MEDICINE MAN
TECHNOLOGIES

Arkansas Cannabis Industry Association Gatherin

July 25, 2017 – Little Rock, AR

Medicine Man Technologies

We are a cannabis consultancy and brand warehouse providing guidance and support for turn-key cultivation, processing, and dispensary operating solutions established by Medicine Man, Tree Frog, Denver Consulting Group, Success Nutrients, and Three-A-Light.

We are a transparent, public company appearing on the OTC Marketplace, Symbol: MDCL.

Medicine Man Technologies

We have IP agreements with Medicine Man Production Corporation and Tree Frog Consulting. We have three wholly owned subsidiaries; Three-A-Light, Success Nutrients, and the Denver Consulting Group.

Three A Light

Three A Light is the premier step-by-step book on indoor cannabis cultivation, focused on how to grow 3 pounds of dried, cured flower per 1000W lighting fixture.

Success Nutrients

Success Nutrients is a nine-part nutrient line built specifically for cannabis cultivation.

Medicine Man Production Corporation

Medicine Man was founded in 2009 with the goal of producing high-quality, low-cost medical marijuana sold with great customer service to Colorado patients.

Today the company operates an industrial cultivation facility, which grew 6,900 lbs. of marijuana in 2016, while supplying medical and adult use marijuana to its dispensaries in Denver, Aurora, and Thornton, CO.

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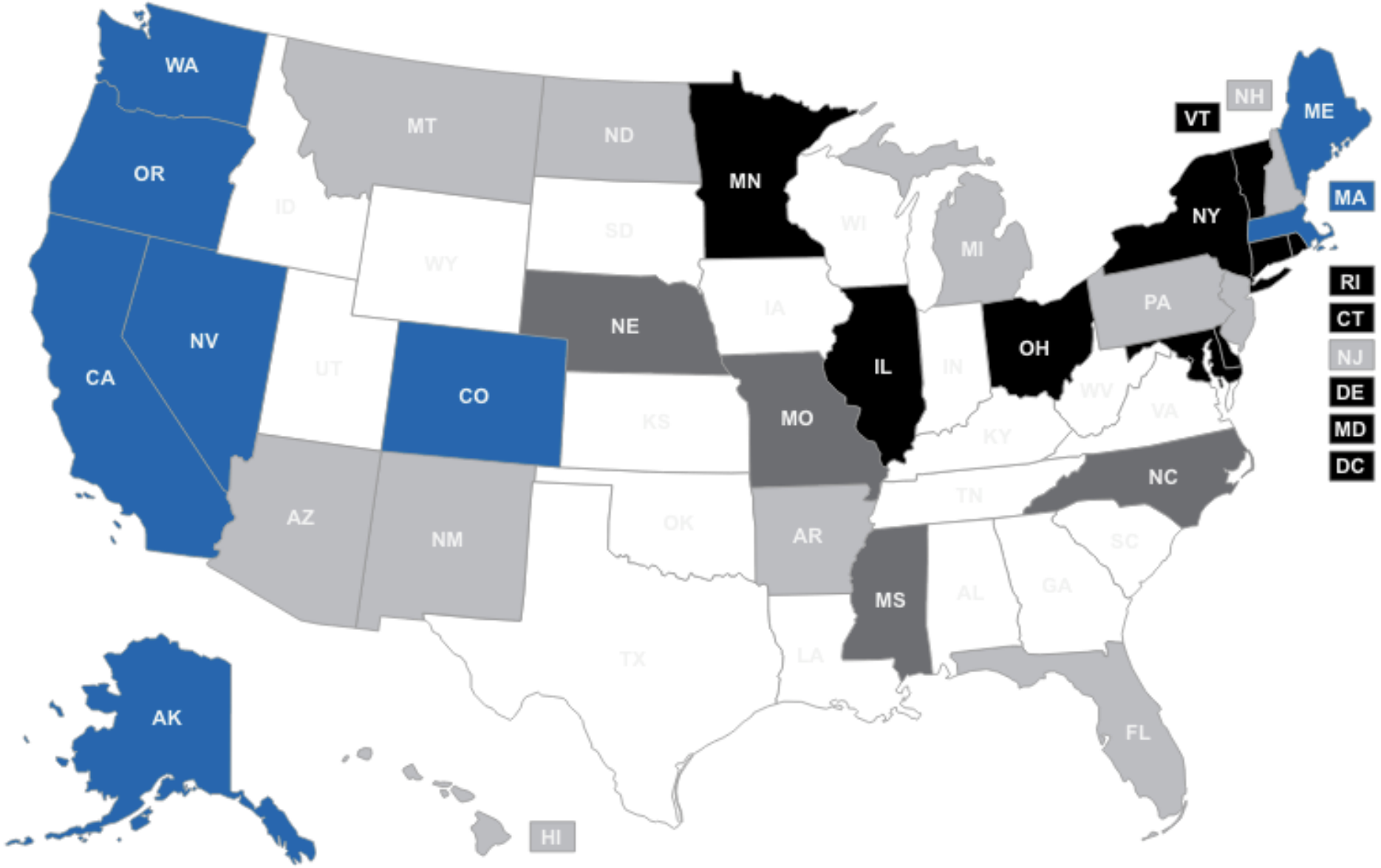
OPEN

State of the Industry

More than ½ of the US has either MED or REC



States that passed new initiatives in November

- Medical
  - Arkansas
  - Florida
  - Montana
  - North Dakota

- Adult Use / Recreational
  - California
  - Maine
  - Massachusetts
  - Nevada

Industry Trends

MED = Medical Marijuana
REC = Recreational / Adult Use Marijuana

Industry Trends

- 28 States now have programs with legislative action increasing
- Flower is still #1, but oils, concentrates, and edibles are on the rise
- Pricing commoditization is underway in legal markets
- Research opportunities are opening up at the state level (PA, OH)
- Pesticide management and associated regulation is evolving quickly

MED Demographics (Colorado)

