

THE NORTH AMERICAN CANNABIS REPORT

3RD EDITION

 PROHIBITION
PARTNERS


Business
of
Cannabis



LONDON

A: 31 New Inn Yard, Shoreditch,
London, EC2A 3EY, United Kingdom
T: +44 20 3928 2814

BARCELONA

A: C/ de Bailèn, 11,
08010 Barcelona, Spain

TORONTO

A: 998 Bloor Street West, #10587,
Toronto, ON M6H 1L8, Canada

Our reports are the leading source of data and insights for the global cannabis industry.

The Strategy & Data team provide cutting edge intelligence to help business leaders, investors and policy makers understand and engage with the nascent cannabis markets across the world.

PROHIBITION PARTNERS TEAM



Stephen Murphy
CEO & Co-Founder



Barbara Pastori
Director of Strategy and Data



Conor O'Brien
Industry Analyst



Kate Robertson
Industry Analyst

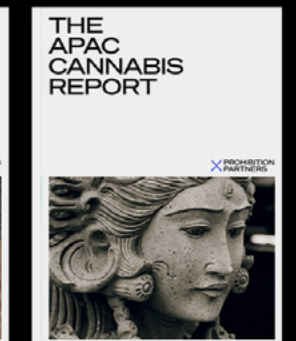
SPONSORSHIP OPPORTUNITIES



Will Sloane
Head of Growth

Prohibition Partners is the number one source for data and information on established and burgeoning cannabis and psychedelics markets. Read by over 150,000 global cannabis investors and entrepreneurs, and creating more than six million social impressions annually, Prohibition Partners produces thought-leading industry reports. If you would like to partner with us and support independent data and research please contact our Head of Growth will.sloane@prohibitionpartners.com

Sponsorship with Prohibition Partners is a unique opportunity to promote your business and brand to the most influential figures in the international cannabis market. Our research, data and content reach key stakeholders in the industry: from politics to pharma and cannabis to consumer-packaged goods. As companies and investors scramble to get a foothold in the market, sponsorship is an invaluable opportunity to put your brand front and centre in many of the industry's most influential reports.



SPONSOR FOREWORD



**Business
of Cannabis**
Cannabis Media & Events

Since 2017, Business of Cannabis has highlighted the companies, brands, people and trends driving the cannabis industry in North America. Powered by Prohibition Partners, the Business of Cannabis team brings over 30 years of public and strategic communications, content and campaign creation, and deep sector expertise, relationships, and insight.

Business of Cannabis hosts a number of quarterly events and annual cannabis conferences in North America. In September 2021, the inaugural Business of Cannabis: New York summit was held at the iconic Rainbow Room in the Rockefeller Center, bringing together over 300 of the most influential businesses, financial institutions and political thought leaders to shape the future of the State's emerging legal cannabis industry.

Business of Cannabis returns to New York this November 3, 2022. Alongside industry pioneers, policy makers, thought leaders and investors, we will look at the most exciting corner of the cannabis industry in New York and North America right now: Retail - including the technology, innovation, design and data that is driving the sector forward.

For tickets and more information on sponsorship and speaking opportunities at Business of Cannabis: New York this year, visit: cannabisnewyork.live

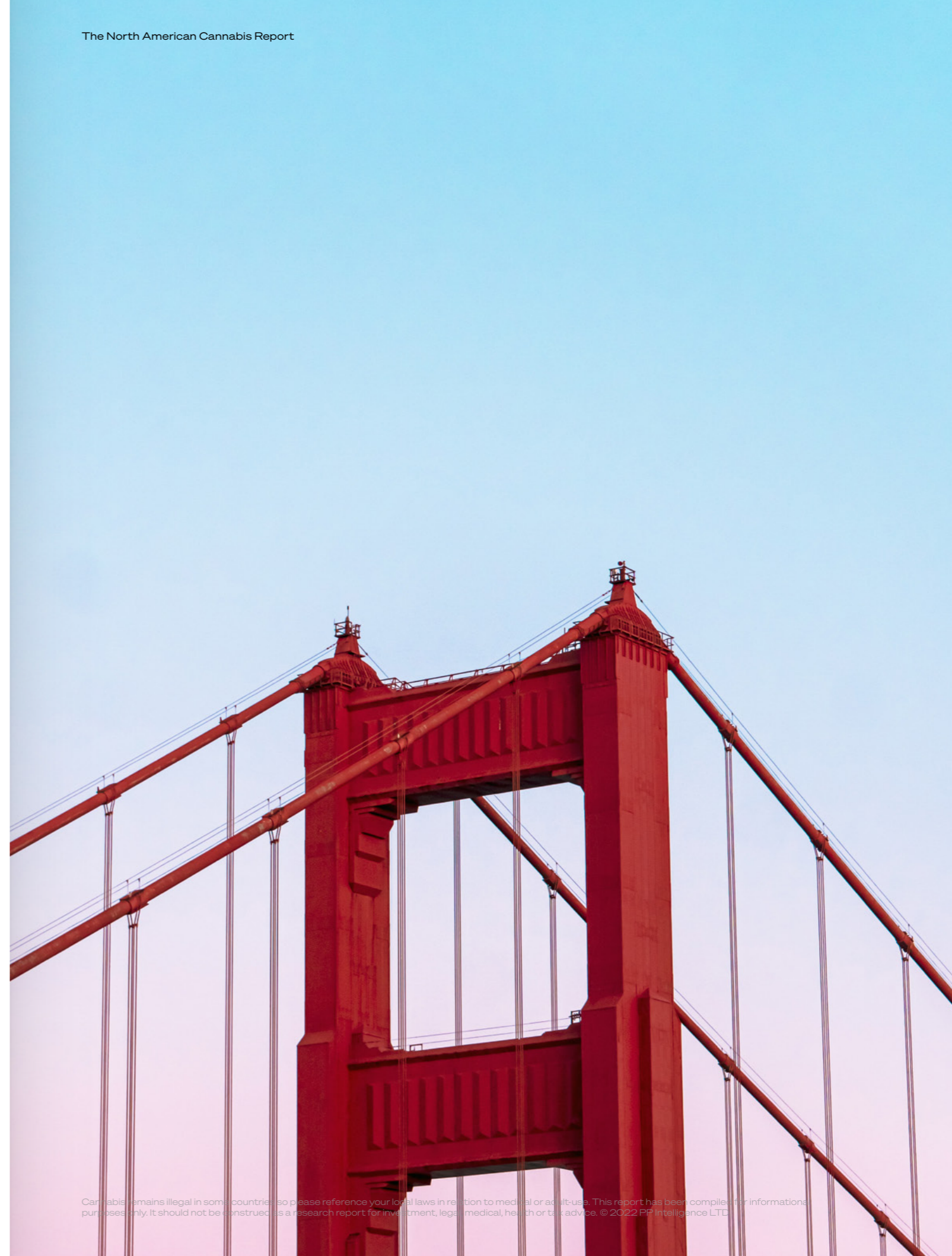


TABLE OF CONTENTS

01
Definitions

05
Methodology

07
Executive
Summary

15
Trends -
North America

43
Trends - Canada

55
Trends - USA

71
Expert Interviews

79
Acronyms

Definitions



Adult-use cannabis

While some use the term 'recreational cannabis' adult-use cannabis better encapsulates the broad list of non-medicinal purposes of cannabis use which include recreation, as well as socialising, euphoria, relaxation, sleep, creativity, spirituality and more.

Cannabidiol (CBD)

Cannabidiol, known as CBD for short, is one of two major cannabinoids found in the cannabis sativa plant. The psychoactive but non-impairing compound can be smoked and vaped in flower form, or extracted for use in a wide variety of topical, ingestible and concentrated formats. It is used for anxiolytic, pain-relieving, anti-inflammatory and neuroprotective purposes, and is believed to counteract the impairing effects of THC. In 2018, the US Food and Drug Administration approved Epidiolex®, a pharmaceutical drug used to prevent seizures, which contains CBD.

Concentrate

Cannabis concentrates are products in which cannabinoids are extracted and isolated from the cannabis plant to create highly potent substances that can be vaporised or smoked. Some concentrates are made using solvents, and include shatter, budder, wax and distillate. Other concentrates are made without solvents, and include substances such as hash and rosin.

Decriminalisation

This refers to the removal of criminal status from a certain behaviour or action. This does not mean that the behaviour is legal, as non-criminal penalties may still be applied. With respect to cannabis, this concept is usually used to describe laws addressing personal possession or use rather than drug supply.

Depenalisation

This refers to introducing the possibility or policy of closing a criminal case without proceeding towards punishment. Depenalisations reduce or remove the likelihood of criminal prosecution for an act, while not explicitly decriminalising it.

Delta-8 Tetrahydrocannabinol (delta-8 THC)

Delta-8 tetrahydrocannabinol, better known as delta-8 THC, is a psychoactive cannabinoid found in the cannabis plant. It is an isomer of delta-9-tetrahydrocannabinol (THC), and is less impairing than the more thoroughly researched delta-9 THC compound. It isn't naturally found in large concentrations in the cannabis plant and is therefore often chemically concentrated from CBD. It is not sold in Canada. However, the 2018 Farm Bill in the United States, which legalised hemp, failed to address delta-8 THC. Now, products containing the compound, which is referred to as 'diet weed', are available for sale in several states in the US.

Delta-9 Tetrahydrocannabinol (THC)

Commonly referred to as THC, delta-9 THC is the psychoactive cannabinoid found in the cannabis sativa plant which delivers the 'high' effects. It is more tightly regulated than other cannabis compounds, such as CBD, because of its impairing and sometimes addictive and/or habit-forming effects. It is used for both adult-use and medicinal purposes, such as for pain relief, appetite stimulation and anti-nausea. Like CBD, it can be smoked, vaped and extracted for use in concentrates, topical creams and ointments as well as edible products.

Edibles

Cannabis edibles make up one of the fastest-growing categories in North America as more consumers turn to non-smokable forms of ingestion. Pre-legalisation, edibles were often made with cannabis-infused butter or coconut oil, and added to baked goods such as brownies to be eaten. In the post-prohibition era, 'gummies', or chewy candies, are the most popular cannabis edible product. There are also infused chocolates, beverages (sometimes categorised as infused liquids), lozenges and more.

Flower

Made up of the dried, cured flowering components of a female cannabis plant, flower is the most popular cannabis product in North America. There are countless 'strains', or cultivars of cannabis, which have been bred and replicated to create reproducible varieties, which all have distinct flavours, aromas and effects. Flower, which is also referred to as 'bud', 'herb' and 'weed', can be smoked, vaped or heated to extract its cannabinoids and other compounds to create edible products.

Hemp

Hemp is a cannabis sativa plant with low concentrations of THC. In both Canada and the United States, hemp is defined as containing 0.3% THC or less in its flowering heads and leaves. There are a range of hemp cultivars, some of which yield high concentrations of cannabidiol (CBD), some which are best used for industrial purposes, such as fibre, and others which are best-suited for foods, such as hemp seed. It is federally legal and regulated across North America.

Legalisation

This refers to making an act lawful when previously it was prohibited. In the context of drugs, this usually refers to the removal of all criminal and non-criminal sanctions, although other regulations may limit the extent of the permission. This term is generally used in the context of drug supply.

