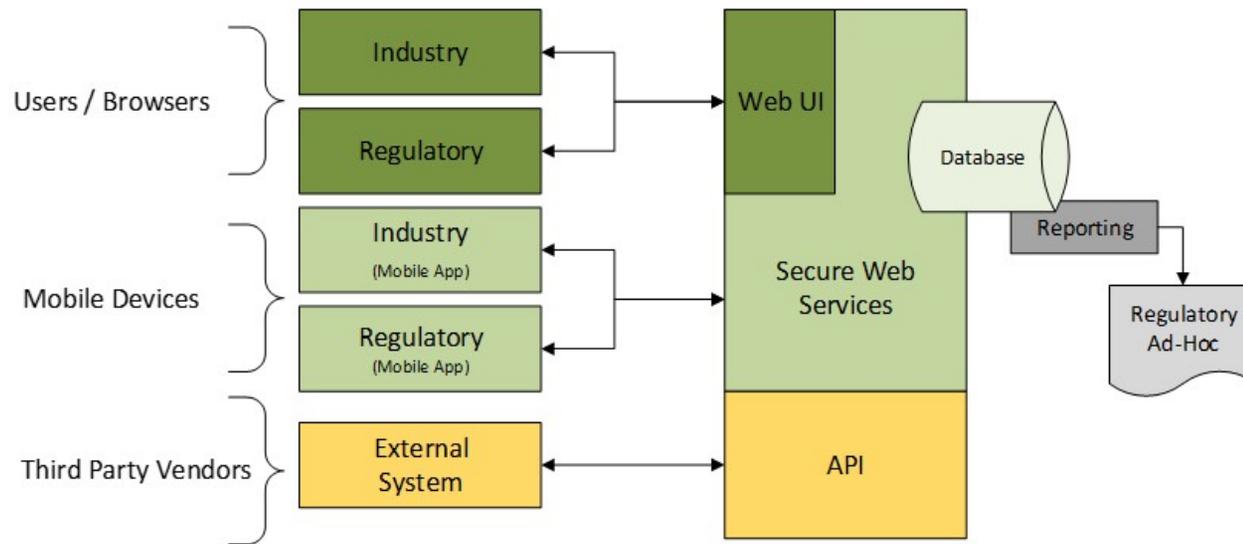
Scope

- 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)



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

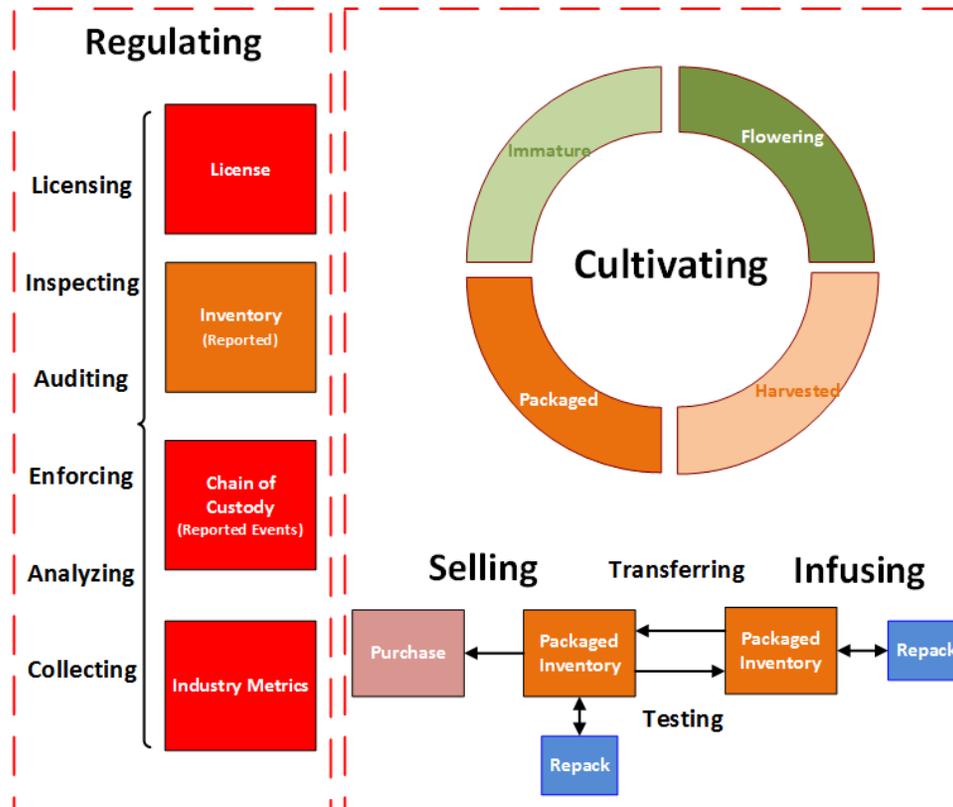


How Metrc is Built

- 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.

