



Welcome to Metrc

Agenda

- Introduction
- Who is Franwell
- What is Metrc
- How does Metrc work
- Security and information
- Why RFID
 - How does it work
- Integration with other software
- Training and support

www.metrc.com/massachusetts



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.)
- In-house
 - Low and high level software design & engineering
 - Digital/hardware design & engineering
 - Solution architecting
 - Help & Support
 - Franwell is the parent company of Metrc



Metric Focus

- Over **50,000** Industry users enrolled
- Over **250** State users
- Over **68,000** patients
- Over **5,200** licensees registered
- Over **12,000,000** plants commissioned
- Over **9,000,000** packages tracked
- Over **1,500,000** travel manifests processed
- Over **4,500,000,000** dollars transacted

Up-Time better than 99.9%





What is Metrc?

Scope

- Metrc™ is a compliance management solution used by regulatory bodies for the oversight of the marijuana industry.
- Metrc is a cloud hosted on-line software reporting system used by licensed marijuana businesses to manage and report supply chain activities as required by state rules.



Different System / Different Applications

Regulatory Tracking – Compliance with rules, regulations and statutes. Used to monitor and track compliance and product for public safety.

Regulatory

Materials Resource Planning – Business Management Software used for production planning, scheduling, and inventory control.

MRP

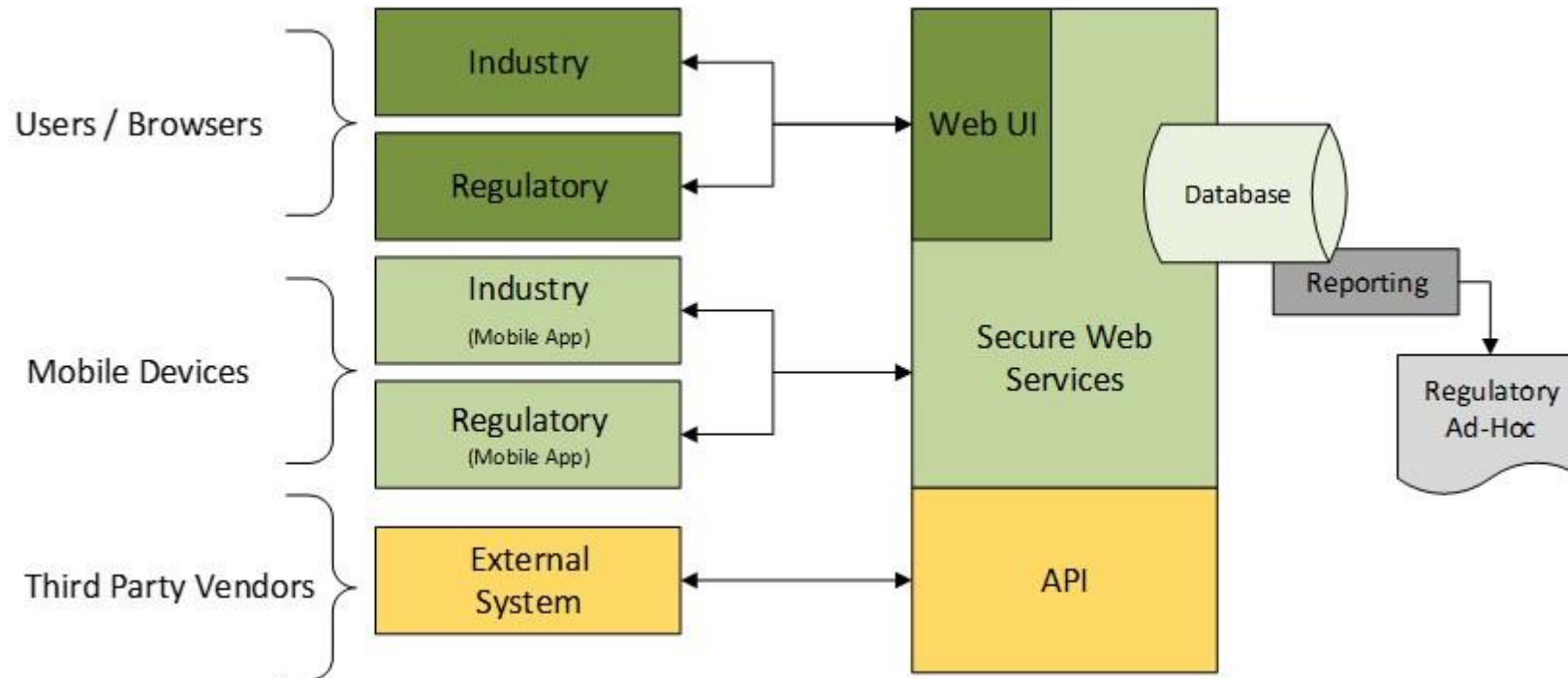
Enterprise resource planning - Business Management software used for the integrated management of core business processes, Production, Inventory, Shipping, Finance