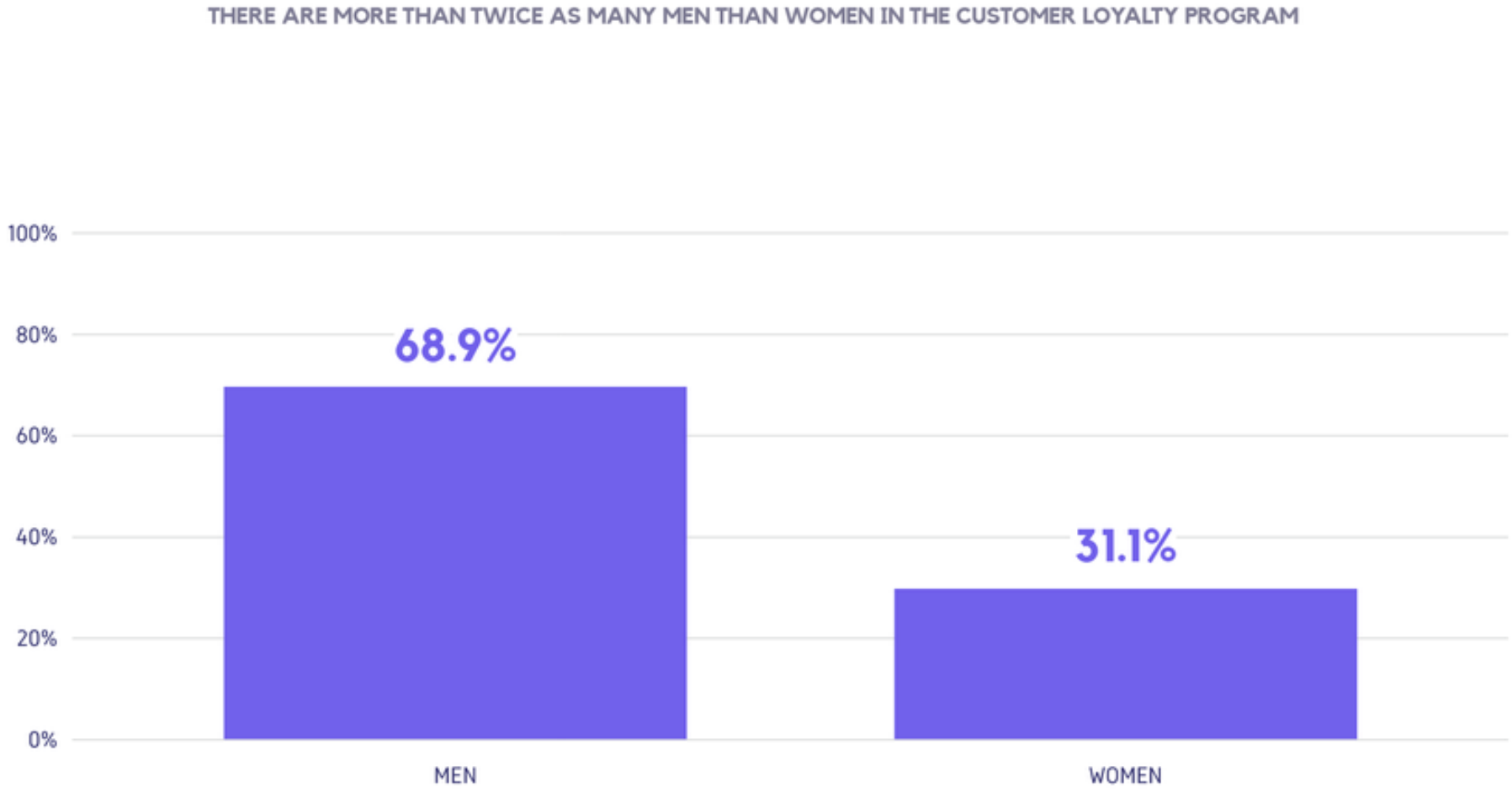
Gender	Average Age**	Percentage on Registry
Male	43	63.30%
Female	46	36.70%

** The combined average age of all patients is 44 years old.

Age Group	Number of Patients	Percentage on Registry	Top Reported Condition
0-10	191	0.20%	Seizures
11-17	127	0.13%	Seizures
18-20	3,425	3.62%	Severe Pain
21-30	19,953	21.10%	Severe Pain
31-40	19,761	20.89%	Severe Pain
41-50	15,480	16.37%	Severe Pain
51-60	17,403	18.40%	Severe Pain
61-70	14,950	15.81%	Severe Pain
71 and Older	3,287	3.48%	Severe Pain