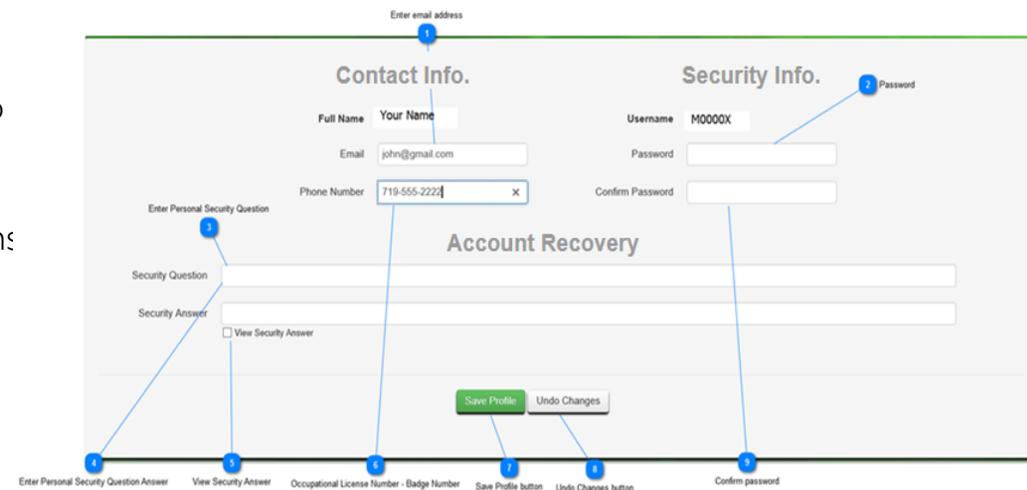
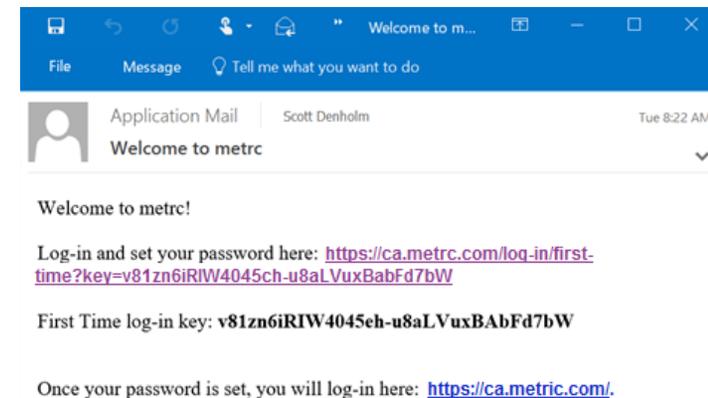




Working with Metrc

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



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.