ERP

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

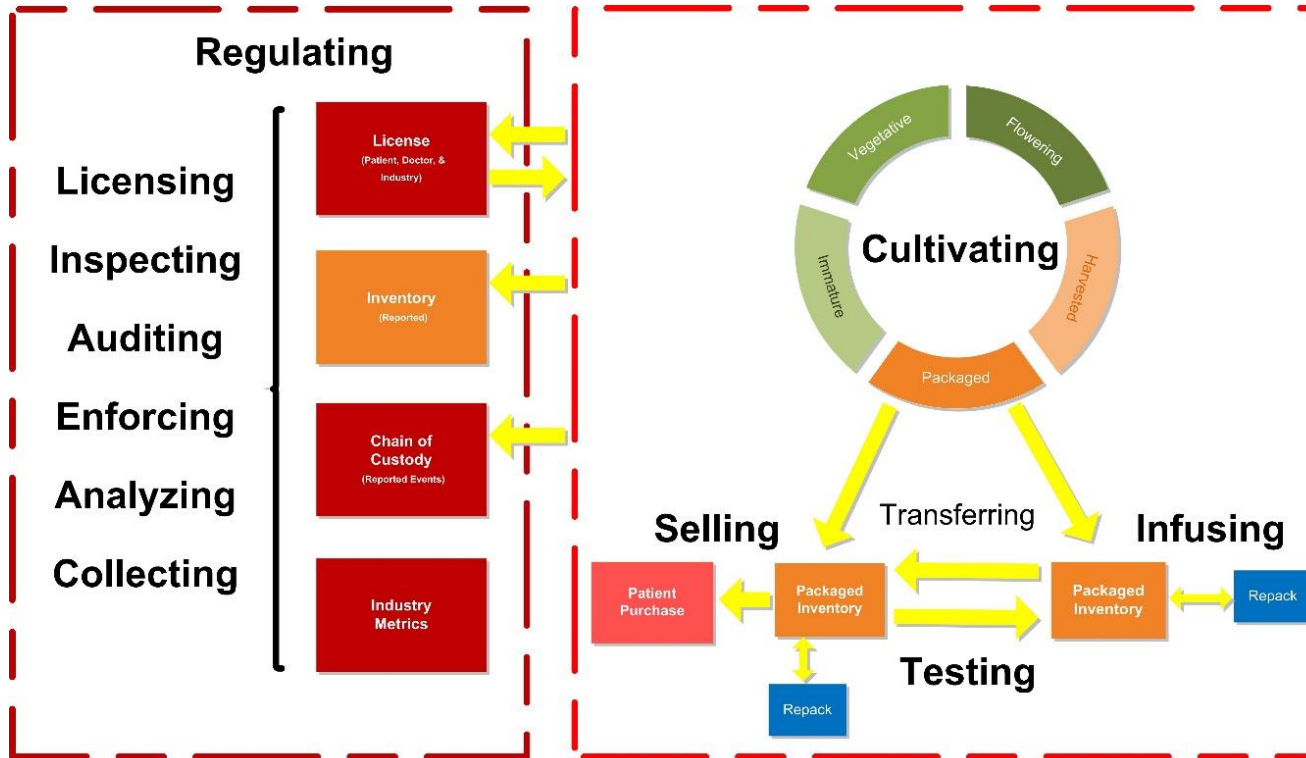
- Private dedicated hardware
- Secure on-line access
- Real-time with data backup and failover





How Does Metrc Work

How Metrc is Organized



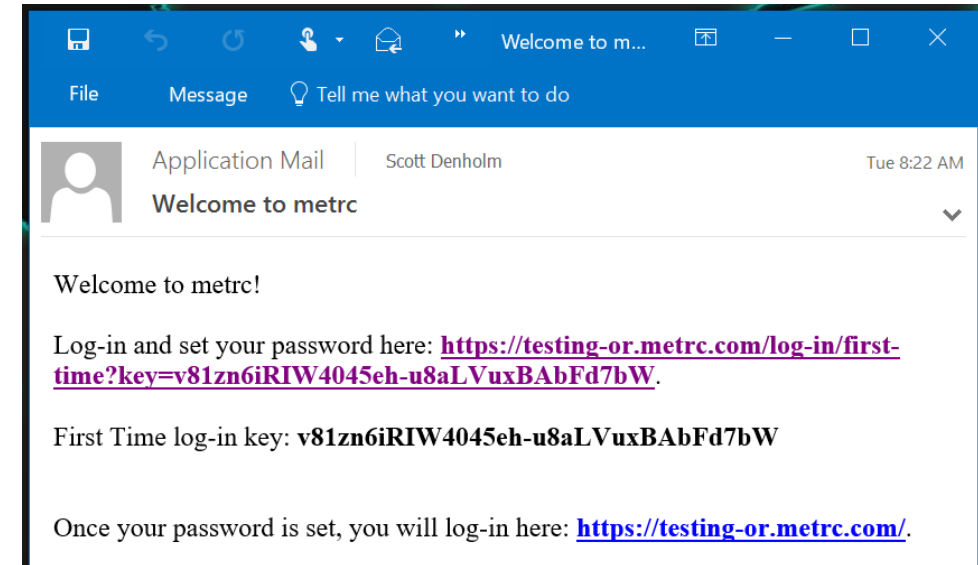
Government
Agencies



Industry

Setup Personal Profile

- After you have received your license
- First time credentialing
- "Welcome to metrc" email,
- Follow these steps to complete your login credentials:
- Click on the first link. You will be directed to the website.
- Setup a user Profile

A screenshot of a web form titled 'Personal & Security Info.' with a 'Password Recovery' section below it. The form contains several input fields and buttons. Numbered blue circles (1-9) are placed around the form with lines pointing to specific elements. 1 points to the 'Enter email address' label. 2 points to the 'Password' field. 3 points to the 'Enter Personal Security Question' label. 4 points to the 'Enter Personal Security Question Answer' label. 5 points to the 'View Security Answer' label. 6 points to the 'Occupational License Number - Badge Number' label. 7 points to the 'Save Profile' button. 8 points to the 'Undo Changes' button. 9 points to the 'Confirm password' label. The form fields include: 'Full Name' (with placeholder 'Your Name'), 'Email' (with placeholder 'john@gmail.com'), 'Phone Number' (with placeholder '719-555-2222' and a clear button 'x'), 'Username' (with placeholder 'M0000X'), 'Password', 'Confirm Password', 'Security Question', 'Security Answer', and a checkbox for 'View Security Answer'. At the bottom are 'Save Profile' and 'Undo Changes' buttons.