Licensed Producers (LPs)

In Canada, licensed cannabis cultivators and manufacturers are commonly referred to as licensed producers, or LPs for short. There are different types of licences under the LP umbrella, including cultivation, sales (direct from the LP rather than a retailer), and processing. In Ontario, they are permitted to own up to 25% of a company with a retail licence, but all cannabis is sold to a provincially run wholesaler, who then sells it to retailers. There are currently more than 800 LPs registered with Health Canada. The largest LPs in Canada by market capital are Ontario-based Canopy Growth, New York-based Tilray and Ontario-based Cronos Group.

Medical cannabis

Medical cannabis is used for medicinal and therapeutic purposes. In areas where medical cannabis is legal, doctors don't prescribe it. Instead, they assess a patient's symptoms and needs, and can issue an authorisation document to permit them access, often capped to a purchase limit per month and sometimes with a THC limit. In Canada, medical cannabis is increasingly accessed through conventional pharmacies but also directly from licensed cultivators. In the US, medical cannabis is accessed from medical dispensaries, often with a doctor on-site or available via video call.

Multi-state operators (MSOs)

Multi-state operators (MSOs) are American cannabis companies that operate in more than one state. Interstate import-export does not yet exist so MSOs have to secure cultivation and sales licences within each state they operate in, as well as through distribution channels. Increasingly, MSOs are vertically integrated retailers with both cultivation, brands and dispensaries under their purview. The largest MSOs by market capital are Illinois-based Green Thumb Industries, Massachusetts-based Curaleaf Holdings and Florida-based Trulieve.

Shake and trim

Cannabis shake refers to the low-grade flower that 'shakes off' from the plant as it is handled for trimming and packaging. In some markets, it is collected and can be purchased in bulk to be smoked or used to make cannabis edibles. Trim refers to the plant cuttings or trimmings, such as the leaves and stalks of the cannabis plant, which are detached from the flower. It too, can be used to make homemade products, such as topical ointments and edibles.

Vaporisers

Also referred to as a vape, or vaping, vaporiser accessories have increased in popularity in the post-prohibition era. There are multiple ways of vaping cannabis products. With dry herb vaporisers, dried cannabis flower is added to a handheld or table-top accessory to be heated up before the vapour is inhaled. Vape cartridges contain vape-able liquids, and can be attached and detached to handheld vaporisers, often referred to as batteries. Most vaporisers are rechargeable, although some markets offer disposable gadgets without replaceable cartridges.

BUSINESS OF CANNABIS: NEW YORK

3 NOVEMBER 2022

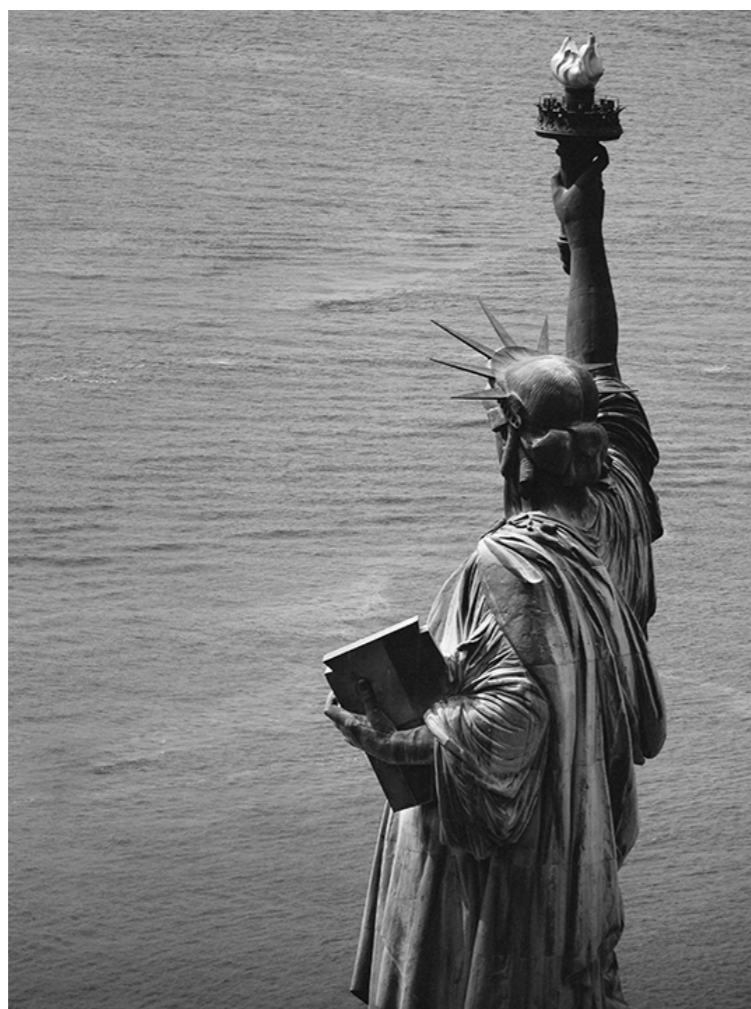
This **November 3**, we will once again welcome business leaders and policy makers to the heart of the Big Apple, to explore this exciting corner of the cannabis market in North America, and identify trends and share ideas on the future of its development. Will you join us at this important stage of New York's cannabis journey?

Register Your Tickets Today at
cannabisnewyork.live

PROHIBITION
PARTNERS

Business
of
Cannabis

Methodology



Market research

Prohibition Partners conducts research with industry experts to provide further information on investment opportunities, technical detail, as well as market strategy and insider opinion on market challenges, opportunities and trends. Prohibition Partners conducts surveys at the international level, with tens of thousands of respondents internationally which then informs our writing generally and the results are reported on extensively in our consumer report series. Responses to recorded interviews are published in full and represent the opinions and views of the individuals concerned. They do not necessarily reflect views held by Prohibition Partners. Industry experts are selected in accordance with their company or brand's activity within the selected market on which the report is written. Desk research is also conducted to inform the research and support the findings from our own research. We strive to ensure that all data referenced from other published sources is accurate and is the latest available at the time of writing.

Market sizing

All of the figures contained herein represent an attempt at estimating the most likely scenario of development in each covered market. Prohibition Partners' market sizing methodology for the North American Report 2022™ involves calculations for the projected sales of cannabis products based on known data from existing markets which is used to form a model that is then adapted to project values for current and future markets which do not have such data. However, all of the reported figures are very sensitive to the necessary assumptions of the model and there are several inevitable sources of uncertainty that come with such a modelling exercise in relation to: whether current markets will behave as they currently are, or have done, in the past; when and how legalisation will occur and finally whether future markets will behave in a predictable manner based on known data points from established markets.

A major factor in the progress of sales in cannabis markets is the progress of legalisation of the plant across the globe. Predicting the evolution of such regulations is difficult. We analyse the news and connect with our extensive network to keep track of political and regulatory developments, but the model can be very sensitive to even slight changes in the time frame or scope of measures being currently discussed, as well as any unforeseen macroeconomic, political or global transformations. COVID-19 and any related delays to supply and regulatory progress have been incorporated into our most recent model.

The main sources of information which inform our forecasting exercise are:

- Official data obtained from regulators, insurance companies and monitoring institutions.
- Company financial reports and news releases.
- Reviews of current clinical trials and patents in the cannabis space and the likely impact of new products and indications.
- Assessment of prevalence, eligibility and dosing through clinical studies, real-world data and literature reviews.
- Proprietary consumer research, public opinion and policy analysis.
- In-depth interviews with industry stakeholders and data-sharing agreements with key operators.

Medical cannabis sizing

Our calculations for the North American Report 2022™ use data on disease prevalence and patient penetration to assess the eligible population in each region covered. Our medical market sizing model then incorporates known data and estimates from existing markets on the sales of medical cannabis, patient numbers, product formats, dosages and pricing to establish an estimated market size for sales of medical cannabis. This model is applied to all regions, with more region-specific modelling carried out for the larger markets.

Adult-use sizing

Our recreational cannabis market sizes are based on comprehensive data made available by public bodies in regions with legalised adult-use cannabis sales. These are used as the basis of projections for these regions, and they also inform our models for US states we believe will legalise adult-use cannabis within the relevant timeline. Also taken into account are the United Nations Office on Drugs and Crime (UNODC) yearly prevalence figures of cannabis use in order to calculate the eligible population for a legal recreational scheme. Our assumption is that legal cannabis will increase its share of the market vis à vis the illicit market during the first few years, thereby following the observed trends in Canada, the US and Uruguay.

Executive Summary



In 2021, the North American cannabis industry continued to grow and showed more promise than ever, with New York, New Jersey, Virginia, New Mexico, Montana and Connecticut all enacting, amending or passing adult-use cannabis legislation during the year. This state-by-state approach to legalising adult-use cannabis has especially benefited America's larger multi-state operators, who are gradually expanding into emerging state markets, acquiring licences and establishing cultivation facilities and distribution channels as new laws are implemented.

Despite a wealth of optimism for full cannabis legalisation in the United States after President Joe Biden was elected and the Democrats took control of the Senate, there has been very little movement by both House Representatives and Senators to pass new laws that would create a clearer path for the industry.

President Biden reiterated his administration's commitment to pursuing cannabis decriminalisation and expungements for those with non-violent cannabis convictions in February 2021. However, those issues were not prioritised by the newly elected government. Even progress on the more limited Secure and Fair Enforcement Act (SAFE Banking Act) fizzled once again. The SAFE Act would protect financial institutions who want to work with the legal cannabis industry, which would make raising capital easier and transactions in cannabis stores smoother and safer.

The patchwork approach to cannabis regulation in the US, where every state has its own unique cannabis laws, is an opportunity to test out and discover; what the appropriate excise tax rates are for cannabis, how many retail and cultivation licences should be available to the industry, whether they should be limited or unlimited, and what the best steps are to reduce illicit cannabis sales and assist unregulated sellers and cultivators to join the new, legal framework.

North of the border, Canada's largest cannabis companies have struggled to retain or grow market share domestically, while a

large, fragmented and newly licensed group of craft cannabis cultivators have eaten into their share with new premium, quality products. Now, after some 'less than rewarding' mergers and acquisitions, they are streamlining, right-sizing and finding ways to enter emerging European markets and position themselves for US legalisation. Securities law prevents them from engaging in 'plant-touching' activities in the US such that they're having to get creative; buying options to acquire smaller companies, if and when legalisation passes, or acquiring non-cannabis companies that can become cannabis-oriented post-legalisation.

Right-sizing is playing out in different ways all across North America. In Canada, inventory still massively outweighs sales. Ontario's private cannabis retail landscape boomed in 2021, with the province licensing more than 1,200 stores. Now, many are expected to be acquired or shuttered in 2022 due to slimmer margins and lower monthly sales because of increased competition.

Last year, 2021, was also a year for identifying what needs to be refined in the regulatory landscape. The Cannabis Act is due for its three-year review, but Health Canada has advised that it has not formally launched that process. When they are ready, the industry has already created a list of priorities: the arbitrary US\$1/gram tax rate that has become unsustainable, especially for smaller cultivators, to absorb as prices have compressed; the low ten milligrams THC limit on packages of edibles; and the strange

volume-based limit on cannabis drink purchases, which doesn't even constitute a six-pack.