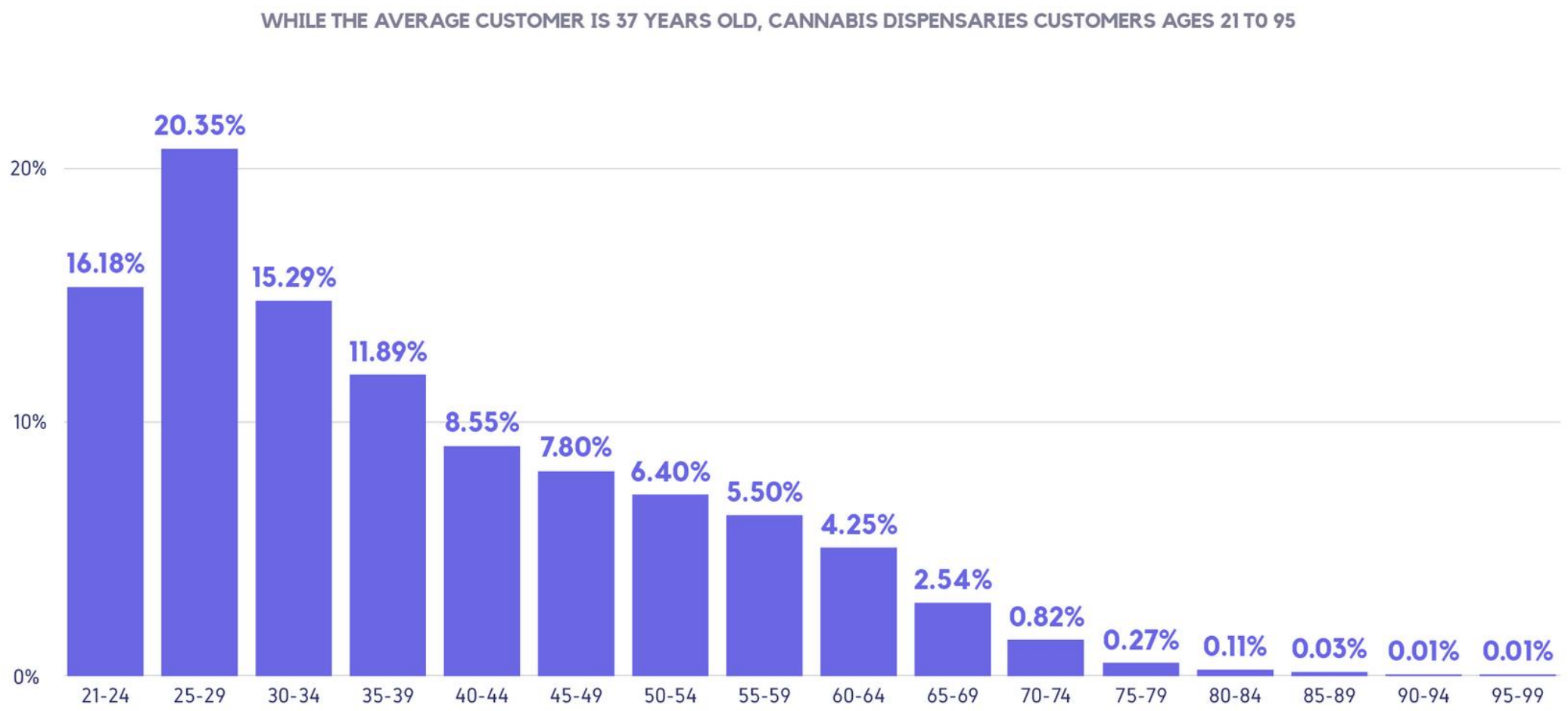
Source: Marijuana Enforcement Division December ‘16

REC Demographics (National)



Source: Headset Cannabis Intelligence July ‘16

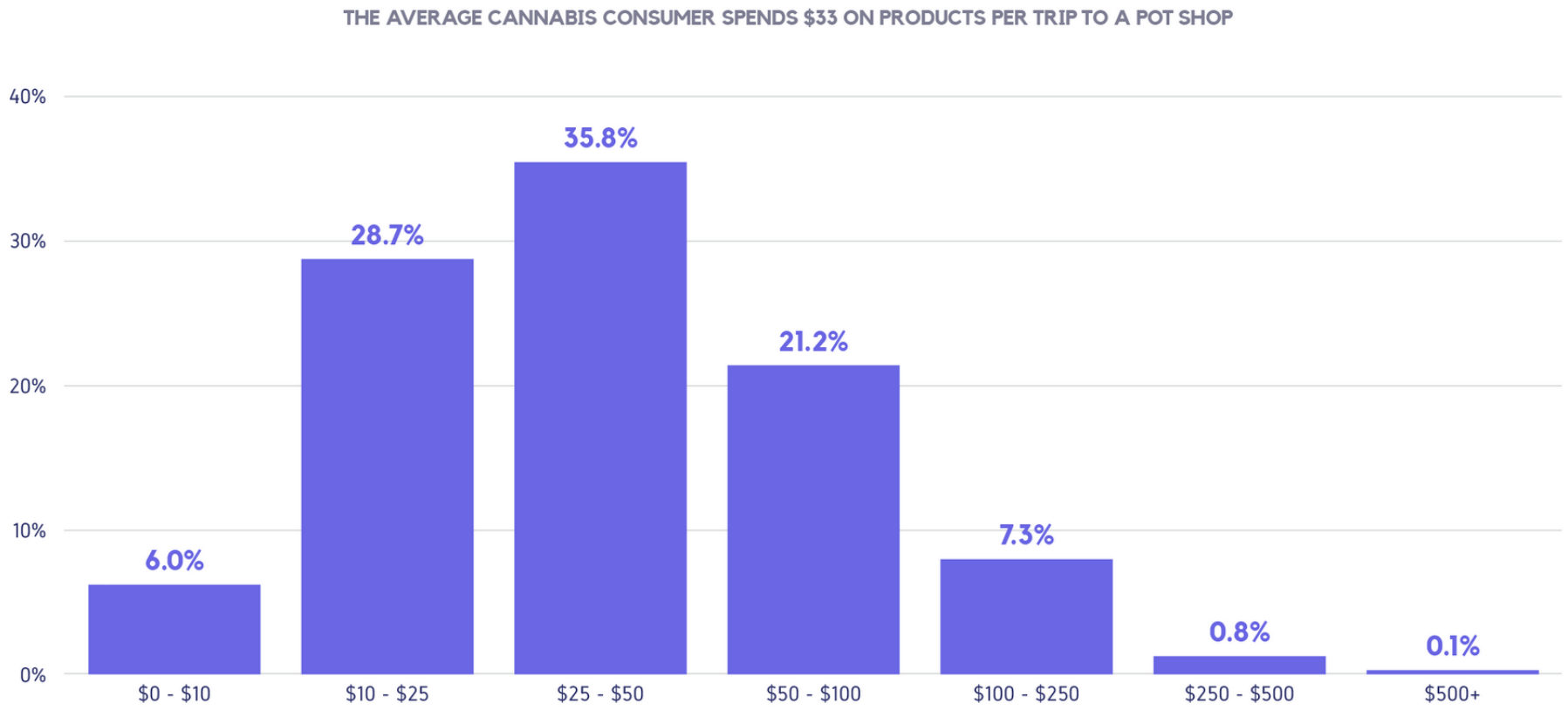
REC Demographics (National)