Setup Business Profile

1. Receive Metrc Administrator credentials
2. Add facilities
3. For each facility add:
 - A. Employees
 - B. Strains
 - C. Items
 - D. Locations

Permissions for each type of facility

| | Marijuana Cultivator | Marijuana Product Manufacturer | Craft Marijuana Cooperative | Marijuana Microbusiness | Marijuana Transporter | Marijuana Retailer | Marijuana Research Facility | Independent Testing Laboratory |
|-----------|----------------------|--------------------------------|-----------------------------|-------------------------|-----------------------|--------------------|-----------------------------|--------------------------------|
| Plants | √ | | √ | √ | | | √ | |
| Packages | √ | √ | √ | √ | | √ | √ | √ |
| Transfers | √ | √ | √ | √ | √ | √ | √ | √ |
| Reports | √ | √ | √ | √ | | √ | √ | √ |
| Sales | | | | | | √ | | |

Setup Product Profile

Categories

- Buds
- Concentrate
- Concentrate (Each)
- Immature Plants
- Infused-Edible
- Infused Non-edible
- Kief
- Shake/Trim
- Shake Trim by Strain
- Seeds
- Waste

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.



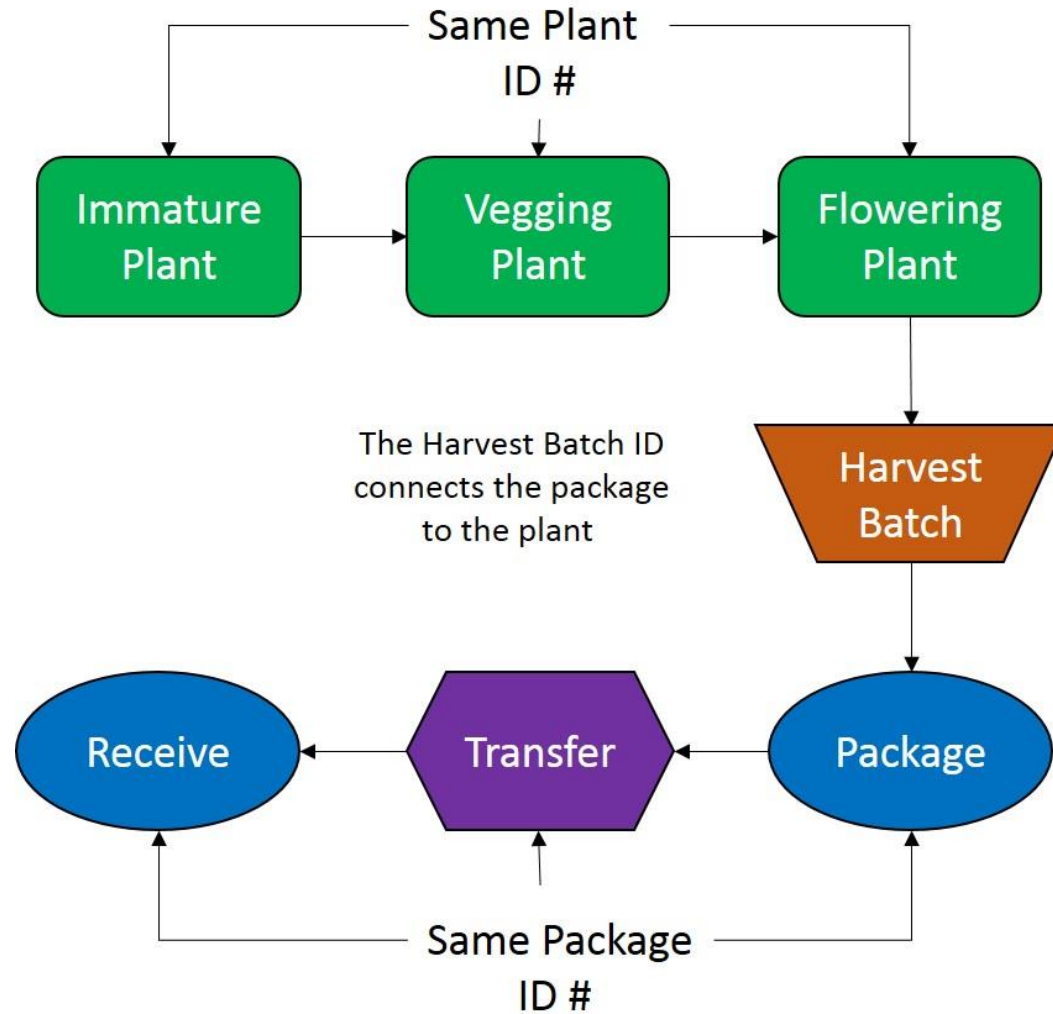


Tags and Tracking

Tagged Inventory in Metrc

- There are two types of tagged inventory in Metrc: **Plants and Packages**.
- **Plants** are immature, vegetative, or flowering. All plants must enter the system through immature plant batches. However, immature plants will be entered as un-tagged Planting Groups in Metrc.
- **Packages** are created from immature plants, harvest batches or other packages.





Plant

License Number

Facility Name



Identifier

Order Information

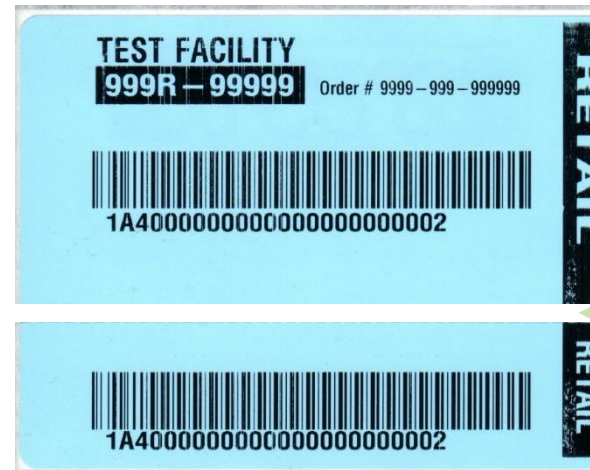
Identification Number

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).