While the pace of federal reform has been slow and certainly reflected in the stock market and valuations, regional efforts are showing a great deal of promise. Revenues are growing rapidly, margins are expanding and markets are maturing, all signalling a bright future for the burgeoning North American cannabis industry.

Prohibitions Partners has combined all of this opportunity with current consumer behaviours and anticipated legislation on both the adult-use and medical sides to create sales projections from 2022 to 2026. In the US, adult-use sales are estimated to reach US\$18.5 billion in 2022 and grow by 218% to US\$58.8 billion by 2026. As adult-use markets grow, they will eat into medical markets. With that in mind, estimated sales will grow by 41.5% between 2022 and 2026, from US\$9.2 billion to US\$13.1 billion.

Canadian adult-use sales are estimated to experience healthy growth as well, from just over US\$4 billion in 2021 to US\$7.6 billion in 2026, or by 91%. The federal adult-use programme will flatten medical sales, however, which are expected to decrease by 11%, from US\$440 million to US\$379 million.



PROHIBITION PARTNERS

THE NORTH AMERICAN CANNABIS REPORT
3RD EDITION

Premium Packages

- £790**
LATAM bolt-on (only)
- £1,490**
North America Report: 3rd Edition + Market Sizing
- £1,890**
North America Report: 3rd Edition + Market Sizing + LATAM bolt-on



ARC MEDAG HUB, BUILDING ON SUCCESS



Professor Tony Bacic

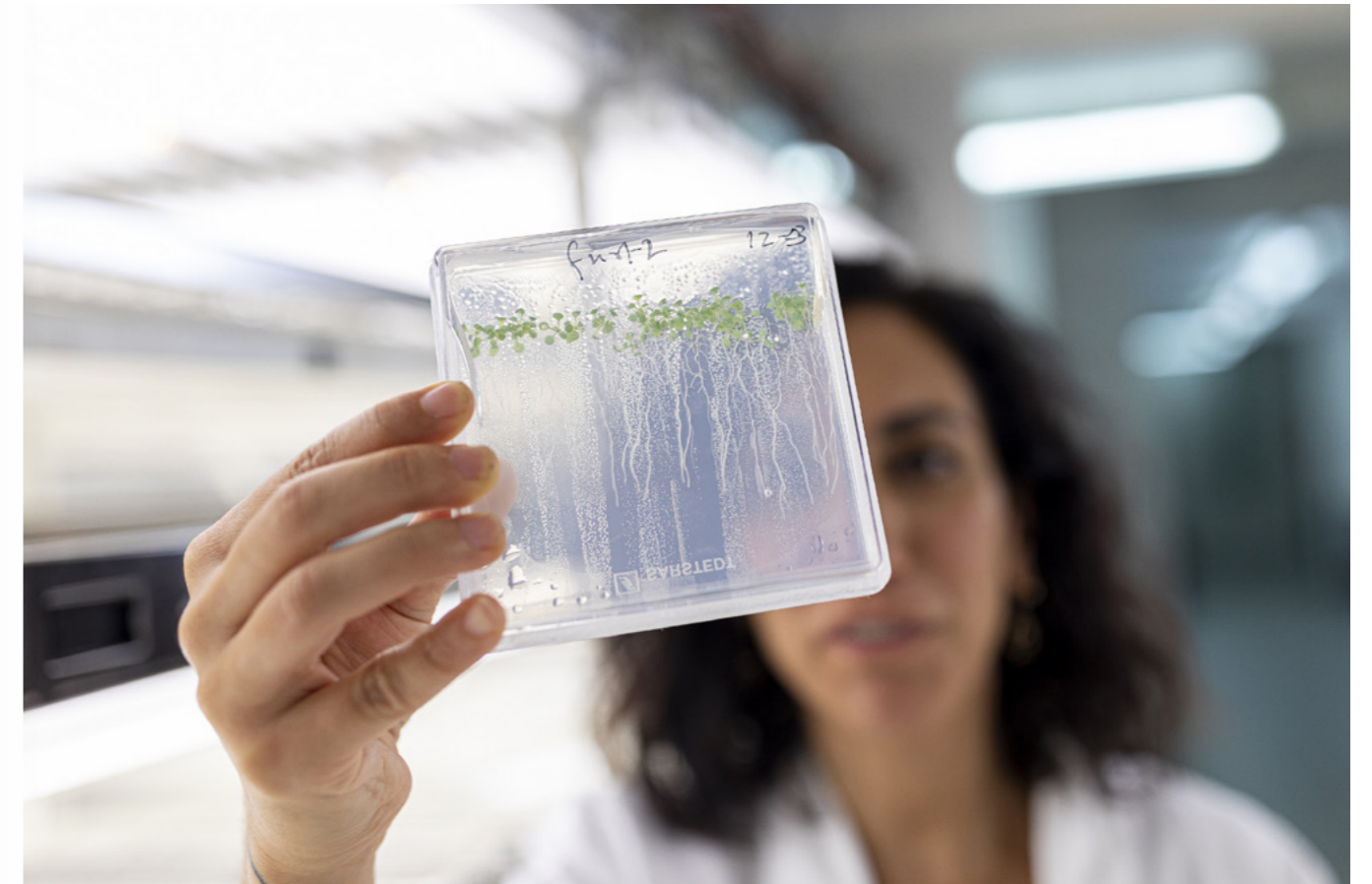
Director
ARC MedAg Hub

The ARC MedAg Hub combines academic and industry research and expertise to drive better cultivation, breeding and manufacturing practices to support the medicinal agriculture industry and ultimately improve health outcomes for patients.

The MedAg Hub brings together industry, world-class researchers, and state-of-the-art facilities. Our current focus is on medicinal cannabis, but with programs in alkaloid poppies, industrial hemp and essential oils (lavender). We research medicinal cannabis plant varieties, commercial cultivation practices and extraction technologies. We are studying how medicinal cannabis plants, and their active ingredients, respond to environmental and nutrient conditions and are developing phenotyping and hyperspectral imaging solutions to link these traits, and to link other impacts such as pests and diseases. We are also working with clinical researchers by in-vitro or ex-vivo screening to identify the bioactive components of the cannabis extracts, addressing the legitimate concerns of health practitioners seeking evidence-based research into the quality, purity, and efficacy of cannabis products.

Our state-of-the-art facilities include

- a cellular resolution 'omics' (transcriptomics, metabolomics and proteomics) facility in agricultural systems that has the capacity, when linked to phenomics (hyperspectral imaging), to translate to the field. and
- Secure and Controlled Environment Rooms and Glasshouses for research on plant growth and responses to abiotic and biotic challenges



Building on our success, we are expanding the scope of our research as well as building new highly controlled plant phenotyping capability. MedAg Hub Director, Professor Tony Bacic said "The new phenomics facility will provide a global edge for medicinal agriculture and protected cropping. The technologies we're developing will identify novel plant traits and translate these data to crops much faster and with greater accuracy than ever before. It will train the next generation of agricultural researchers in multiple disciplines, ranging from engineering, data analyses and integration, plant physiology and bio-technology that will drive agricultural innovation in the coming decades to ensure economic and environmental sustainability."

The MedAg Hub is located in Melbourne, Australia, in the La Trobe University Research and Innovation Precinct that is home to AgriBio and to global companies, start-ups and research organisations spanning agriculture, food, biotechnology and digital innovation creating an ecosystem for industry-led research and development.

Our future strategy and directions include expanding research on medicinal cannabis, hemp, poppies, psilocybin, essential oils, traditional medicines, and other plant-based products.



The ARC Research Hub for Medicinal Agriculture works to apply knowledge and leading-edge innovation by transforming high quality, plant-derived therapeutics production into an integrated industry that spans primary producers and manufacturers.

Our future strategy and directions include expanding research on medicinal cannabis, hemp, poppies, psilocybin, essential oils, traditional medicines, and other plant-based products. Specialist phenotyping for optimising cultivation and genetics. Extraction technologies for bioactives, structure-function studies, protein expression systems, and more!

Contact us if you want to learn more or potentially join us as a future partner.



medagriculture.com



Trends - North America



01

COVID-19 has had both positive and negative impacts on the cannabis industry. More flexible distribution methods such as delivery have been made permanent in some jurisdictions, but the virus has also negatively impacted the supply chain, particularly in cannabis accessories.

02

Mergers and acquisitions have accelerated through 2021 and early 2022, as American MSOs work to dominate the US market and Canadian companies aim to be well-positioned for federal cannabis reform.

03

Cannabis technology companies have gone public, raising hundreds of millions to build out point-of-sale and data collection systems to support retailers and producers.

Legalisation

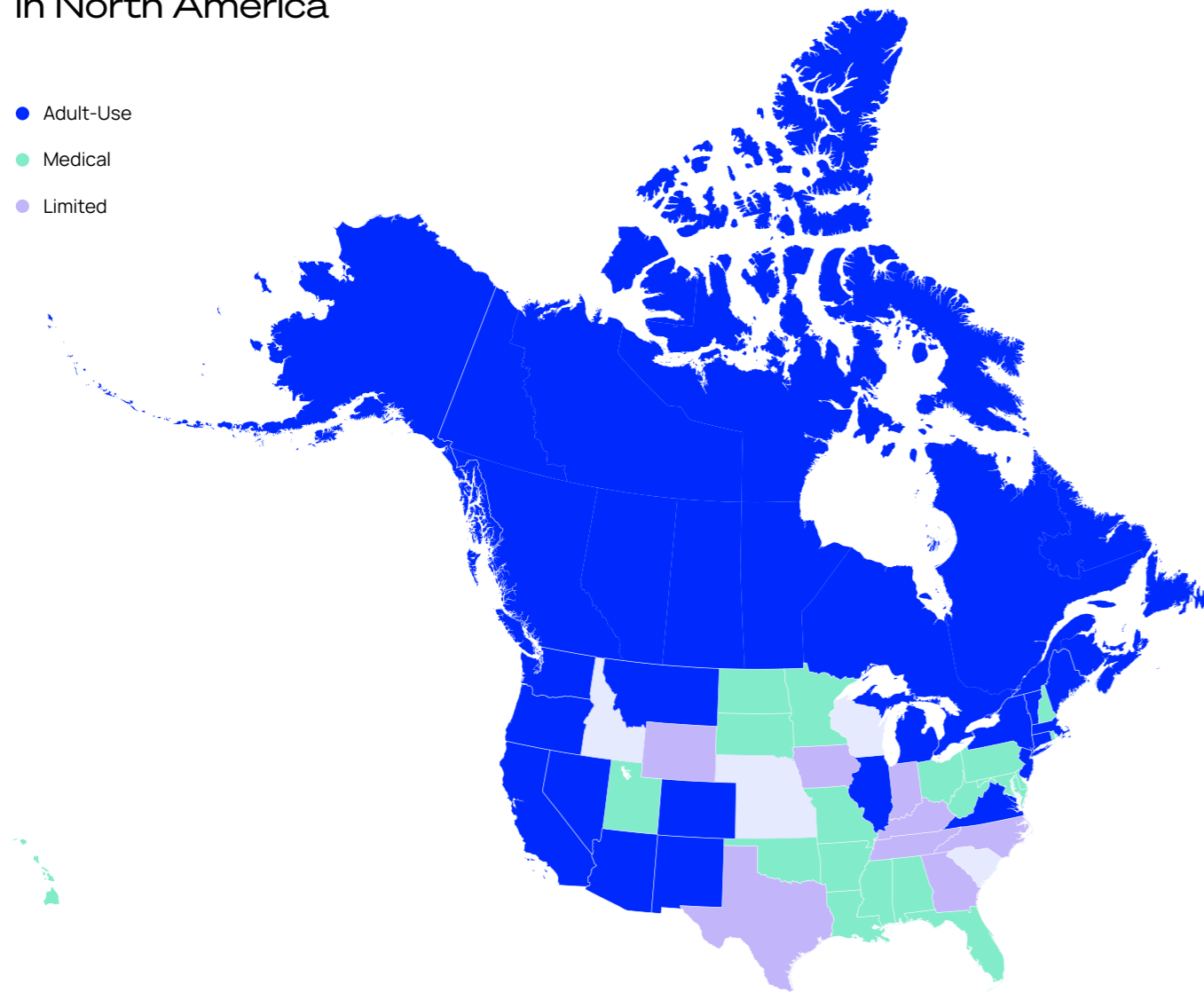
Local efforts to decriminalise and legalise cannabis in the US brought big wins in 2021, particularly in (but not limited to) the northeast. Also, on the medical front, particularly in the southern US, several states have passed or expanded existing but limited medical programmes.