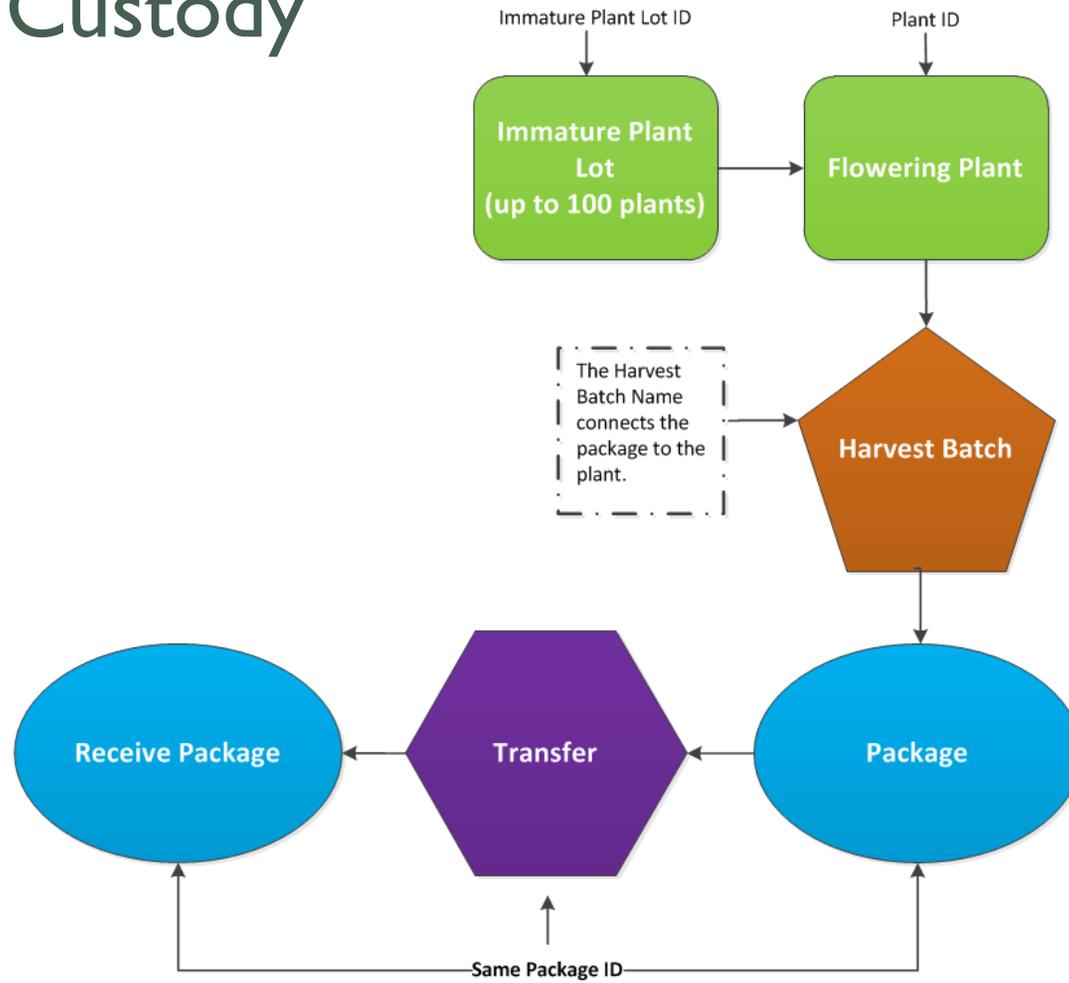
Tags and Tracking

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



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

Harvest Steps - Cultivator

- **Harvest Name** – Harvest name is required to be 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

Each harvest captured

Harvest details captured

Plants

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

Create Packages Report Waste Finish

Harvest Batch +	Room	Strain	Plants	Wet Wgt.	Waste	Total Pkg'd	Pkg's	Weight	Restored
▶ 11/17/17 9 Lb Hammer	Drying Room	9 Lb. Hammer	9	120 oz	0 oz	0 oz	0	120 oz	0 oz
▶ 11/17/17 Lemon Stomp	Harvest Room	Lemon Stomper	5	100 oz	1.0392 oz	40 oz	2	58.9608 oz	0 oz
▶ 11/17/17 Mani 9lbHammer	Harvest Room	9 Lb. Hammer	5	300 g	0 g	0 g	0	300 g	0 g

Packages Waste **History**

John Jones (Jones5)

Description	Employee	Date	Reported
Harvest created in room "Harvest Room"	John Jones (Jones5 ●●●)	11/17/2017	11/17/2017 11:00 am
Manicured 100 Grams from Plant 1A4FF0000000020000000020	John Jones (Jones5 ●●●)	11/17/2017	11/17/2017 11:00 am
Manicured 100 Grams from Plant 1A4FF0000000020000000021	John Jones (Jones5 ●●●)	11/17/2017	11/17/2017 11:00 am
Manicured 25 Grams from Plant 1A4FF0000000020000000023	John Jones (Jones5 ●●●)	11/17/2017	11/17/2017 11:00 am

All associated plant data captured



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

Complete package status & history

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	Rcvd
1A4FFD10000002000000025		Afghan Haze Trim	Leaf	11 g	No		NotSubmitted	No	11/17/2017	
Description		Employee	Date	Reported	Sources	External App				
Packaged 11 Grams of Afghan Haze Trim from another Package		John Jones (Jones5***)	11/17/2017	11/17/2017 02:20 pm	User					
- Took 11 Grams of Afghan Haze Trim from Package 1A4FFD10000002000000022		John Jones (Jones5***)	11/17/2017	11/17/2017 02:20 pm	User					
Page 1 of 1 20 rows per page Viewing 1 - 2 (2 total)										
1A4FFD10000002000000012		Immature Pineapple Express	Immature Plant	5 ea	No		NotRequired	No	11/14/2017	
1A4FFD10000002000000010		Immature Pineapple Express	Immature Plant	5 ea	No		NotSubmitted	No	11/13/2017	
1A4FFD10000002000000005		Immature Pineapple Express	Immature Plant	0 ea	No		NotSubmitted	No	11/09/2017	11/09/2017
1A4FFD10000002000000009		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)										