Source: Headset Cannabis Intelligence July ‘16

Consumer Spending (Per Trip)

- Medicine Man Avg. MED Receipt: $102.46
- Medicine Man Avg. REC Receipt: $89.22 (Denver) $61.86 (Aurora)



Source: Headset Cannabis Intelligence July ‘16

REC Consumer Spending (Annual)

Source: Headset Cannabis Intelligence July ‘16

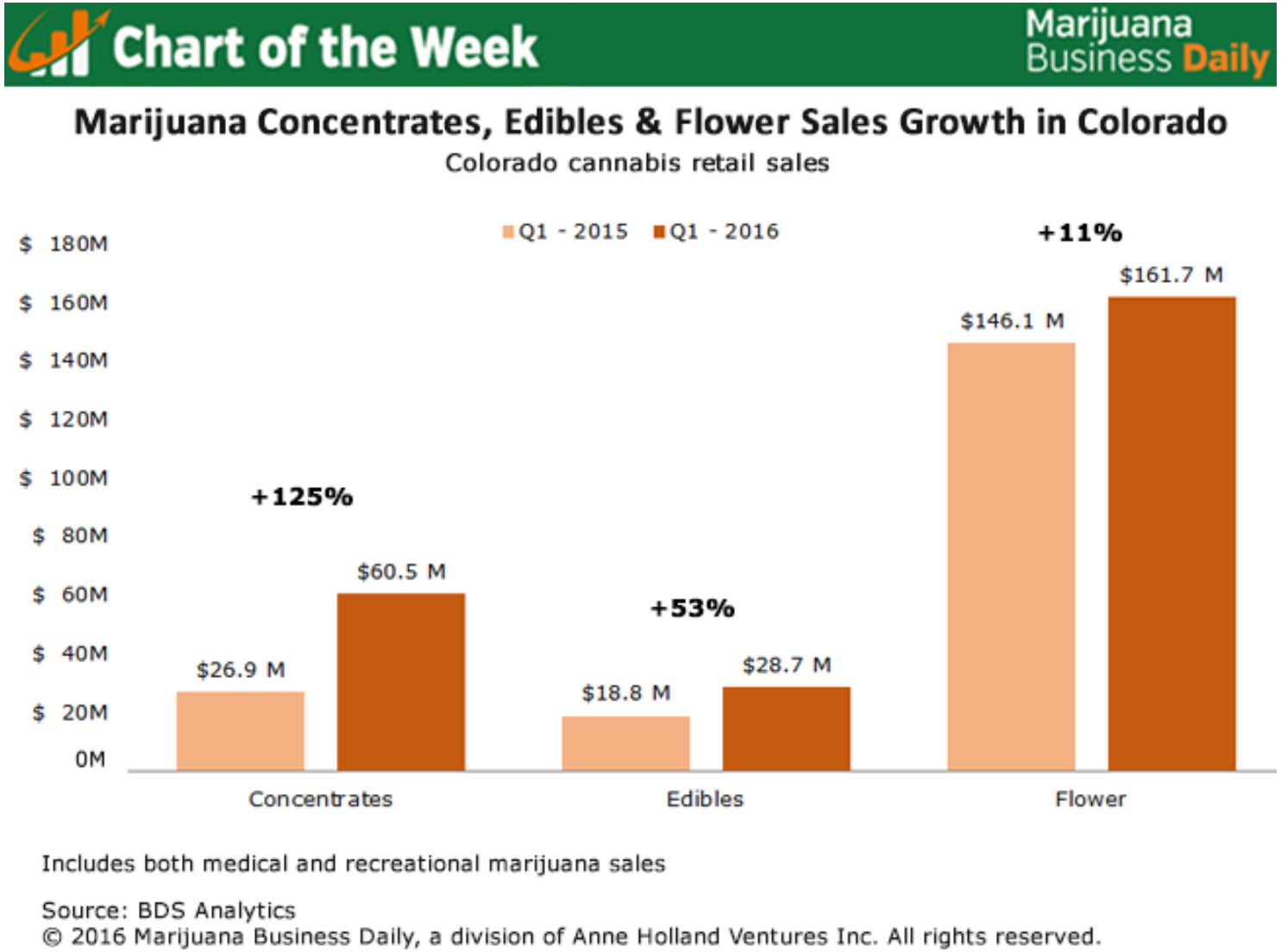
Recreational Product Category Trends (National)