In Canada, medical cannabis has been legal since 2001, but the personal or designated grower programme, for medical purposes, has been under slightly more scrutiny by Health Canada in recent

years, with a recent report showing that 82 personal grows were inspected in 2020 compared to just nine in 2019. Canada has also experienced some promising iterations to local regulations, where distribution channels like delivery, which were allowed due to the pandemic, were made permanent in Ontario and online cannabis ordering was relinquished by the province of Alberta and handed over to private retailers. However, home cultivation is still not legal in all provinces. Advocates in Manitoba and Quebec are still working towards that goal.

Map of Cannabis Legality in North America

- Adult-Use
- Medical
- Limited



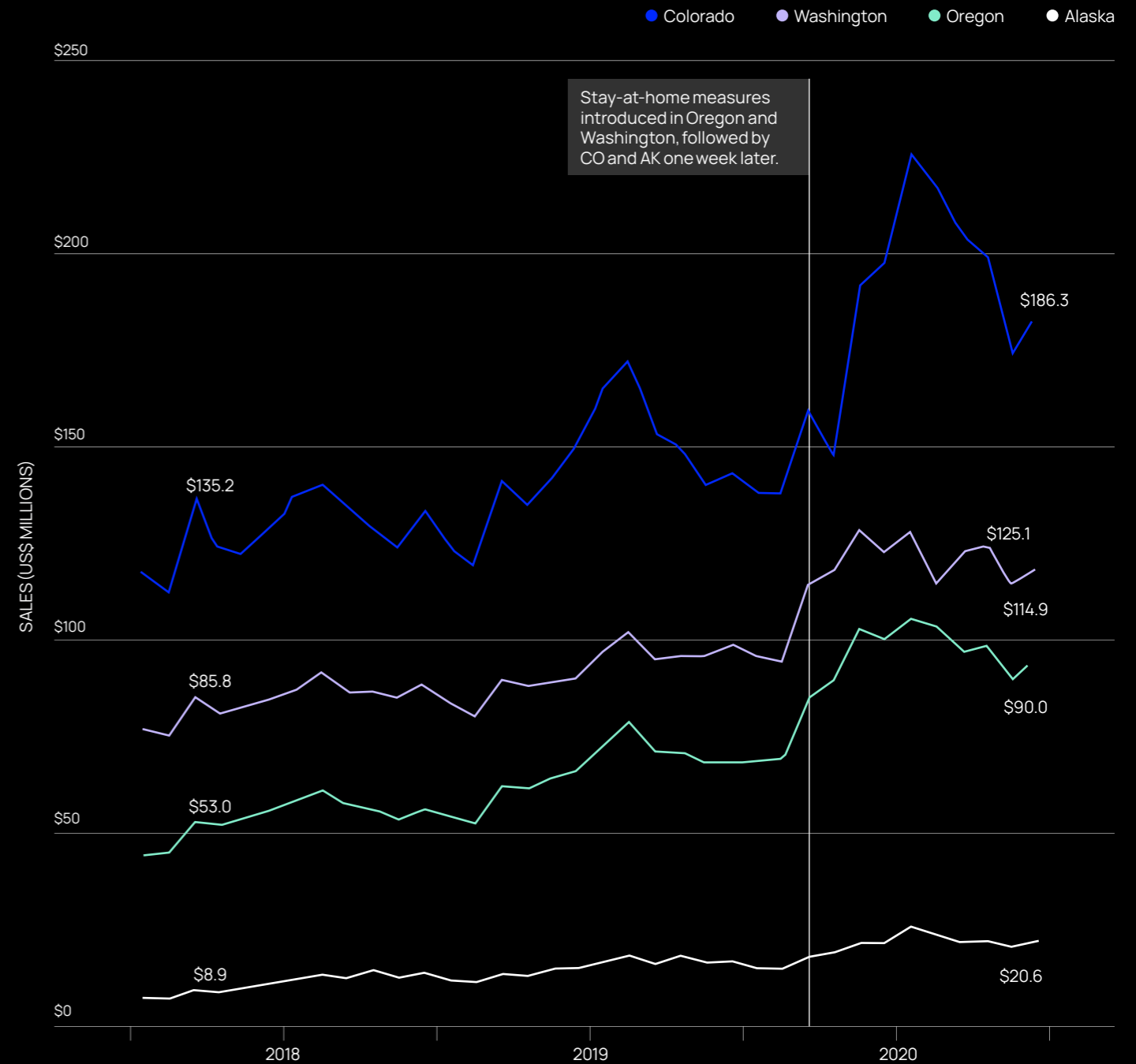
Source: Prohibition Partners, change Limited to Limited Medical

COVID-19's impact

The effects of lockdowns and stay-at-home orders that created sky-high adult-use cannabis sales in 2020 continued through 2021 across North America, with more record-breaking regulated sales

as new markets emerged, restrictions loosened, and distribution channels that were first introduced as a result of the pandemic were made permanent in some jurisdictions.

US cannabis sales spike during lockdown



Source: Prohibition Partners, Government agencies.

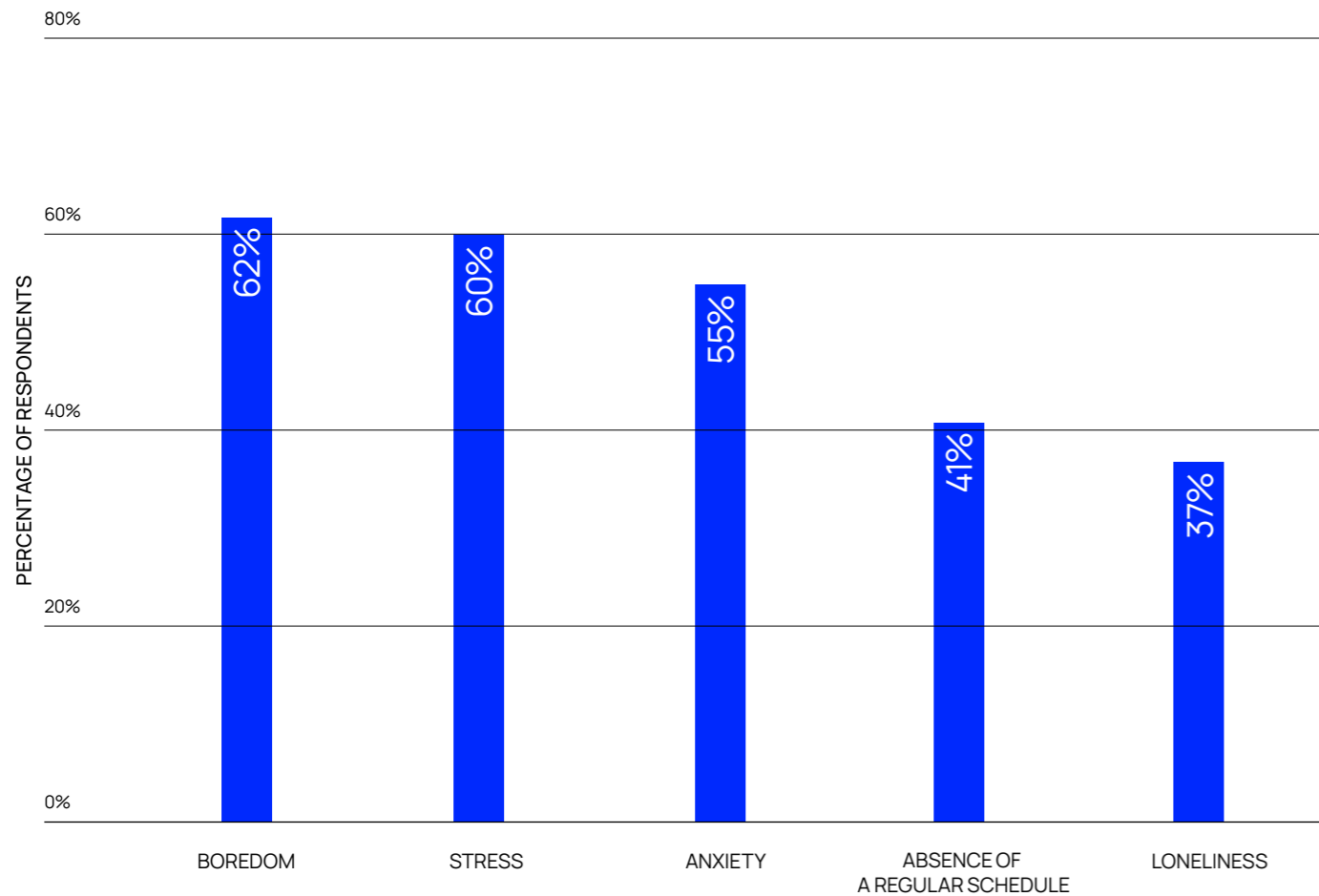
In the US, sales grew in 2021, albeit at a slower pace than in 2020, in the more mature markets in the western US due to a combination of market saturation, low prices and the absence of stimulation cheques in the second year of the pandemic. In new markets such as Arizona and Michigan, sales have soared beyond projections, showing that as more states kick off adult-use sales and implement new cannabis laws, opportunities will grow.

In Canada, the numbers of those who had consumed cannabis in the previous 12 months dropped slightly in 2021 from 2020. According to the Canadian Cannabis Survey 2021, 29% of males have used cannabis at least once in the past year vs. 31% in 2020. Of the female participants, that number has dropped incrementally from 23% in 2020 to 22% in 2021. Despite this, the amount of

legally sold cannabis has increased, with a 30% increase in the packaged units sold on the adult-use market for the first nine months of 2021 compared to the same period in 2020.