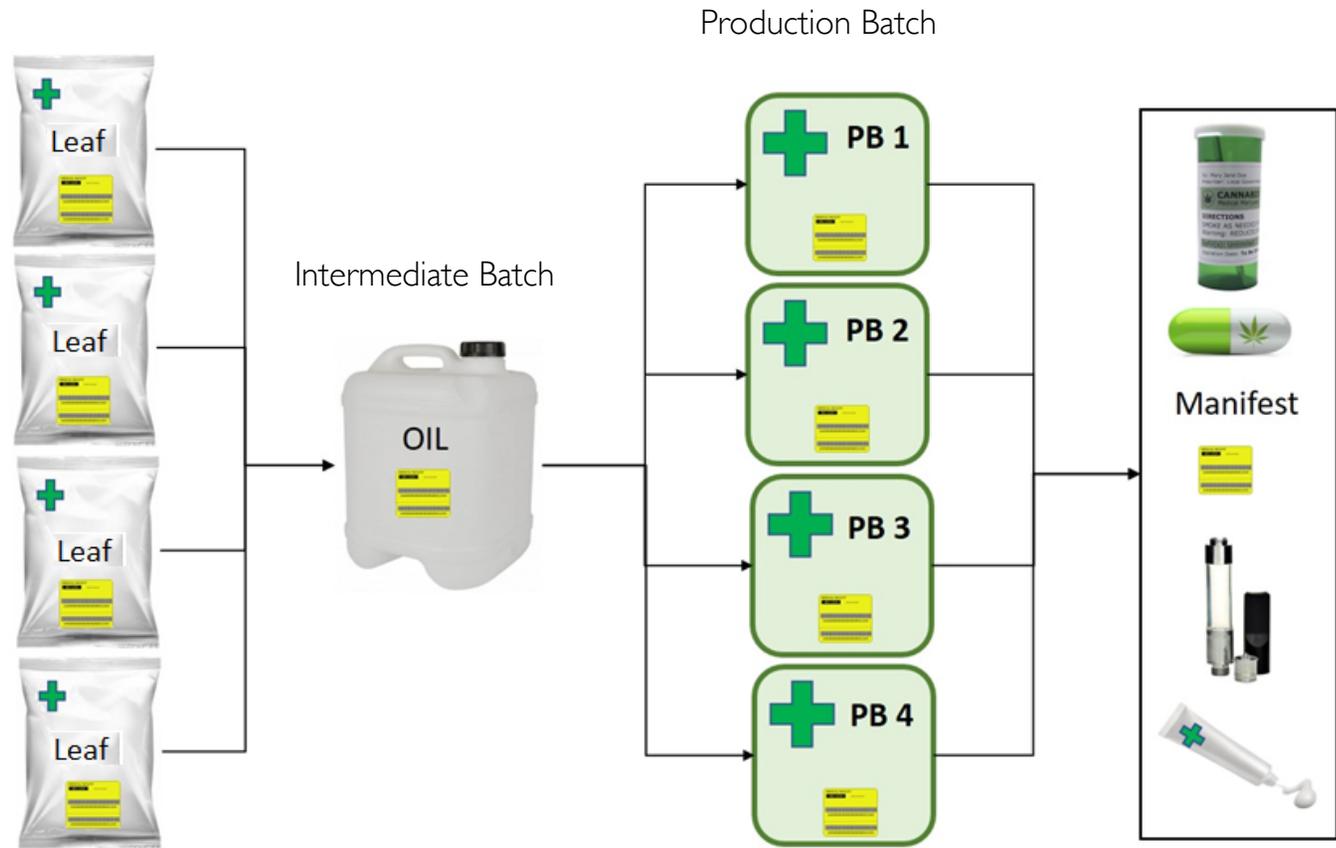
Manufacturing

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 [input] [lookup]

Planned Route: [input]

Type: - Select -

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 [input] [lookup] Layover

- Lookup -

Employee ID: [input]

Driver's Name: [input]

Driver's Lic. No.: [input]

Phone No.: 831-728-9772 (Use default)

- Lookup -

Vehicle Make: [input]

Vehicle Model: [input]

License Plate: [input]

Package # 1: Type part of Package number [input] [lookup]

Package # 2: [input] [lookup]

Destination: [input]

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 20 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
		Date/Time Received:	11/17/2017 5:43 PM
Roads to be Traveled:	1233	Notes: details for extenuating circumstances (e.g., road closures, flat tire, etc.)	