PERCENTAGE OF TOTAL TRANSACTIONS BY PRODUCT CATEGORY

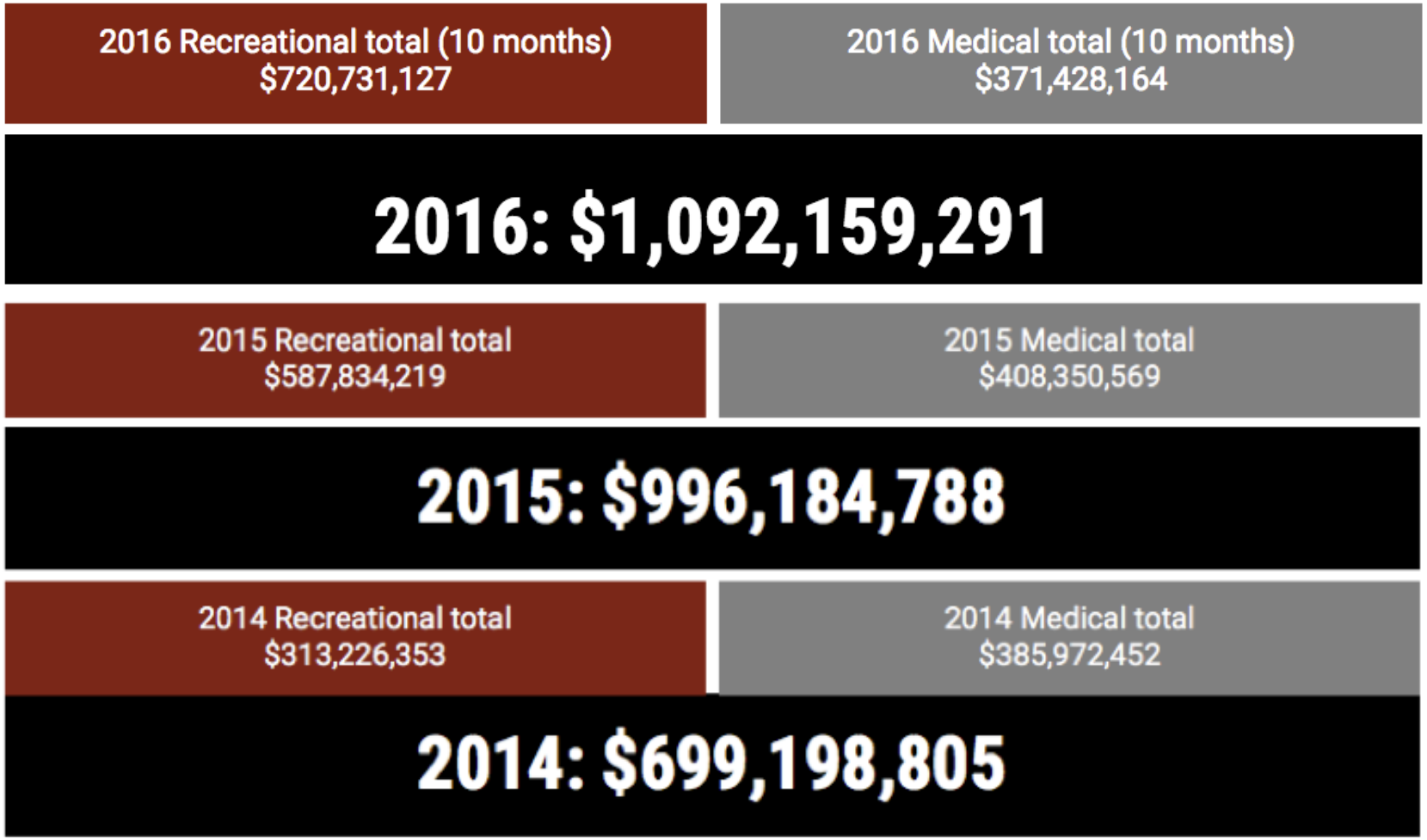
Rank	Product Category	Percentage of Transactions
1	Flower	48.7%
2	Edible	13.1%
3	Pre-Roll	11.5%
4	Concentrates	10.7%
5	Vapor Pens	8.2%
6	Beverage	3.7%
7	Tincture & Sublingual	2.2%
8	Topical	1.1%
9	Capsules	0.8%
10	Multi-Item Gift Sets	0.1%

Source: Headset Cannabis Intelligence July ‘16

Colorado Year Over Year Product Sales



Colorado YOY MED / REC Sales



Source: The Cannabist

Industry Pricing Trends

"Every Gram Has its Price"

Headset Cannabis Market Insights, March 2017

HEADSET CANNABIS MARKET INSIGHTS

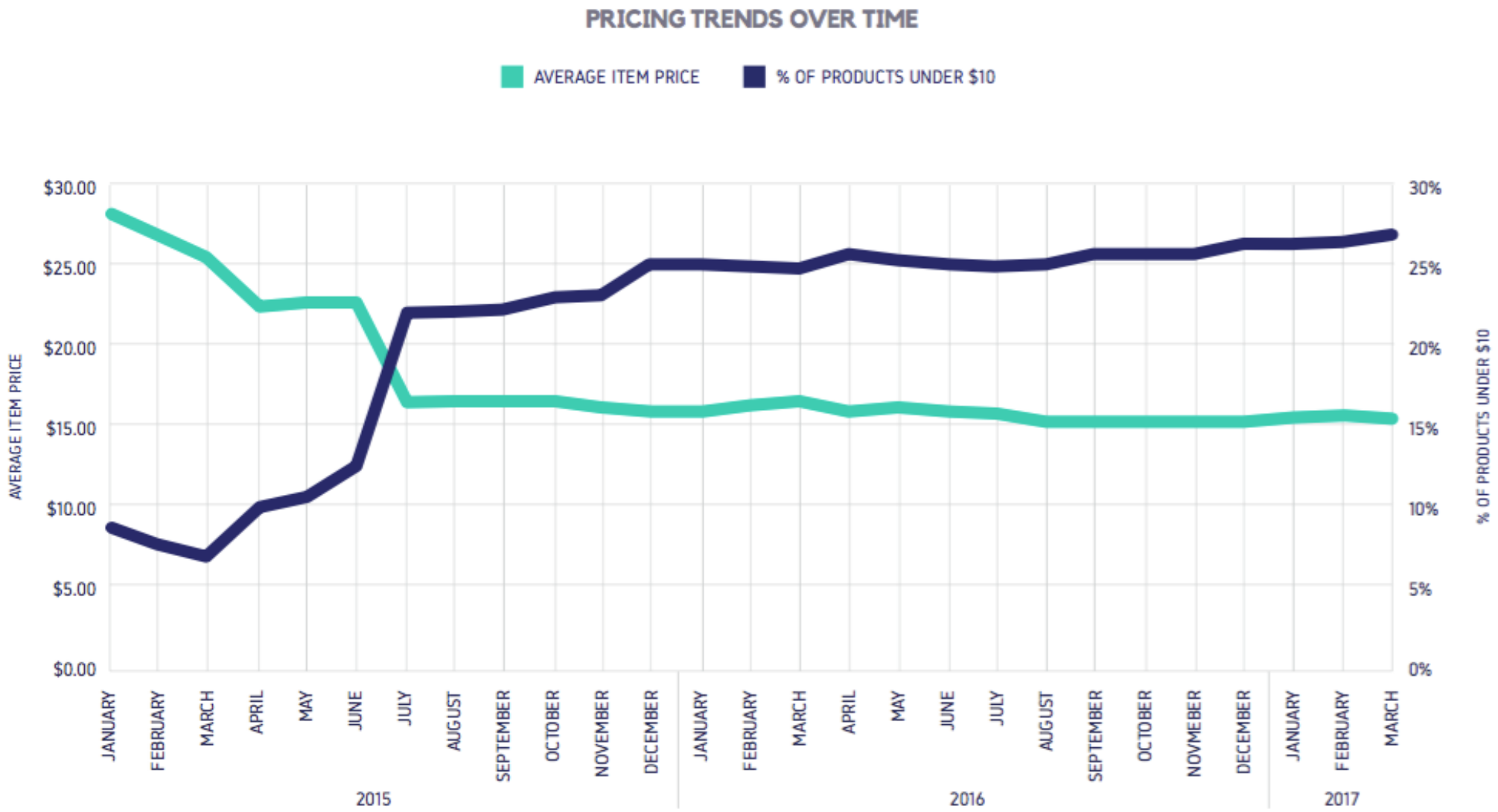
Every Gram Has Its Price: A Look at Pricing Trends in the Cannabis Industry