Of those who have used cannabis in the last 12 months, 49% have said that they were using the same amount of cannabis as before the pandemic. That's a decrease from 56% who had said they were using the same amount of cannabis pre-pandemic. Twenty-nine per cent said their use increased, which is up by 7% since 2020. For that cohort, the trend skews towards the young: 25% of those aged 25 and older have said they were consuming more; 46% of those between the ages of 16 and 19 have said their use had increased; and 40% of those between 20 and 24 have reported an increase in consumption.

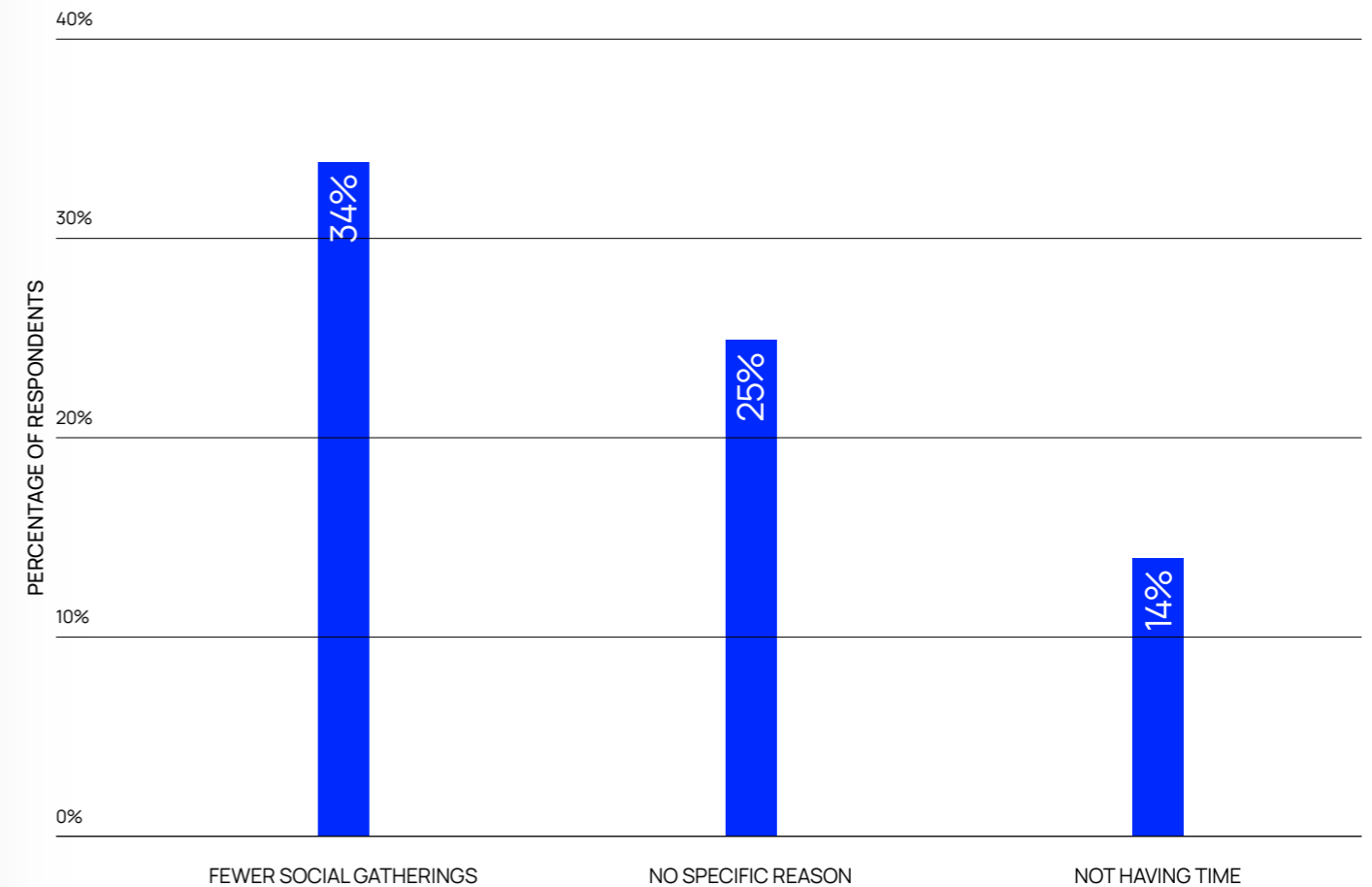
Reasons for increased use, Canadian Cannabis Survey 2021



Source: Government of Canada, 2021, Prohibition Partners

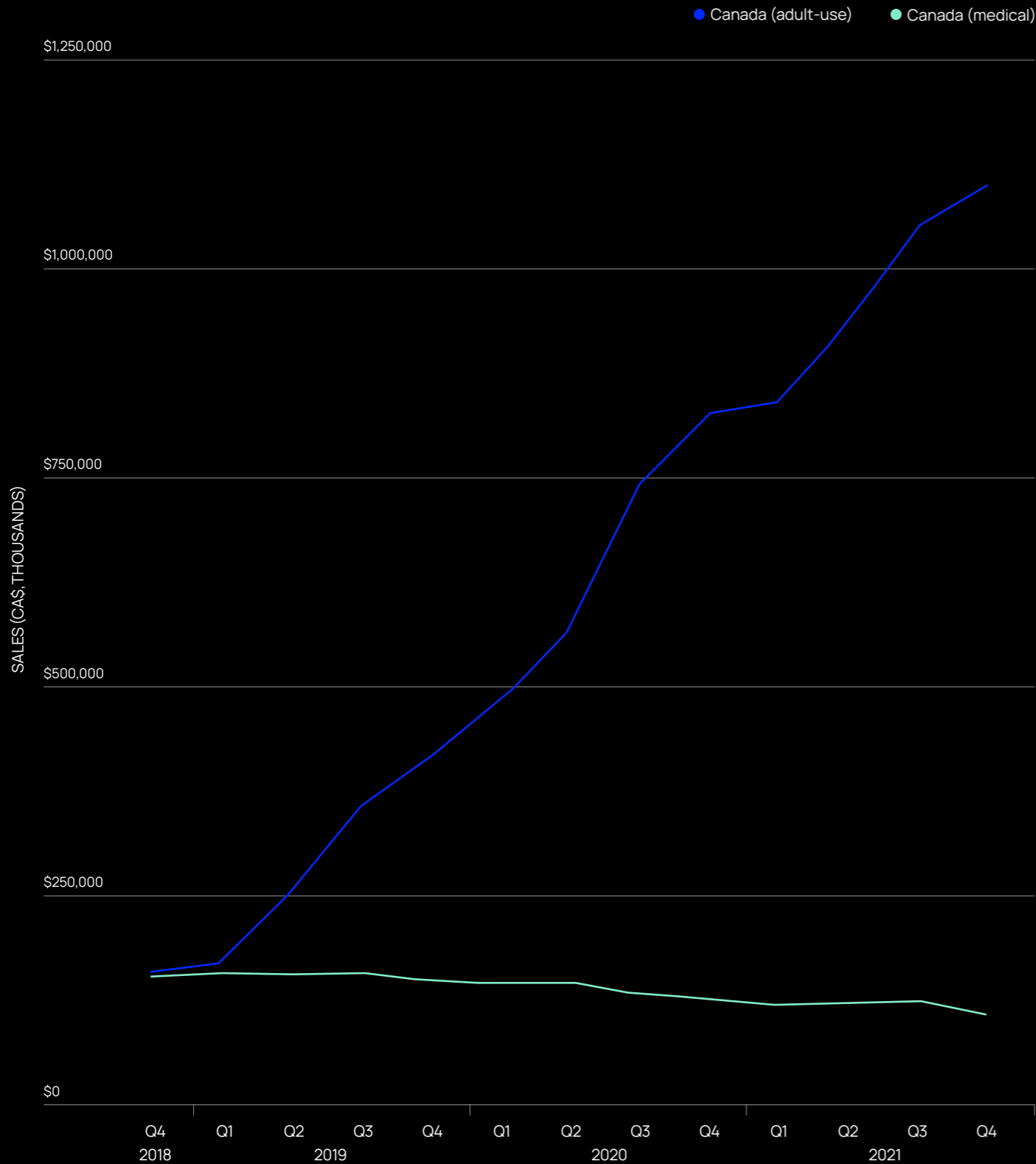
The increase in adult-use sales is partially attributable to the shift from illicit to legal sales, and the increased number of storefronts in populous provinces like Ontario and British Columbia. The plateauing of medical cannabis sales is attributable directly to the shift of consumers from medical to adult-use.

Reasons for decreased use, Canadian Cannabis Survey 2021



Source: Government of Canada, 2021, Prohibition Partners

Canadian adult-use vs. medical sales



Source: Statistics Canada, 2021

Delivery services

The pandemic has also solidified some of the more flexible distribution channels that had been first introduced in 2020 after stores were deemed essential in many North American jurisdictions.

In 2021, Colorado and Massachusetts began licensing cannabis delivery services for the first time. In Oregon, regulators have relaxed a few rules, including doubling the limit on how much cannabis can be bought at any one time and allowing delivery across county lines and city limits to ensure those in areas that opted out of cannabis retail can still buy regulated products.

From data collected through its purchasing portal, Weedmaps reported that 60% of orders in the first half of 2021 were for delivery – an increase of 97% compared to the first half of 2020. The company also reported that the average delivery time decreased to 5.6 hours in 2021 compared to 7.7 hours in 2020, signalling that delivery services have become more efficient.

Several states have also seen a number of M&A deals involving delivery which underscores its growing value in the marketplace. In Florida, Chicago-based Cresco Labs has closed its acquisition of medical cannabis company Bluma Wellness, which includes its delivery service, for US\$213 million. New York-based Columbia Care has acquired MSO Green Leaf Medical, which operates dispensaries and delivery services in Virginia and Maryland, for US\$240 million.

In Ontario, Canada's most populous province, the provincial government has made delivery and curbside pick-up permanent for retailers after introducing it in 2020. In Alberta, the province has decided to relinquish its e-commerce and delivery services to the private sector, which will take over in spring 2022. In June 2021, British Columbia regulators finally greenlit cannabis delivery from retailers, which went into effect one month later.

Disruptions

COVID-19 has brought some tough challenges for the cannabis industry, most notably in the supply chain at the tail end of the year.

Through most of the pandemic, the cannabis industry had largely been insulated from the supply chain woes facing so many other industries worldwide, since cultivation, manufacturing and processing occurs domestically in North America.

The industry still relies on shipments of supplies such as vaporiser hardware, chips and cartridge-filling equipment, LED lighting for indoor grows, and some packaging such as tins. The emergence

of the Omicron variant put a strain on Chinese manufacturers and shippers, driving some companies to switch up suppliers or find creative solutions to delayed plans.