Transporter # 1:	Cannabis Connection Distributor	Non-Layover	
Transporter License Number:	A11-0000002		
Address of Transporter:	4200 MILLPORT WAY Sacramento, CA 95823		
Contact Phone No. for Inquiries:	831-728-9772		
Name of Person Transporting:	Skp McClie	Employee ID of Driver:	1234
Date Driver's License No.:	01234567	Signature of Person Transporting:	
Make, Model, License Plate No.:	Honda Civic 7ABC123		

Package Label	Harvest Name	Item Name	Weight/Quantity
14AFF0100000000000000002		Alghan Haze Trim (Lb)	Shp: 14.0000 g Rec: 14.0000 g

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

Name of Person Receiving or Rejecting Product: [input]

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: [input] Date: [input]

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

Transfer Tracking

Transfer manifest created, and monitored by the system

Licensed Transporter and estimated and actual departure and arrival times

Manifest package details

The screenshot displays the 'Licensed Transfers' interface. At the top, there are buttons for 'New Transfer' and 'View Manifest'. Below this, there are tabs for 'Incoming', 'Outgoing', and 'Rejected'. The main content area shows a manifest entry with the following details:

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	

Below the manifest, there is a section for the transporter:

Transporter	ETA	ATA	ETD	ATD
M13-000010-LIC Cannabis Transport				

The bottom section shows a list of packages with the following columns: Package, Harvest, Item, Category, Shipped Qty., Gross Wgt., Ship Whsle. Price, Received Qty., Rcv. Whsle. Price, and Status.

Package	Harvest	Item	Category	Shipped Qty.	Gross Wgt.	Ship Whsle. Price	Received Qty.	Rcv. Whsle. Price	Status
1A4FFD100000022000000025		Immature Strawberry	Immature Plant	5 ea		N/A		N/A	Shipped
1A4FFD100000022000000026		Immature Girl Scout	Immature Plant	10 ea		N/A		N/A	Shipped
1A4FFD100000022000000027		Immature FOG	Immature Plant	20 ea		N/A		N/A	Shipped
1A4FFD100000022000000028		Immature Shark	Immature Plant	25 ea		N/A		N/A	Shipped

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.



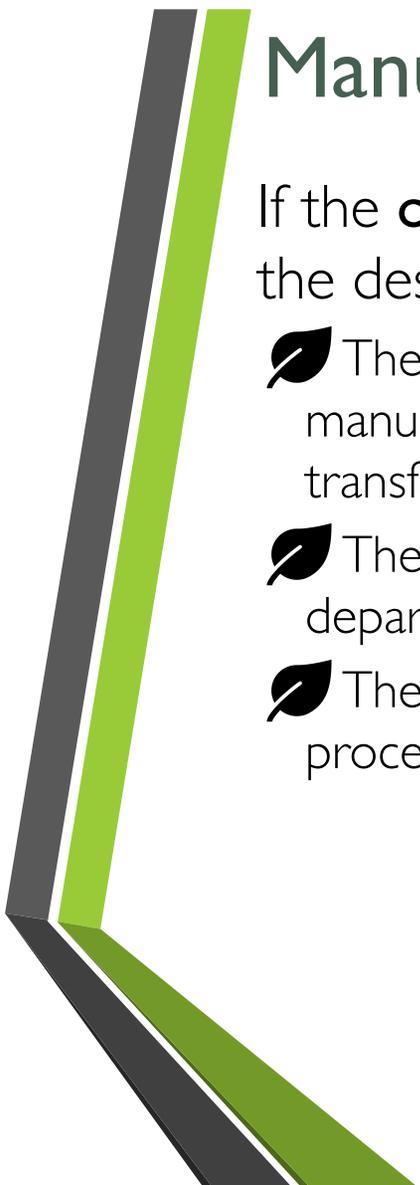


Transfer Procedures – Annual vs. Temporary Licenses

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.