March 2017

HEADSET
Cannabis Intelligence

Pricing Trends (Washington REC)

Source: Headset



Industry Opportunities

Business Types

- Cultivation
- Processing / Extractions (oils, edibles, concentrates)
- Dispensary (medical or recreational)
- Testing
- Security
- Supply Chain (consumables, nutrients, packaging)
- Professional Services (legal, tax, consulting, contracting, seed to sale)
- Public / State Services (lobbying, legislative, advisory)
- Investor Opportunity (ArcView or similar)

Cultivation

Pros	Cons
✓ Highest Revenue Potential	✓ Highest Startup Cost
✓ Employment / Job Creation	✓ Highest Overhead
✓ Local Capital Investment	✓ Rigorous Compliance
✓ Limited State Licenses	✓ Ill-defined Marketplace
✓ Precursor to Adult Use	✓ Federal Challenges

Processing / Extractions

Pros	Cons
✓ High Product Margins	✓ High Equipment Cost
✓ Increasing Market Share	✓ Variable Employment Costs
✓ Lower Startup Costs	✓ Rapid Regulatory Changes
✓ Robust Product Lines	✓ Source Material Consistency
✓ Alternative to Smoking	✓ Poor Public Education

Dispensary

Pros	Cons
✓ Direct Patient Care	✓ High Security/Cash Handling
✓ Employment / Job Creation	✓ Higher Staff Turnover
✓ Lower Overhead	✓ Higher Competition
✓ Safe, Legal Alternative	✓ Third Party Dependency
✓ Precursor to Adult Use	✓ Tax Burden: IRS Code 280E

Vertical Integration

Pros	Cons
✓ Operational Efficiency	✓ Aggregate Startup Cost
✓ 280E Tax Offset	✓ Multiple Licenses/Compliance
✓ Total Supply Chain Control	✓ Real Estate Management
✓ Maximized Profit Margins	✓ Risk Management
✓ Cross-Training Capabilities	✓ Internal Communication

Cultivation 101

Virtual Tour

Medicine Man - Cultivation Virtual Tour

Plant Basics

- Cannabis Sativa, Cannabis Indica, Hybrid
- Female plants produce flowers, male plants produce pollen sacks
- If a male plant pollenates a female, she will produce seeds
- Marijuana plants are finicky – they prefer controlled environments
- Genetics can vary greatly and influence yield, potency, taste & aroma

Plant Basics

MOTHERS

CLONE

EARLY VEG

MID – LATE VEG

EARLY FLOWER

LATE FLOWER

TRIMMED BUD

DRY

CURE

THREE A LIGHT

Inventory Control / Seed to Sale Tracking

- Most states require strict seed to sale tracking
- Tracks all physical plant inventory throughout the plant lifecycle
- Includes plant status, plant weights (wet, dry, waste), destruction
- Typically must interface with State system

Cultivation Facility Type

There is no wrong way to grow:

- Warehouse / Hardened Indoor Structure
- Greenhouse / Shade house
- Hybrid (Greenhouse + Warehouse)
- Outdoor

vintageCONTRACTING CO

Processing / Extraction 101

Extraction Methodology

- Popular methods include hydrocarbon (butane), ethanol, or CO2
- State and local laws may dictate which methodology is permitted, be sure to remain compliant and able to adjust to changing legislation
- Will influence facility design and equipment costs
- All have pros & cons – there are experts available in each field

Extractions

- Highly concentrated marijuana extract which can yield high THC/CBD percentages. Product Types include: Oil (BHO – Butane Hash Oil, CO2 Oil), Wax (Budder, Crumble), Shatter, Live Resin, Bubble Hash, Kief.

Infused Product Categories

- Edibles (sweets, savories)
- Beverages (soda, tea, juice, concentrated shots)
- Sublingual tinctures, sprays
- Capsules, pills, lozenges
- Topicals (patches, salves, lotions, rubs)

Infused Product Packaging

Don’t Do This…

3 Rastateers
10X
Twixed
Munchy Way
3X
Rasta Reese's
3X
KeefKat
10X
Puff-A-Mint Pattie
Get a sensation!
10X
Buddahfinger
4X
DOUBLE PUPP OEO
10X
Tri-Chrome CRUNCH
10X

Dispensary 101

Virtual Tour

Medicine Man - Dispensary Virtual Tour

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MEDICINE MAN
Bio-Tech
CBD
MINTS
suckers
$7.50
$12
$7.50
MINTS
90 MG THC

penVAPE
INDICA
HYBRID
SATIVA
WITCH'S WEED
MILE HIGH SATIVA
DISPOSABLE
CARTRIDGE
40 MG THC

Preston's Purple Kush
Indica

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IRS Tax Code 280E

- Prohibits marijuana businesses from deducting their ordinary business expenses because marijuana is classified as a Schedule 1