Tag Attached to Larger Plant



Attachment to Small Plant



Point of strap used for inserting into small plant container



Strap inserted into growth media

Plant Tag Strap User Instructions



Notch

Multi-Use straps

When assembling the tag to a strap, move the tag up until the notch catches the label through the hole, so that the label will not slide down.



When hanging the tag, release one end of the label, then tie the strap around the plant.



Metric Plants

Plant Tracking

Each phase of
plant life
captured

Each plant
location captured

Ability to
Destroy Plants

Each plant
uniquely
serialized

Complete
event history

The screenshot shows a web application for plant tracking. At the top is a navigation bar with tabs: Plants, Packages, Transfers, Financials, Reports, and Admin. The 'Plants' tab is active. Below the navigation bar is a header for 'Plants' with a sub-header 'MMC CO Cultivation | 212-MMC'. A filter bar contains tabs: Immature, Vegetative, Flowering, On Hold, Inactive, Harvested, On Hold, and Inactive. Below the filter bar is a toolbar with buttons: Change Room, Change Growth Phase, Assign Tags, Replace Tag, Destroy Plants, Changes by Room, Manicure Plants, and Harvest Plants. The main content area is a table with columns: Tag, Strain, Room, On Hold, Batch Date, and Phase Date. The first row is selected, showing Tag: ABCDEF012345670000010711, Strain: AK-47, Room: Plants Room, On Hold: No, Batch Date: 06/20/2014, and Phase Date: 07/20/2014. Below this table is a detailed event history table with columns: Description, Employee, Date, and Reported. The event history table shows a sequence of actions performed on the selected plant, including planting, moving to the 'Plants Room', changing growth phases, and attaching tags. At the bottom of the interface is a pagination bar showing 'Page 1 of 1' and '20 items per page'.

| Tag | Strain | Room | On Hold | Batch Date | Phase Date |
|--------------------------|--------|-------------|---------|------------|------------|
| ABCDEF012345670000010711 | AK-47 | Plants Room | No | 06/20/2014 | 07/20/2014 |

| Description | Employee | Date | Reported |
|---------------------------------------|------------------------|------------|---------------------|
| Planted | SCOTT DENHOLM (X00086) | 06/20/2014 | 09/18/2014 01:10 am |
| Plant moved to room "Plants Room" | SCOTT DENHOLM (X00086) | 06/30/2014 | 09/18/2014 01:10 am |
| Changed Growth Phase to Vegetative | SCOTT DENHOLM (X00086) | 06/30/2014 | 09/18/2014 01:10 am |
| Attached tag ABCDEF012345670000010711 | SCOTT DENHOLM (X00086) | 06/30/2014 | 09/18/2014 01:10 am |
| Changed Growth Phase to Flowering | SCOTT DENHOLM (X00086) | 07/20/2014 | 09/18/2014 01:10 am |

Page 1 of 1 | 20 items per page | Viewing 1 - 5 (5 total)

Harvest Steps

- **Harvest** – Create harvest with associated plants
- **Weigh** – the plant in its entirety after being cut from root ball (stem, stalk, bud/flower, fan leaves, trim leaves, etc.)
- **Waste** – can be multiple entries but must be reported the day it is created
- **Package** – pack and tag product (buds, or shake/trim)
- **Transfer** – must create transfer manifest to move product to Testing Lab, Processors, Wholesalers etc.
- **Finish** – when Harvest Batch is completely gone



Harvest Tracking

Harvest details
captured

| Harvest Batch | Type | Room | Wet Weight | On Hold | Batch Date |
|---------------------------|----------|--------------|------------|---------|------------|
| 2014-07-30-Harvest Room-M | Manicure | Harvest Room | 40 oz | No | 07/30/2014 |
| 2014-07-30-Harvest Room-H | Harvest | Harvest Room | 40 oz | No | 07/30/2014 |
| GA Red Kush 9-22 | Harvest | Harvest Room | 316.8 g | No | 09/22/2014 |
| GA Red Kush 9-30 | Harvest | Harvest Room | 396.8 g | No | 09/30/2014 |
| GA Red Kush 10-1 | Manicure | Harvest Room | 40 oz | No | 10/01/2014 |
| GA Red Kush 10-2 | | | | | 10/02/2014 |
| Spring Hill Kush 10-10 | | | | | 10/10/2014 |

| Harvest created in room "Harvest Room" | Employee | Date | Reported |
|--------------------------------------------------------|------------------------|------------|---------------------|
| Manicured 1 Ounces from Plant ABCDEF012345670000010021 | SCOTT DENHOLM (X00086) | 07/30/2014 | 09/18/2014 01:10 am |
| Manicured 1 Ounces from Plant ABCDEF012345670000010022 | SCOTT DENHOLM (X00086) | 07/30/2014 | 09/18/2014 01:10 am |
| Manicured 1 Ounces from Plant ABCDEF012345670000010023 | SCOTT DENHOLM (X00086) | 07/30/2014 | 09/18/2014 01:10 am |
| Manicured 1 Ounces from Plant ABCDEF012345670000010024 | SCOTT DENHOLM (X00086) | 07/30/2014 | 09/18/2014 01:10 am |
| Manicured 1 Ounces from Plant ABCDEF012345670000010025 | SCOTT DENHOLM (X00086) | 07/30/2014 | 09/18/2014 01:10 am |

Each harvest
captured

All associated
plant data
captured



Packages

Packages - Definition

- Any amount of marijuana or infused product that may be sold, processed or transferred and must be placed into one or more containers, each having a unique tag created in Metrc.
- Any product intended for transfer must have a package tag.
- Metrc allows you to repack any package into a new package.