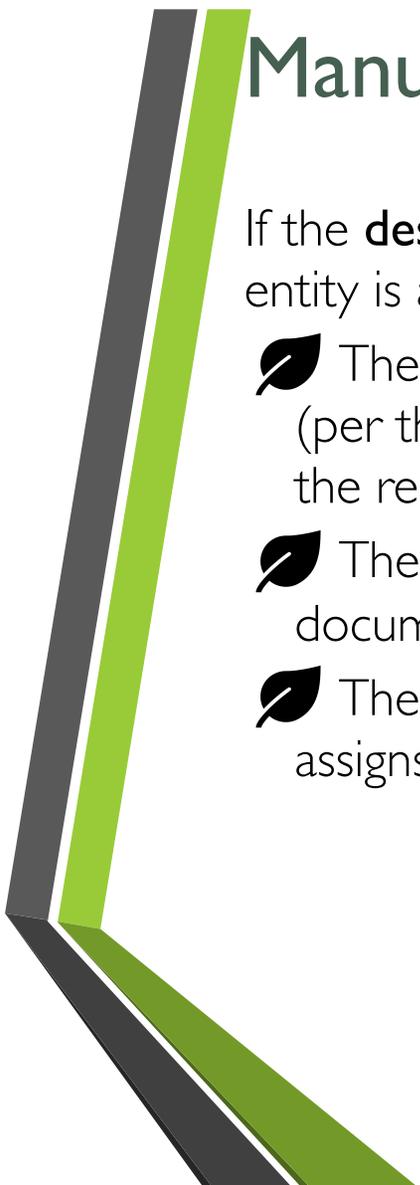




Manual Manifest Transfer Process

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

Distributors



Only Distributors can transport packages



Testing Laboratories can transport packages of samples



Important role in maintaining Chain of Custody during transport

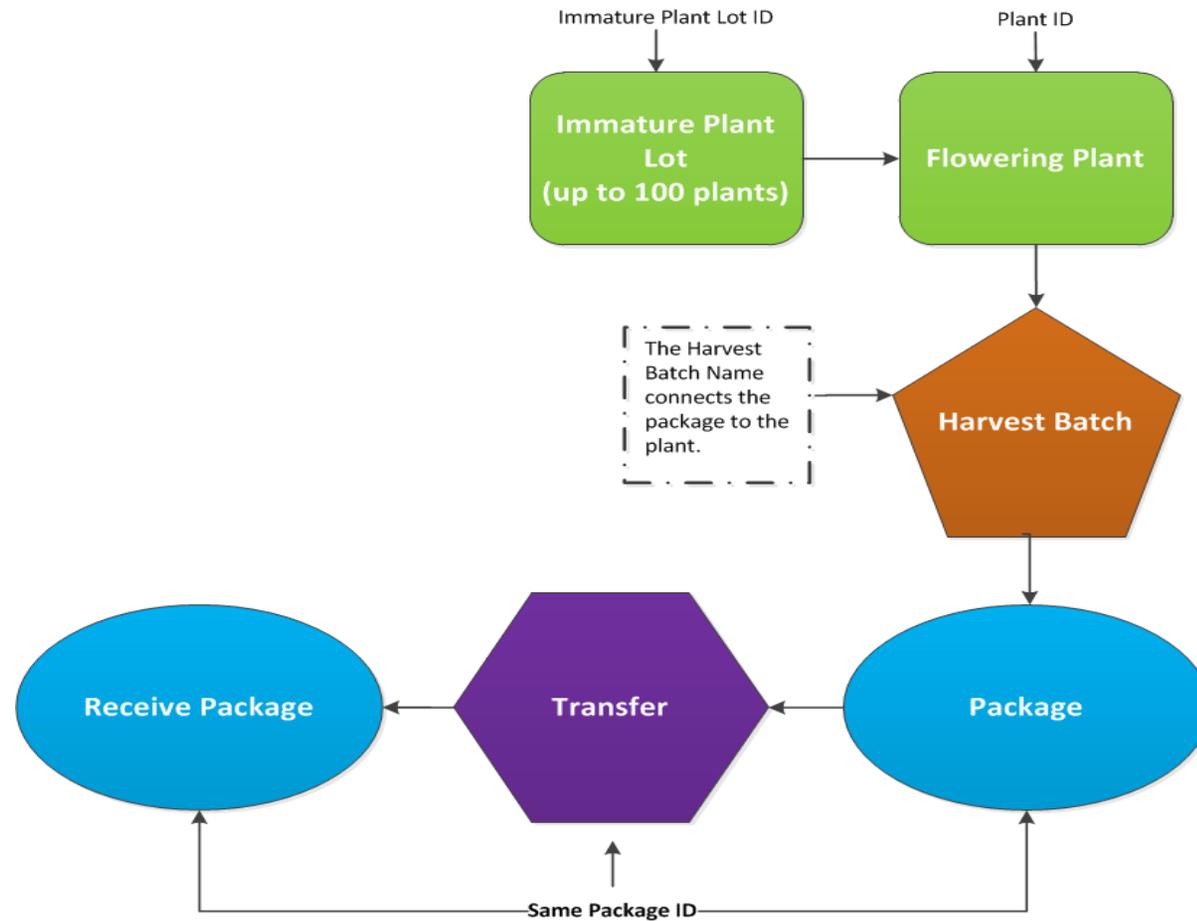


Responsible for submitting samples of final product for testing prior to transferring to Retailer



Distributors are required record actual departure and arrival times at destinations and layover stops in Metrc

Chain of Custody





Laboratory Testing

Lab Test Results

The screenshot shows the 'Record Tests' window for 'Test Package # 1'. It includes a search bar for the Package ID (1A4FF0300000026000000004), a date selector for the Result Date (01/03/2018), and a dropdown for the Test Batch. A 'Mini-template' section shows the Status set to 'Passed'. Two test results are listed: 'Escherichia coli. (pass/fail)' with a quantity of 'ex. 100.2345' and 'Salmonella spp. (pass/fail)' with a quantity of '0.0001'. Both have 'Passed' status and 'Additional notes...' fields. Callouts explain that 'Test Result Tracking' points to the Package ID, 'Selecting a Test Batch Adds One or More Tests' points to the Test Batch dropdown, and 'Test Results recorded by Quantity and Status' and 'Notes can also be recorded.' point to the quantity/status and notes fields respectively.