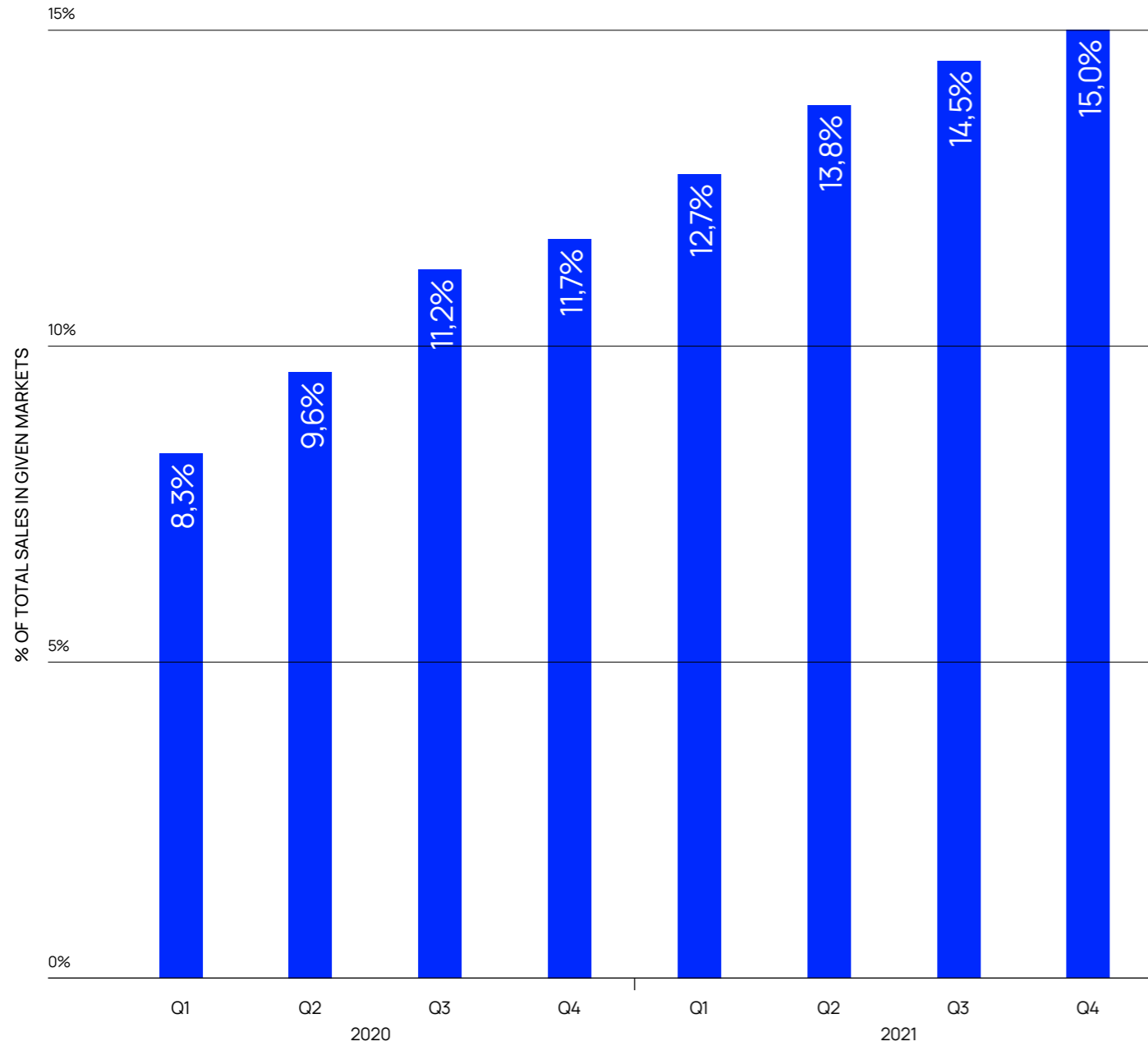
Californian edibles company Kiva Confections, for example, had planned to sell a holiday-themed edibles product called Holiday Punch, with a winter wonderland scene printed on the package. After the shipment was included in a massive backlog of containers headed to Long Beach, it didn't arrive until well after the holidays. The company has subsequently decided to print stickers on each tin, re-branding the product to 'Post-Holiday Punch: Supply Chain Chaos'.

Adult-use demographics and product trends

Men still purchase the vast majority of cannabis in 2021, out-buying what women buy by more than half, according to Headset.

Growth is largely attributed to Generation Z consumers, whose sales share grew steadily through 2020 and 2021.

Gen-Z* cannabis sales during the pandemic in several states



Source: Headset. States included: CA, CO, MI, NV, WA

* Gen-Z refers here to the consumer group up to 25 years old



Millennials are also credited with fueling the American adult-use cannabis boom in 2021, according to Weedmaps data, with that generation buying between 54% and 62% of each category – concentrates, edibles, flower, topicals and vape pens – in their orders. They are also the most likely to try something new, with 56% reporting that they had tried a new product and would buy it again and 36% saying that they had experimented with new products. Male millennials are particularly adventurous and open to switching products and formats.

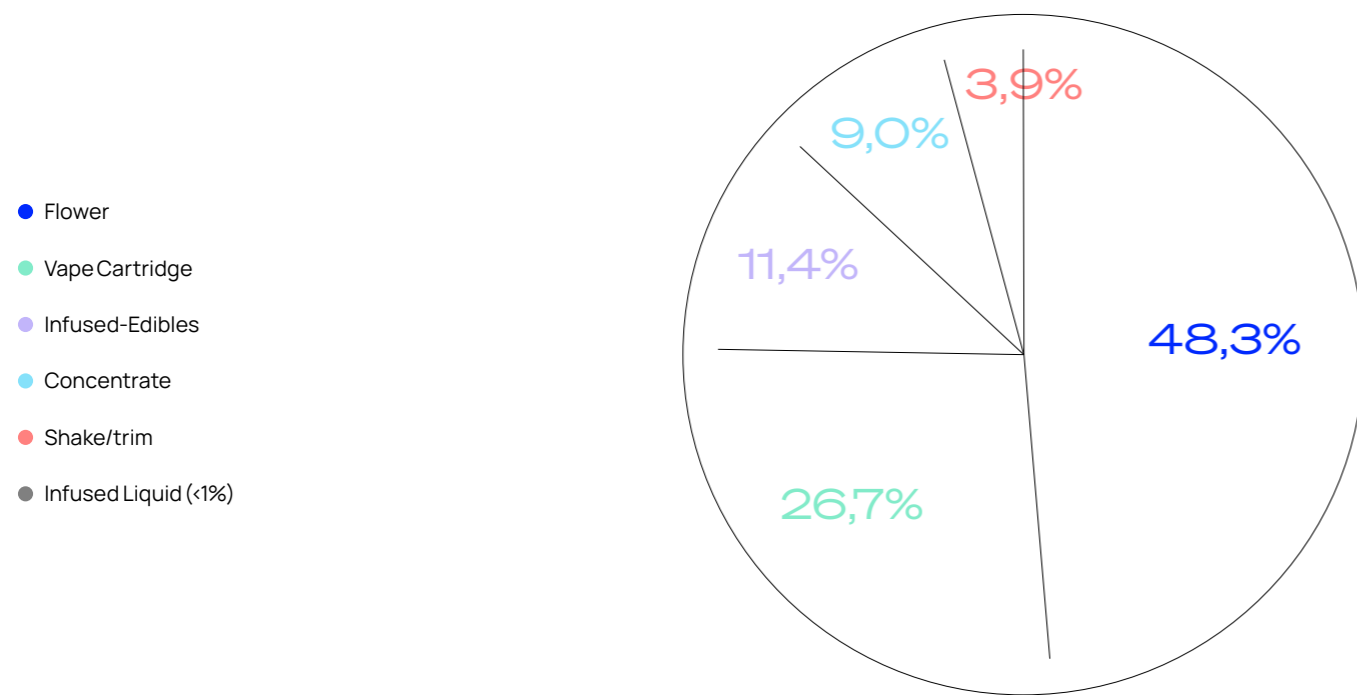
In the first half of 2021, Gen-X was most likely to buy topicals (27%), edibles (24%) and flower (19%). For the same time period, Gen-Z gravitated toward vape pens (25%), concentrates (22%) and flower (17%). Younger baby boomers (between 57-66) were more likely to stay loyal to the same products (60%), with some saying it can be expensive to risk buying something new. Gen-X were least likely to call themselves 'creatures of habit' when it came to trying new products (39%).

Edibles are also gaining the most momentum when it comes to popularity according to the report, where 69% of consumers reported that edibles are fueling more excitement and interest. Edibles also made their way to multiple 'best of' lists, according to the report, including those that contain delta-8 THC.

Non-THC or CBD cannabinoids such as cannabidiol (CBD) are also emerging as a trend in 2021, particularly in the Californian market where products containing significant CBD concentration captured 14% of the edibles market and are making gains in other states, too. Frequently combined with THC, CBD is believed to assist with sleep and insomnia though convincing research in human subjects is, as yet, lacking.

Flower is still king of all the cannabis categories, according to data collected by the state of Michigan, where flower made up the bulk of purchases throughout 2020 and 2021. Interest in discount products like 'shake' are growing in that state.

Cannabis product format sales in Michigan, 2021



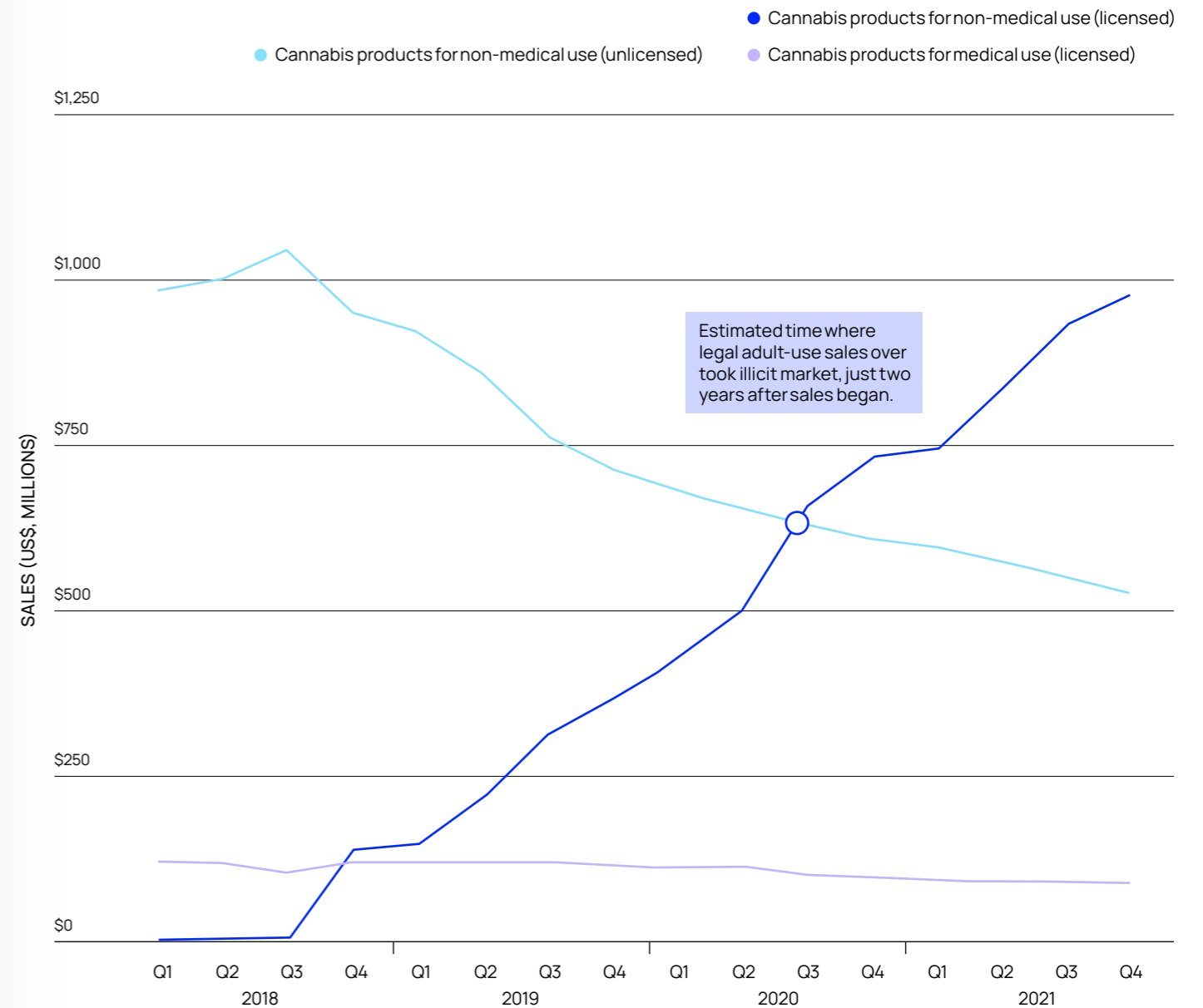
Source: Marijuana Regulatory Agency Statistical Report

The most recent quarterly review by the Ontario Cannabis Store shares sales data and market research insights from July to September 2021. According to the report, Canada's most populous province sold 39% of all regulated cannabis in the country, so it's a reliable snapshot into the national trends.