- 280E enables the Federal Government to collect taxes of gross sales because it does not differentiate between income derived from legal sources or illegal sources

- More expenses can be deducted from the cultivation side than the dispensary side, which the latter ends up in the highest tax bracket

Customer Service

- Like any retail business, great customer service is paramount
- Transaction can take over 15 minutes per patient, especially first timers who need more product education
- Customers build relationships with budtenders, as a result budtenders can heavily influence a retail sale and ongoing dispensary sales
- Online reviews are increasingly popular – respond in a timely manner
- Consider a patient loyalty or rewards program for consumers

Security 101

Security Systems

All security elements are focused on preventing diversion and providing for patient and employee safety. Marijuana facilities are typically required to have the following systems in place:

- Video monitoring requirements
- Alarm systems, panic buttons
- Locks, key-cards, biometrics
- Off-site record keeping

Physical Security

- Patient, guest, visitor check-in station
- Roaming security
- Lethal/non-lethal consideration
- Third-party/in-house consideration

Product and Cash Vaulting

- High-value finished products typically require vaulting, including environmental controls (climate, refrigeration, etc.)
- Typically an interior room, hardened construction, restricted access
- May require independent security monitoring

Cash Handling

- Medicine Man owns and operates their own on-site ATMs
- Cash is vaulted within an on-site secure location and has restricted access
- Medicine Man utilizes a third-party provider, Blueline Protection Group, to transport cash from the facilities on a regular basis
- Blueline is licensed to work directly with the Federal Reserve to deposit cash upon notifying our financial institution of the transaction, mitigating the risk associated with off-premise employee cash handling

Transportation and Chain of Custody

- Transportation of finished goods between licensed facilities requires a transportation manifest which documents chain of custody
- State agencies can typically track and monitor this independently, ensuring that diversion is not taking place
- Some states require GPS monitoring and provide specifications for transportation agents and vehicles to ensure integrity of the process

Cannabis Business Planning Basics

Business Plan Fundamentals

A well-founded business plan should be your group's first order of business

- Get started early and ***tell your story***
- Financial capabilities and accountability are critical
- Define operating outlook and partners or consultants
- Product, Public, and Patient safety are ***always*** paramount

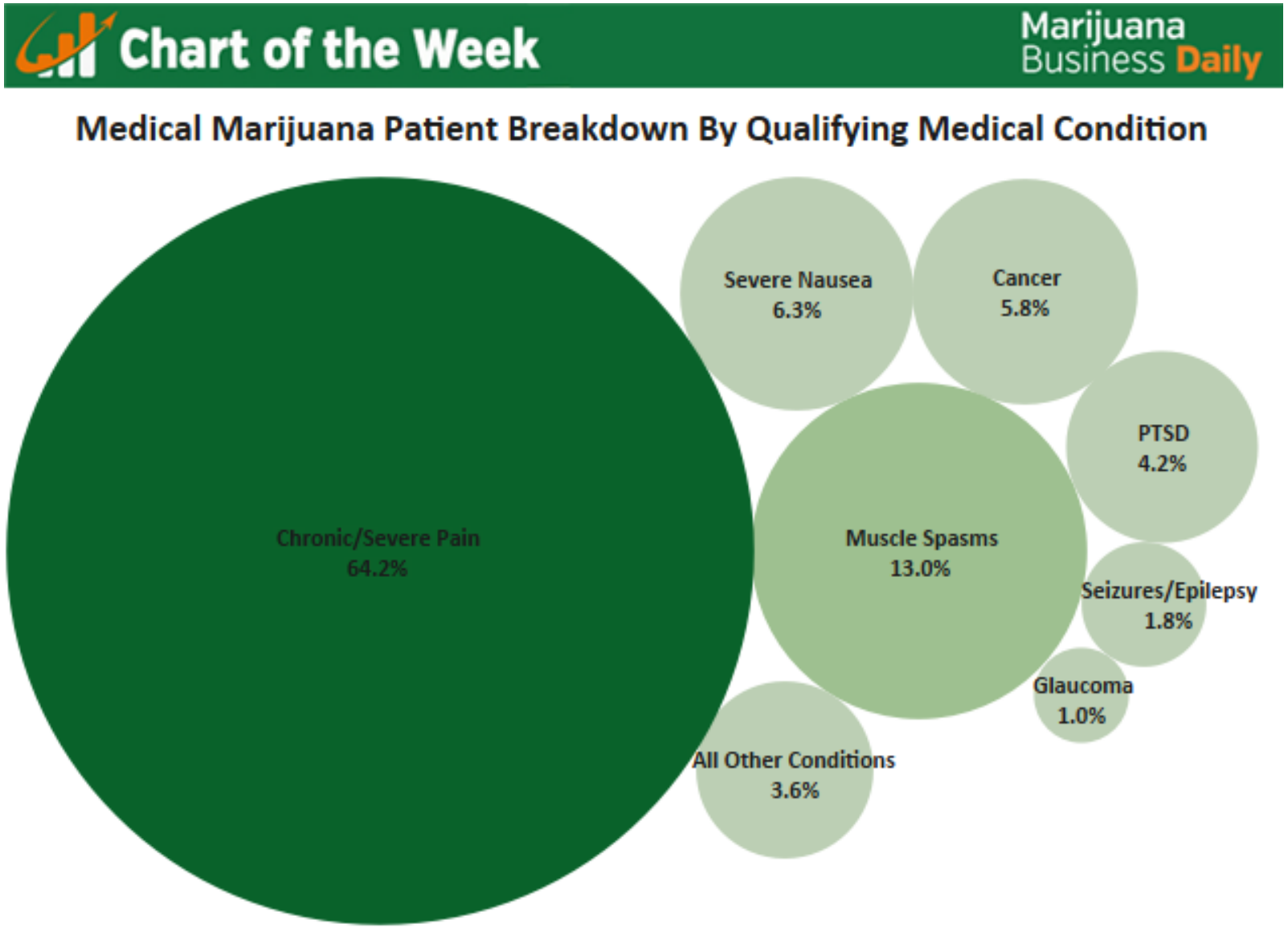
Management Team / Advisors

- Consider Past Business Experience, Financial Capabilities
- Cultivation: Agriculture (Horticulture, Botany, Nursery, Farming)
- Retail: Medical (Pharm-D, Nurses, Physicians)
- Advisory Board (Cannabis Experts, Legal, etc.)