Test Result Tracking

Test Package # 1

Package 1A4FF0300000026000000004

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

Selecting a Test Batch Adds One or More Tests

Test Results recorded by Quantity and Status.

Notes can also be recorded.



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) Quantity: ex. 100.23 - Select -
Available: 6.9251 oz Total Price: \$ ex. 100.23

(+) (package)

(+)

Record Sales Receipts Cancel



Reports

Reports

Reports Control Panel Saussato Solutions Retailer | M10-000004

select one, or multiple, tags to filter reports
adjustments facility inventory packages sales transfers

- Monthly Sales**
 - Start Date: today 11/9/2017
 - End Date: today 11/21/2017
 - Export: PDF, Excel, CSV, Word
- Packages Adjustments**
 - Item Filter (optional)
 - All Item Categories -
 - All Adjustment Reasons -
 - Start Date: today 11/1/2017
 - End Date: today 11/21/2017
 - Export: PDF, Excel, CSV, Word
- Packages Inventory**
 - Harvest Filter (optional)
 - Item Filter (optional)
 - All Item Categories -
 - All Lab Testing States -
 - Start Date: today 11/1/2017
 - End Date: today 11/21/2017
 - Export: PDF, Excel, CSV, Word

Reports Control Panel Freedom Farms Cultivation | CHL17-000001

select one, or multiple, tags to filter reports
adjustments destroyed facility harvests inventory packages plants transfers trends

- Harvests**
 - Harvest Name Filter (optional)
 - Room Filter (optional)
 - Start Date: today 11/9/2017
 - End Date: today 11/21/2017
 - Export: PDF, Excel, CSV, Word
- Monthly Plants Inventory**
 - Start Date: today 11/1/2017
 - End Date: today 11/21/2017
 - Export: PDF, Excel, CSV, Word
- Packages Adjustments**
 - Item Filter (optional)
 - All Item Categories -
 - All Adjustment Reasons -
 - Start Date: today 11/1/2017
 - End Date: today 11/21/2017
 - Export: PDF, Excel, CSV, Word