Package Tracking

Each package
uniquely serialized

Complete package
status & history

metrc

Plants

Packages

Transfers

Financials

Reports

Admin

Help & Support

X00086

MMC CO Cultivation

212-MMC

Packages

Active

On Hold

Inactive

New Packages

Submit for Testing

New Transfer

Adjust Packages

Finish Packages

| ID | Harvest | Item | Category | Quantity | Prod. Batch | Lab Testing | On Hold | Date | | |
|--------------------------------------------------------------------|---------------------------|------|----------|------------------------|-------------|--------------|---------------------|------------|-------------|-------------------------|
| ABCDEF012345670000010741 | 2014-07-30-Harvest Room-M | Buds | Buds | 1 oz | No | NotSubmitted | No | 08/09/2014 | Discontinue | |
| Description | | | | Employee | | Date | Reported | | | |
| Packaged 1 Ounces of Buds from Harvest "2014-07-30-Harvest Room-M" | | | | SCOTT DENHOLM (X00086) | | 08/09/2014 | 09/18/2014 01:10 am | | | |
| ⏪ ⏩ 1 Page 1 of 1 20 items per page | | | | | | | | | | Viewing 1 - 1 (1 total) |
| ABCDEF012345670000010742 | 2014-07-30-Harvest Room-H | Buds | Buds | 1 oz | No | NotSubmitted | No | 08/09/2014 | Discontinue | |
| ABCDEF012345670000010743 | 2014-07-30-Harvest Room-M | Buds | Buds | oz | No | NotSubmitted | No | 08/09/2014 | Discontinue | |

All associated
plant data
captured



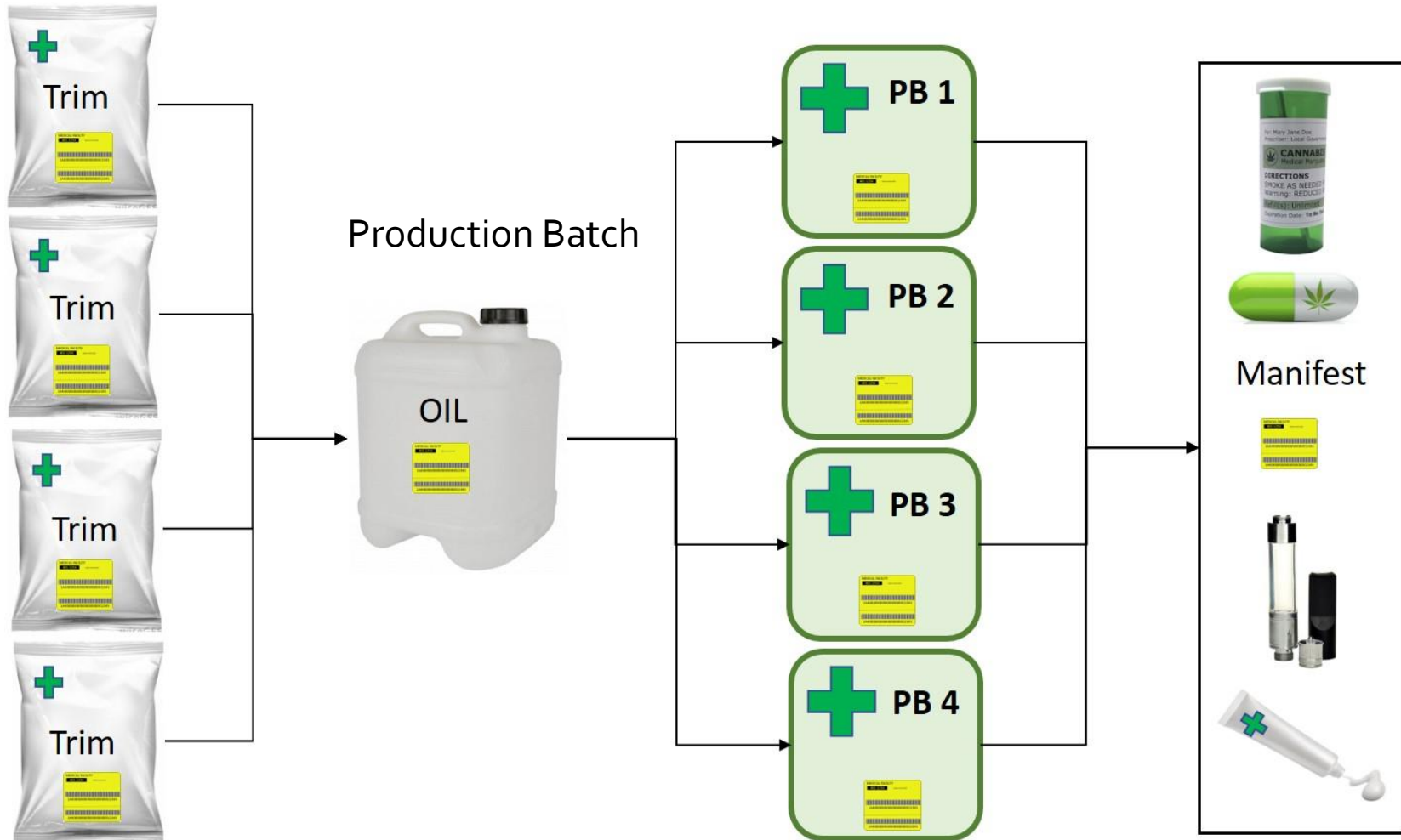
Product Manufacturers

Packages & Intermediate Processes

- For in-coming packages used in an intermediate process such as making **concentrate**.
 - Pull from existing packages and create a new package for the **concentrate**.
 - The new packaged **concentrate** may then be partially used in an infused product such as an Infused Edible or Infused Non-Edible or another Concentrate.