Market Assumptions

- Determine current size and growth potential - utilize historical data from other states but have the crystal ball ready
- Patient qualifying conditions list is key
- Physician/patient relationship & recommendation vs. prescription is key
- Product mix list is key - Flower, Oils, Edibles

MED Patient Conditions (Multi-State)



Note: Similar qualifying medical conditions have been grouped together for reporting purposes
Source: Nevada, Arizona, New Mexico, Minnesota, New Jersey, Montana, Colorado and Oregon state MMJ progams
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MED Patient Conditions (Colorado)

Reported Condition	Number of Patients Reporting Condition	Percentage of Patients Reporting Condition**
Cachexia	996	1.05%
Cancer	4,089	4.32%
Glaucoma	1,183	1.25%
HIV/AIDS	484	0.51%
Muscle Spasms	24,077	25.38%
Seizures	2,476	2.62%
Severe Nausea	12,064	12.76%
Severe Pain	88,209	93.27%

**Does not add to 100% as some patients report more than one debilitating medical condition.

Source: Marijuana Enforcement Division December '16

Pro Forma Setup

- Pre-Application (Business Plan, Legal, Consultants, Travel)
- Application (Technical Writing, Preparation, Filing)
- Execution (Architectural, Construction, MEPs, Permitting)
- Pre-Opening (Hiring, Training, Consumables)
- Operational (Staffing, Energy, Insurance, Contingencies)

Sample Pro Forma

Financial Plan Elements

- Pre-Application Expenses
- Application Management and Filing Expenses
- Interim Application Processing Expenses
- Post-Application Capital Deployment
- Operations Outlook & Staffing
- Burn Rate
- Contingencies
- Investors and Investor Preferences

Site Selection

- Proximity & local law (schools, churches, etc.)
- Location: metro / rural and the transportation delta
- Ease of zoning and permitting
- Community buy-in
- Security and proximity to local law enforcement

Cultivation/Processing Facilities Consideration

- Location
- Lease vs Own
- Tenant Improvements
- Power Demand
- Security

Retail Dispensary Facilities Consideration

- Accessibility
- Privacy
- Elegant security
- Finish preferences
- Environment

Banking Tips

- Its all about local relationships
- Be honest and declare your nature of business (retail)
- Bank under a non-cannabis related name
- Private Colorado banks are not taking out of state business
- Its easy to open accounts with big banks, but they inevitably come around to the nature of your business and close accounts – be prepared

License Application Planning

Keys To A Successful Application

1. A well-crafted story explaining the applicant's suitability
2. Technical writing (legal or individuals with DOH RFP experience)
3. Ownership team and industry consultants
4. Control of real estate for cultivation/processing & dispensary
5. Adequate funding and operational capital
6. Strong community and political support

Pre-Application Planning

- Review your State rules and dates – stay ahead of the curve and participate
- Retain competent consultants and advisors
- Preliminary work:
  - Determine financial capabilities and flush out a well-founded pro forma
  - Background checks (don’t let this come back to haunt you)
  - Begin reviewing real estate opportunities
  - Engage your community officials
  - Engage local zoning officials
  - Engage local law enforcement

Resource / Consulting Planning

- Cultivation (Boutique vs Commercial/Industrial)
- Processing & Manufacturing (Extractions)
- Dispensary
- Security
- Seed To Sale Tracking / Inventory Control
- Lab Testing
- Legal
- Technical Writing
- Project Management

Application Influencers (External)

- State Legislation
- Political Influence & Lobbying
- Real Estate & Zoning Requirements
- Public Hearings
- State Application Process and Format

Application Plan Elements

- Cultivation SOP, Processing SOP, Retail SOP – how will these be established in a timely manner and who will be responsible?

- Consider sample plans for the following elements:
  - Genetics, Post-Harvest, Batch Processing, Finished Goods Management, Packaging, Quality Control, Waste Destruction, Security, Transportation, Patient/Product Education, Community Impact & Outreach, Staffing/HR/Employment, Facility Management, Compliance, Inventory Control, Testing, Product Alerts/Recalls

Application Submittal and Outlook

- Timelines can vary widely (Maryland experience)
- Be prepared for the waiting game
- Management of real estate deals can be cumbersome
- Interim prep work, be prepared for both scenarios

Post-Application Outlook

- Follow state timelines and fee schedules
- Construction management
- Hiring and training
- Permitting and inspections
- Application accountability and deployment

Medicine Man Technologies App Experience

- Colorado
- Oregon
- Illinois
- Nevada
- New York
- Maryland
- Hawaii
- Puerto Rico
- Pennsylvania
- California
- Upcoming: Ohio, Arkansas, Michigan

Local Outreach and Advocacy

Local Outreach & Community Support

- People do businesses with people they know, like, and trust
- At the local, state, and federal level its important to develop and maintain good relationships with policy makers and policy enforcers
- Many communities are unprepared for cannabis business; developing community impact and outreach plans in concert with local officials can mitigate their fears and better prepare them for the future

Industry Advocacy and Involvement

- Five reasons to get involved in a cannabis-related trade association:

1. Networking
2. Education
3. Competitive edge
4. Access to industry experts
5. Advocacy for the cause

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Thank You