Significantly, the Ontario Cannabis Store estimates that the legal market share has increased from 47.1% to 54.2% in Ontario. Nationally, the Canadian Cannabis Survey says 43% of those who

had consumed cannabis in the previous 12 months had always bought from regulated sources, which is up from 37% in 2020. One reason is the exploding number of regulated cannabis stores in the province—1,115 at last count, which is more than the number of licensed liquor retailers in the region. The same situation is playing out across all jurisdictions in North America, where legalised cannabis sales are overtaking the illicit market slowly but surely, though specifics of regulation such as taxation levels play an important role in this.

Licit and illicit cannabis sales in Canada



Source: Statistics Canada, Prohibition Partners

Note: Licensed products here refer to products bought from a legal, licensed point of sale as opposed to an illicit source e.g. an unlicensed dispensary.

Importantly, shoppers appear to prefer the privately run storefronts over online purchasing through the provincial wholesaler for a number of reasons: the ability to locate preferred products among fast-moving inventory in stores; less time to acquire products through delivery or curbside pick-up; and the ability to ask questions about products and effects, as well as the possibility to pay with cash, which many retailers report is preferred by consumers. While the government-run online store sold US\$14 million between July and September of 2021, storefronts sold US\$299.3 million through that same period.

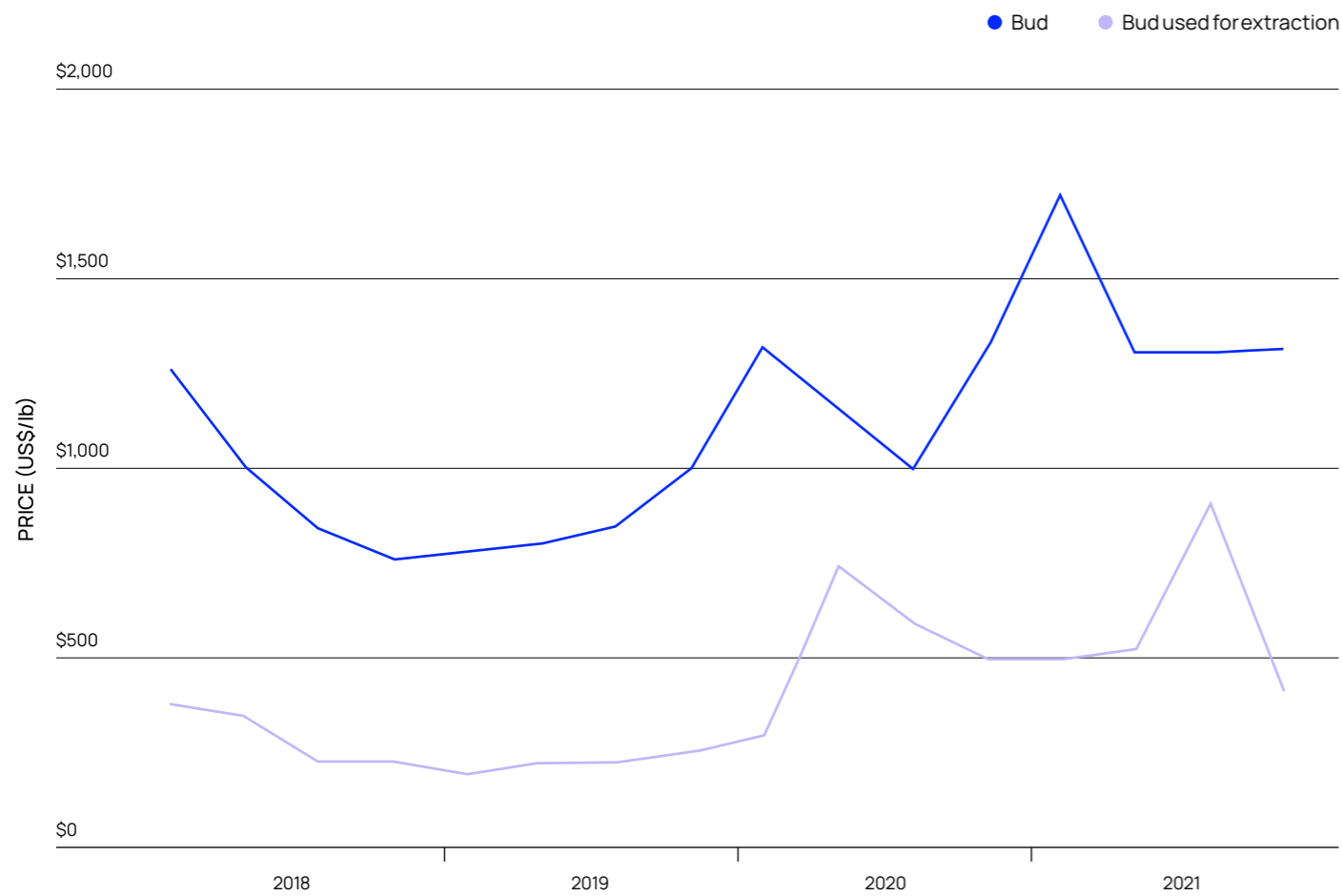
Volatile, unpredictable pricing

Price is also one of the few product differentiators available to consumers before trying a product. According to the Ontario Cannabis Store report for July to September 2021, price is the third most important factor for consumers, behind quality and potency. Prices vary wildly from state to state in the US and in the Canadian markets.

In some of the older markets like Canada and the western US states such as California and Oregon, oversupply has driven prices down. In response, suppliers are right-sizing. Quebec-based HEXO Corp. for example, shuttered three cultivation facilities in 2021 in an effort to streamline production. In newer markets such as Arizona, high demand and lower supply drove prices up in 2021.

Wholesale prices have been quite volatile in many US regions in recent years. In Colorado, bud prices have undergone steep price compression from a high of US\$ 2,000 per pound in 2015 and remain changeable to this day. For the period covering January 2018 to December 2021, on average, the change in pricing for cannabis buds from the previous quarter has been 15%, and this figure is 28% for buds used in extraction, making it difficult for operators to forecast revenues and margins.

Colorado wholesale cannabis prices



Source: Colorado Department of Revenue, Prohibition Partners



To add to consumer confusion, prices at points of sale are extremely varied, and do not necessarily correspond to potency alone. In California, for example, 100-milligram THC edibles can be priced as low as US\$3.33 to as high as US\$50.33, according to an analysis by Deloitte. In Canada, where edibles are limited to ten milligrams of THC, prices are as low as US\$3.25 for ten milligrams to US\$13.

Due to different taxation rates, growing costs and conditions, regulator fees and retail structures, even the same stock-keeping units (SKUs) vary wildly in price from state to state. Take, for example, Wana's Sour Gummies, which come in 10 x 10 milligrams of THC (100 milligrams THC) per package in the US and is one of the best-selling edibles products in North America. In Colorado, on average a package costs US\$18.01. In Illinois, they're about US\$27.59. In Oregon they cost just US\$8.03 on average.

Discounts

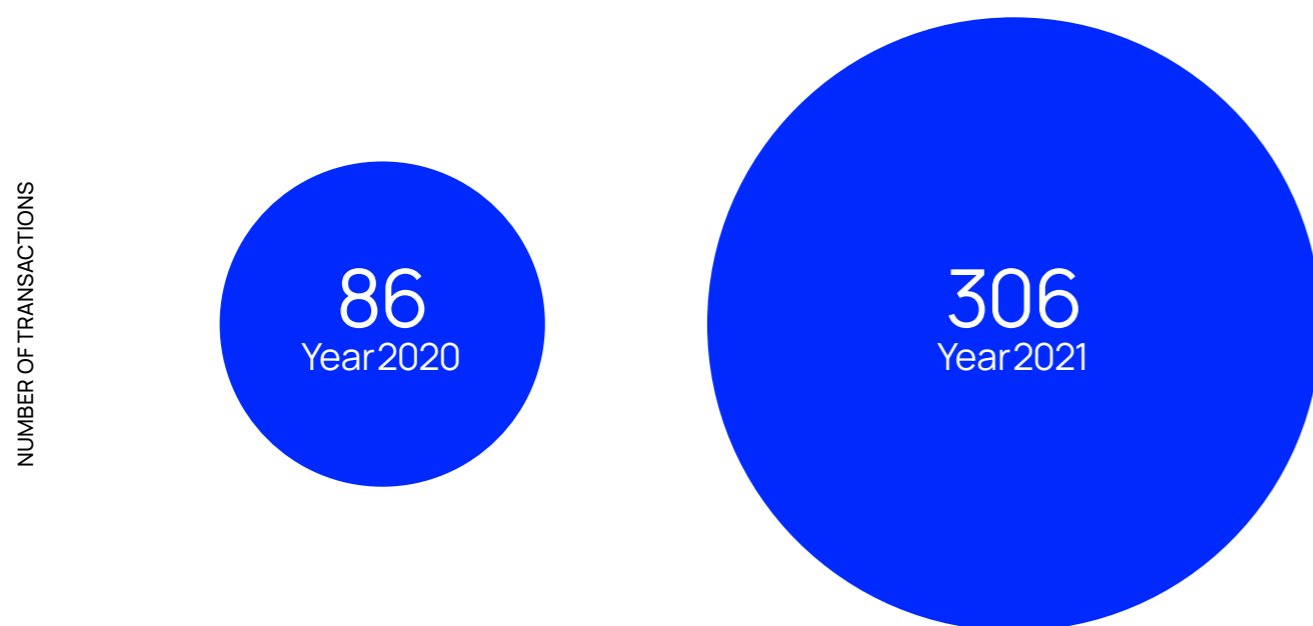
Due to competition from the large number of suppliers and retailers in the US, discounts have become an increasingly popular method operators are using to try and distinguish themselves from competitors. Data from Headset in the US showed that the majority of states have double digit discounts operating on adult-use flower in June 2022. States like Washington and Nevada have

saw flower sales discounted by over 20% in each state. Discounts are also common in Canada, though are of a lower calibre as of mid-2022. Ontario is showing the highest rate of discount for retail cannabis flower at 4.1% in June 2022. The disparity is partly accounted for by the fact that wholesale prices are often set by the government in Canadian provinces whereas pricing is more flexible in US states, meaning retailers have more room to manoeuvre with discounts. The total net effect of these discounts is estimated to be a loss of billions of dollars of revenue for North American operators. It will also put increasing pressure on smaller players who can't keep up with the discounts being offered by retailers with more finances available to support decreased profitability. Operators must also be careful to calculate where reduction in price can be made up for by increases in number of sales.