Sales

Cultivation

Transfer

Package

Reports configured with trend analysis

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



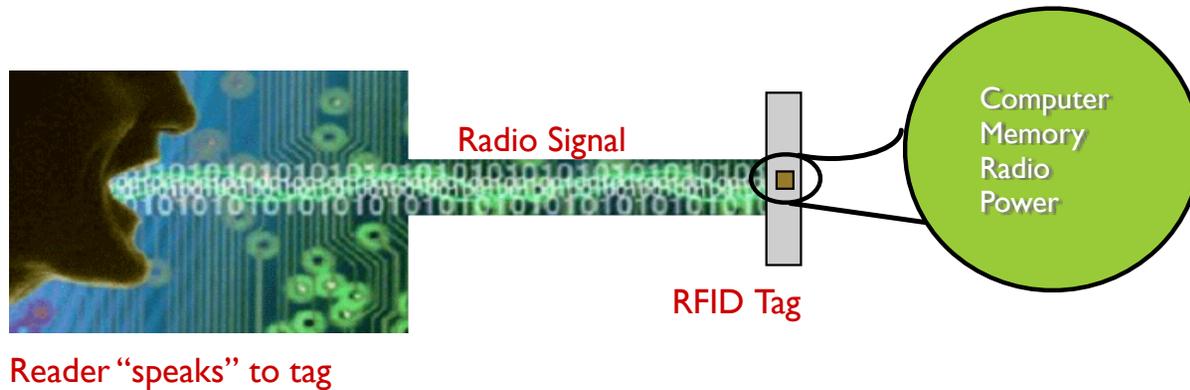
RFID, What & Why

Speed / Accuracy / Precision

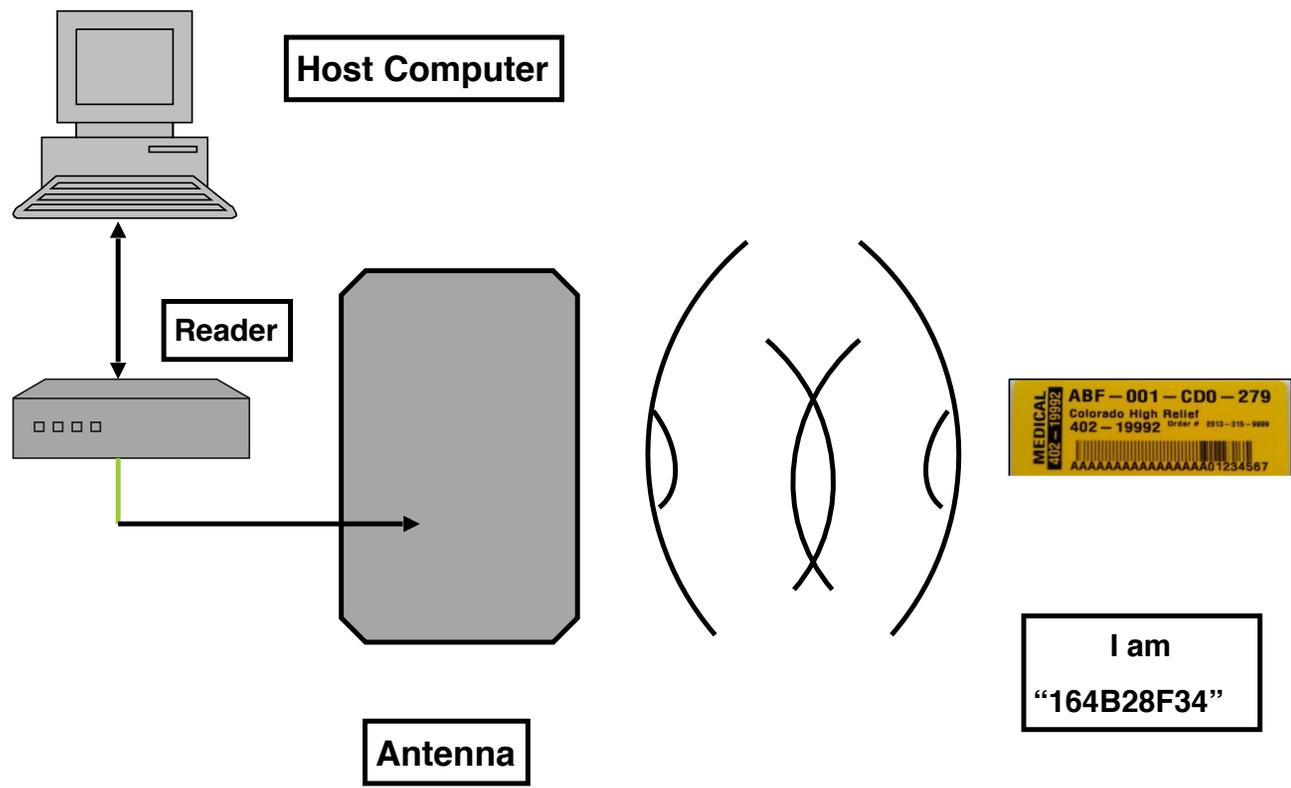


What is RFID?

- 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

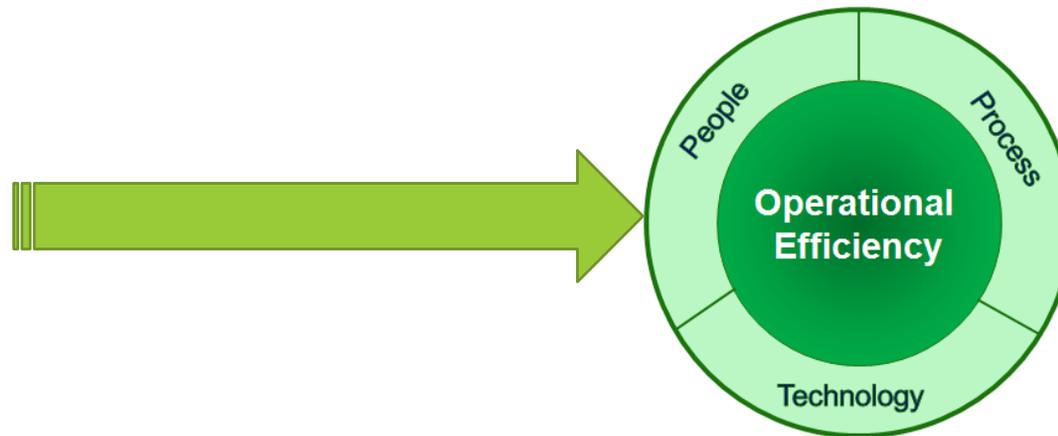


How Passive RFID Works



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 24th.





Support

Support Resources

California Licensing Authorities

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

Support Tab

- Metrc Manual/User Guide
- State Supplemental Guide
- Training
- **Interactive Support**
- E-mail
 - Support@metrc.com
 - Metrc support line - 877-566-6506

YouTube





Contact Information

Support Desk

877-566-6506

Support@metrc.com

www.metrc.com/california