Edible/Non-Edible Process



6/28/2018



Transfers

Transfers

- A transfer must be created anytime a package moves from one physical location or licensed facility to another.
- A transfer can be rejected by package or completely.
- A rejected package will require the originating Licensee receive the package back into their custody.

New Transfer

Scooter (X00086) Ford Mustang 123 gofast

Occupational: X00086 Vehicle Make: Ford

Driver's Name: Scooter Vehicle Model: Mustang

Driver's Lic. No.: DL98765AB License Plate: 123 gofast

Phone No. for Questions: (use default)

Destination 1: 402-X0001 Type: Transfer

Planned Route: Est. Departure: 09:36 AM today

Est. Arrival: 09:36 AM today

MARIJUANA ENFORCEMENT DIVISION
MARIJUANA TRANSPORTATION MANIFEST

All sales transactions are to be completed prior to transportation of any Medical Marijuana. The originating entity may reject product delivered, but amount delivered must be limited to amount agreed upon in prior sales transaction. If the person transporting Medical Marijuana has not yet received his or her occupational license number, put "Pending" in the appropriate field.

| | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-----------------|
| Manifest #: | 0000000040 | Date Completed: | 01/26/2016 |
| License # of Originating Entity: | 300-X0002 | For MED Use Only | |
| Name of Originating Entity: | OR LOFTY ESTABLISHMENT, LLC | | |
| Address of Originating Entity: | 9079 SE McLoughlin Blvd. Portland, OR 97222-7355 | | |
| Phone # of Originating Entity: | 123.456.7890 | | |
| Phone # MED Can Call with Questions: 123.456.7890 | | | |
| DESTINATION: | OR LOFTY ESTABLISHMENT, LLC | Destination Phone #: | |
| Stop Number on Route: | 1 | Destination License Number: | 200-X0002 |
| Address of Destination: | 9079 SE McLoughlin Blvd. Portland, OR 97222-7355 | Date and Approximate Time of Departure: | 1/27/16 3:09 PM |
| Route to Be Traveled: | I will use this route. | Date and Approximate Time of Arrival: | 1/28/16 3:09 AM |
| <small>Notes: details for estimating insurances (e.g., road closures, flat tire, etc.)</small> | | | |
| Item Description | Item Label | Weight/Quantity | |
| Shake/Trip | ABCDEF012345670000012879 | 15.0000 | |
| Shake/Trip | ABCDEF012345670000012880 | 14.0000 | |
| Shake/Trip | ABCDEF012345670000012881 | 10.0000 | |
| Shake/Trip | ABCDEF012345670000012882 | 15.0000 | |
| PRODUCT REJECTION (if only a portion of shipment is rejected, circle that portion above) | | | |
| Name of Person Rejecting 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: | Date: | | |
| Signature of individual taking receipt of rejected portion of this shipment: | | | |
| Name of Person Transporting: | X | Occupational License # of Person Transporting: | Pending |
| Signature of Person Transporting: | | | |
| Make, Model, License Plate #: | X X X | | |

Transfer Tracking

Transfer manifest created, moved and monitored by the system

Detailed transfer manifest and history captured

Transfers

MMC CO Lakeland Store | 402-MMC3

New TransferView Manifest

IncomingOutgoingRejected

| Manifest | License | Origin | Driver | Vehicle Info | Packages | Est. Departure | Est. Arrival | Received | |
|------------|----------|------------|---------------|--------------------------------------|----------|------------------------|------------------------|------------------------|--|
| 0000001603 | 403-MMC1 | MMC CO LLC | Scooter Brown | Make: X Model: X Lic. Plate: X | 1 | 10/13/2014 01:07 pm | 10/13/2014 01:07 pm | 10/13/2014 12:08 pm | |
| 0000001601 | 403-MMC1 | MMC CO LLC | Scooter Brown | Make: X Model: X Lic. Plate: X | 5 | 10/13/2014 12:51 pm | 10/13/2014 12:51 pm | 10/13/2014 11:56 am | |

| Package | Item | Shipped Qty. | Received Qty. | Status |
|--------------------------|-------------------------------|--------------|---------------|----------|
| ABCDEF012345670000020253 | Immature Plants - GA Red Kush | 2 ea | 2 ea | Accepted |
| ABCDEF012345670000020254 | Buds - GA Red Kush | 453.6 g | 453.6 g | Accepted |
| ABCDEF012345670000020256 | Shake/Trim | 453.6 g | 453.6 g | Accepted |
| ABCDEF012345670000020257 | Shake/Trim | 450 g | 450 g | Accepted |
| ABCDEF012345670000020258 | Buds - GA Red Kush | 451 g | 451 g | Accepted |

1

Page 1 of 1

20

items per page

Viewing 1 - 5 (5 total)

| | | | | | | | | | |
|------------|----------|------------|---------------|--------------------------------------|---|------------------------|------------------------|------------------------|--|
| 0000001501 | 403-MMC1 | MMC CO LLC | Scooter Brown | Make: X Model: X Lic. Plate: X | 1 | 10/10/2014 12:47 pm | 10/10/2014 12:47 pm | 10/10/2014 11:50 am | |
|------------|----------|------------|---------------|--------------------------------------|---|------------------------|------------------------|------------------------|--|

Lab Test Results

Lab test results by batch, controlled by a testing facility

Test Result Tracking

The screenshot shows a web application window titled "Test Packages". Inside, there's a section for "Test Package # 1" with a "(clear)" button. Below this, there are input fields for "Package" (with a search icon), "Test Date" (with a calendar icon and "today" button), and "Package Status" (with radio buttons for "Passed" and "Failed"). To the right, there's a "Result # 1" dropdown menu currently showing "- Select -". Below the dropdown, there are fields for "Quantity", "Status", and "Notes". The "Notes" field is open, showing a list of test types: CBD, CBN, Microbial, Solvent, THC, and THCa. At the bottom of the form, there are two buttons: "Record Tests" (green) and "Cancel" (grey). A plus icon in a blue box is also visible on the left side of the form.

Customizable test results with notes

Sales

- Recording of Sales in Metrc is for “reporting last event in chain of custody”
 - Quantity
 - Unit of Measure
 - Total dollars of the sale
- There is sales data import functionality currently with Point of Sale (POS) companies
 - POS companies will provide more details.
 - Comma Separated Value (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

Q

(clear)

Quantity

ex. 100.23

- Select -

Available

6.9251 oz

Total Price

\$

ex. 100.23

(package)

+

Record Sales Receipts

Cancel

Reports

Reports Control Panel MMC C

select one, or multiple, tags to filter reports
☒ Facility ☒ Inventory ☒ Packages ☒ Plants

Monthly Sales

Start Date: (11/1/2014)

End Date: (11/6/2014)

Packages Inventory

Item Filter (optional):

- All Item Categories -

- All Lab Testing States -

Start Date: (11/1/2014)

End Date: (11/6/2014)

Packages Sales

Item Filter (optional):

- All Item Categories -

Start Date: (11/1/2014)

End Date: (11/6/2014)

Sales

Cultivation

Transfer

Package

Reports Control Panel

select one, or multiple, tags to filter reports
☒ Facility ☒ Harvests ☒ Inventory ☒ Packages ☒ Plants ☒ Trends

Harvests

Harvest Name Filter (optional):

Room Filter (optional):

Start Date: (11/1/2014)

End Date: (11/6/2014)

Monthly Plants Inventory

Start Date: (11/1/2014)

End Date: (11/6/2014)

Packages Inventory

Item Filter (optional):

- All Item Categories -

- All Lab Testing States -

Start Date: (11/1/2014)

End Date: (11/6/2014)

Plants Inventory

Strain Filter (optional):

Room Filter (optional):

- All Growth Phases -

Start Date: (11/1/2014)

End Date: (11/6/2014)

Plants Trend

Start Date: (11/1/2014)

End Date: (11/6/2014)

Reports
configured with
trend Analysis

Exportable to
MS Word, MS
Excel and PDF
formats



RFID, What & Why

Speed / Accuracy / Precision



What is RFID?

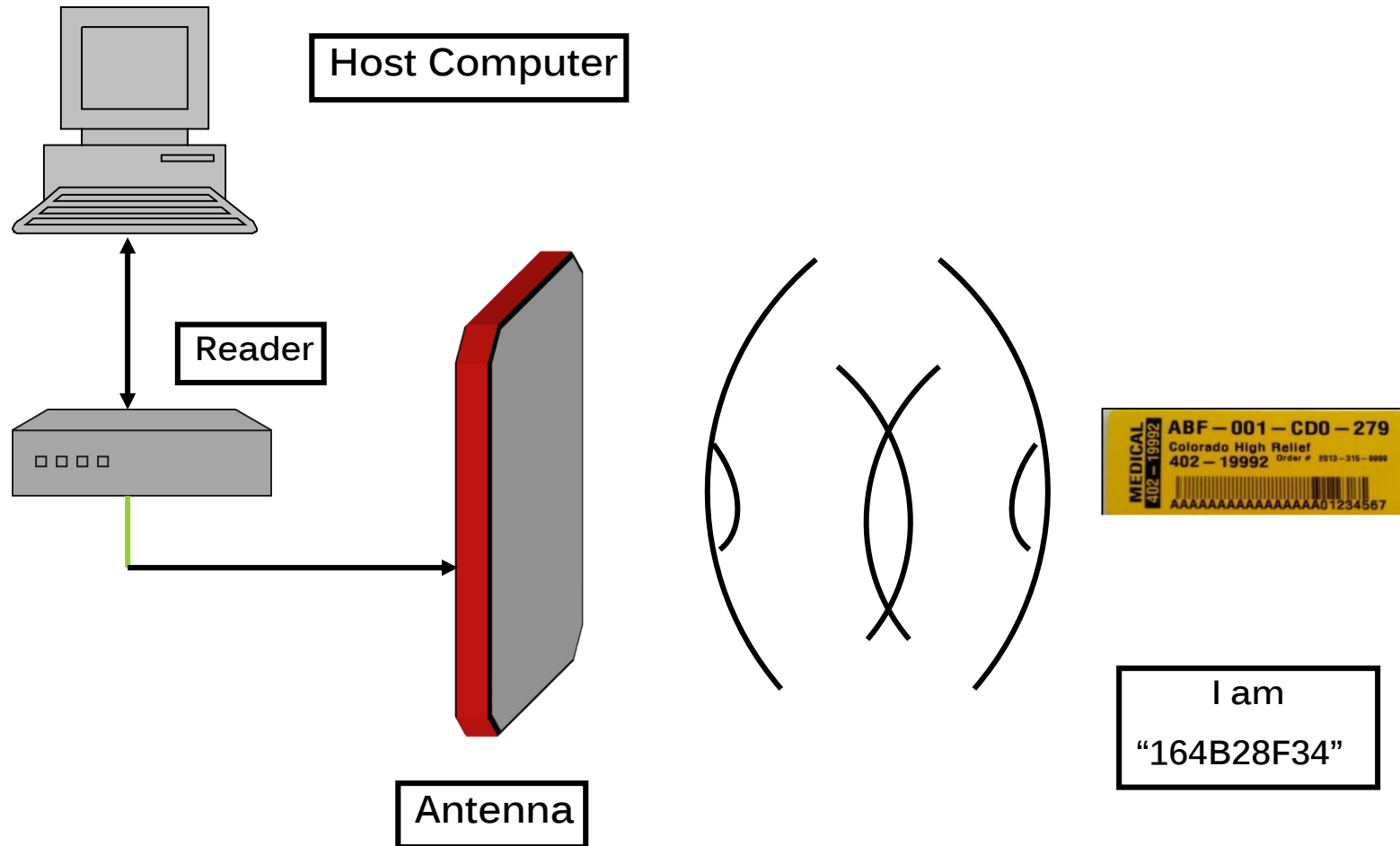
- Radio Frequency Identification
 - A technology that identifies objects using low-power radio frequency technology.
- RFID Solutions consist of three components:
 - Hardware (Reader and Antenna)
 - RFID Tag
 - Software



Reader "speaks" to tag

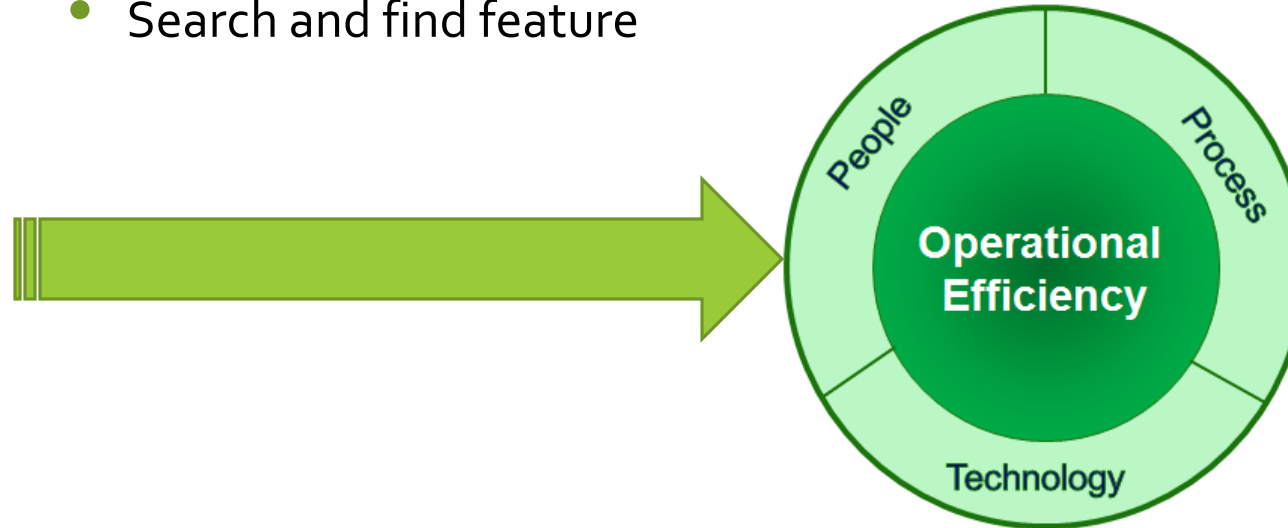
The graphic shows the components of an RFID system. It includes a reader (represented by a head profile), a radio signal (represented by a green bar), an RFID tag (represented by a small square), and a computer (represented by a green circle). The text explains that the reader "speaks" to the tag, and the tag is connected to the computer, which contains memory and radio power.

How Passive RFID Works



Why RFID

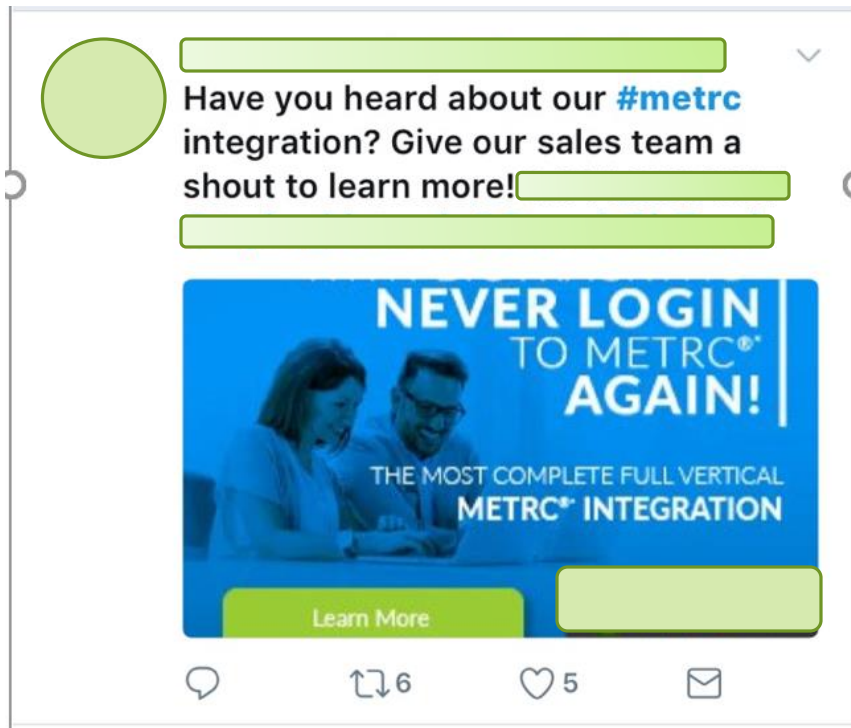
- Read Range – 10+ Feet
- Line of sight is not required
- Speed 8 to 10 times faster than bar-code
 - Improved Accuracy
 - Faster compliance
 - Search and find feature





Integration

Use Caution and Seek Clarity



- Metrc does not outsource, partner or validate 3rd party companies
- Not all aspects of Metrc are available in the API
- Remember the state does not look at other systems only the system the state procured



Application Programming Interface

- The API supports data transfer FROM vendor applications to METRC
- The API supports data transfer TO vendor applications from METRC
- The API supports data transfer FROM agency applications to METRC
- The API supports data transfer TO agency applications from METRC

Third party vendors validation process currently in process





Support

Support Resources

Support Tab

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





Contact Information

Support Desk

877-556-6506

Support@metrc.com

www.metrc.com/massachusetts