M&A and licensing deals

As predicted by Prohibition Partners in the 2020 North American™ report, aggressive consolidation accelerated through 2021. According to New York's Viridian Capital Advisors, there were 306 cannabis industry mergers and acquisitions in 2021, more than three times the 86 counted in 2020. The majority of deals were in cultivation and retail, with some in ancillary services, products and agriculture.

M&A transactions, 2020-2021



Source: Viridian Capital Advisors, 2021

In the United States, some multi-state cannabis operators (MSOs) favour continued federal prohibition, which prevents Canada's cash-rich companies from acquiring 'plant-touching' cannabis companies and gaining access to US markets.

While many US cannabis executives advocate for access to major markets like the New York Stock Exchange and the Nasdaq, decriminalisation and social justice reform such as the expungement of criminal records, continued federal prohibition gives companies like Illinois-based Green Thumb Industries (GTI), Massachusetts-based Curaleaf Holdings and Florida's Trulieve Holdings a window to gradually gain a presence within US state-legal medical and adult-use markets.

In an historic first, GTI was the first US cannabis initial public offering (IPO) in February 2021, raising a combined US\$100 million through a single undisclosed institutional investor. Though it is still listed on the Canadian Securities Exchange and the deal had to be self-underwritten because banks won't touch federally illegal companies, the US Securities and Exchange Commission approved the registration, demonstrating new acceptance of the industry's potential.

Later that month, GTI raised an additional US\$56 million, and an April US\$217 million debt financing deal added significantly to the balance sheet.

That capital went towards rapid expansion, partially via M&A, with the company snapping up cultivator and retailer Liberty Compassion Inc. in Massachusetts in June, Virginia's Dharma Pharmaceuticals in July, GreenStar Herbals Inc. in Massachusetts in September, and Minnesota's LeafLine Industries in December.

Now, GTI operates a total of 16 manufacturing facilities, 66 open retail locations with operations in 14 markets such as Florida, Maryland, New Jersey, Nevada and its home state of Illinois.

The biggest M&A deals of 2021

Acquirer	Deal Value (US\$)	Target
Trulieve Cannabis	\$2,100,000,000	→ Harvest Health & Recreation Inc.
Hexo Corp.	\$766,000,000	→ Redecan
TerrAscend	\$545,000,000	→ Gage Cannabis
Canopy	\$346,000,000	→ Supreme Cannabis
Canopy	\$297,000,000	→ Wana Brands (option to buy)
Curaleaf	\$286,000,000	→ Emmac Life Sciences

Source: Prohibition Partners, 2021

Florida's largest cultivator and retailer, Trulieve Cannabis, also made history in 2021 by making the largest cannabis acquisition in the US thus far: Arizona-based Harvest Health & Recreation Inc. for US\$2.1 billion.

In October, the deal closed, giving Trulieve a total of 149 dispensaries and 22 cultivation facilities operating in 11 states, with market-leading positions in Arizona, Florida and Pennsylvania.

Multiple analysts predict Trulieve will be one of the most profitable cannabis companies in the US in 2022 alongside competitors like Massachusetts-based Curaleaf Holdings. It also did its share of M&A in 2021, snapping up Nevada-based Tryke Companies (US\$286 million), Arizona's Bloom Dispensaries (US\$211 million) and the Natural Remedy Patient Centre (US\$13 million).

Consolidation has continued in 2022, most notably in March with Chicago-based Cresco Labs, snapping up rival Columbia Care, which is based in New York. The all-stock deal is worth close to US\$2 billion, and means Cresco will now have more than 100 cannabis dispensaries across 18 states in the US, making it one of the largest in America.

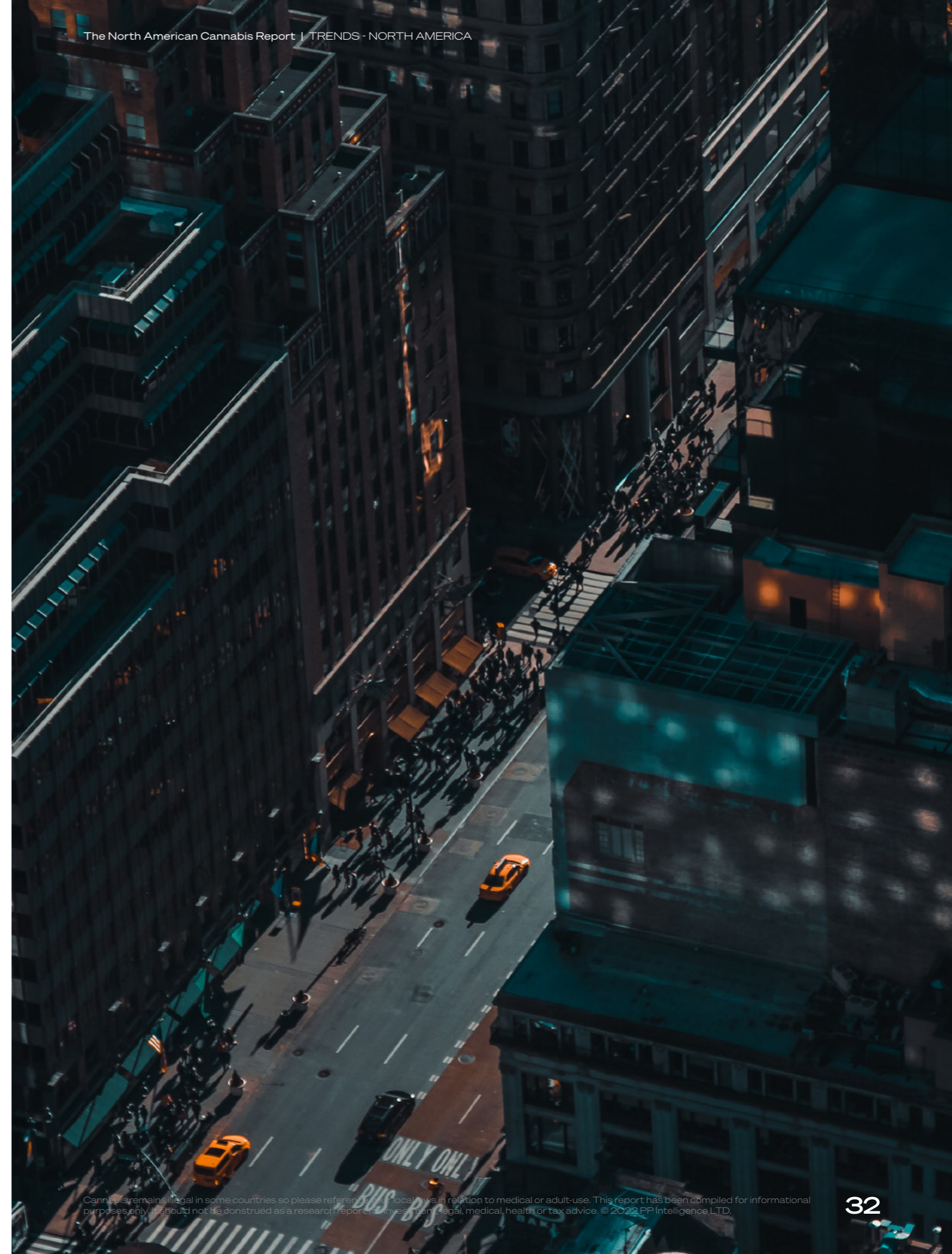


canna BUSINESS ERP

Built to help you grow

- Cultivation • Compliance
- Processing • Quality
- Financials • Traceability

[Watch the Product Tour >>](#)



Canadian companies prepare for US legalisation

Canada's cannabis industry is not sitting on the sidelines. While securities law precludes them from investing in plant-touching companies in the US ahead of federal reform, several companies are finding creative ways to position themselves to reap those rewards, if or when legalisation happens.

One way is through an option agreement. In February, Ontario-based Canopy Growth, announced it had acquired approximately 20% of issued and outstanding shares of TerrAscend,

which operates in Pennsylvania, New Jersey, California, Maryland and Canada. The shares are not convertible or exercisable until federal cannabis reform happens.

Similarly in October, Canopy announced they had agreed to pay US\$297.5 million for the option to acquire Colorado's Wana Brands, the leading edibles maker in the US. Again, the deal is contingent on one crucial element: the federal permissibility of THC in the US.

Ontario-based retailer Fire & Flower has also made inroads south of the border. In February, the company announced a strategic licensing deal with American Acres stores, which lends its brand name and proprietary HiFyre technology to stores in California, Arizona and Nevada. Now, American Acres has been renamed Fire & Flower US, and the Canadian side of the company also has the option to acquire it should federal reform happen or under approval of the stock exchanges.

Tilray, which has also completed a mega-merger with fellow Canadian licensed producer Aphria and has moved its headquarters from British Columbia (B.C.) to New York in 2021, is taking a multi-pronged approach to the US: acquiring a 75% stake in retail chain MedMen's outstanding secured convertible notes from Gotham Green Partners, as well as 65% of its outstanding warrants for US\$165.8 million. They can't convert the notes or exercise the warrants until after federal legalisation. Tilray has also acquired a number of non-THC companies with the intention of transforming them into cannabis companies once they are permitted to do so. Tilray had already acquired Manitoba Harvest, a Winnipeg, Canada-based hemp food and CBD company with cultivation and distribution channels in the US. In 2021, the company had also acquired several craft beer and spirits companies: California's Alpine and Green Flash for a combined US\$5.1 million in a cash-and-stock deal, Colorado's Breckenridge Distillery in a deal worth US\$102.9 million, and Atlanta-based SweetWater Brewing Co. for approximately US\$300 million.

In addition, British Columbia-headquartered Village Farms, a three-decade-old agricultural greenhouse grower which recently added cannabis to its portfolio when Canada legalised through its Pure Sunfarms subsidiary, is also readying for reform in the US. As a publicly traded company, it too cannot participate in plant-touching activities south of the border until laws and regulations change, but its six million square feet of greenhouse space in southwest Texas could be an important piece of the strategy. However, that would not be possible without federal reform that allows interstate export. Currently, MSOs are not competing in the state — Texas has not yet implemented its own medical and adult-use cannabis cultivation laws.



US players begin eyeing advance into Canada

While the market in Canada is more mature than most US states, and faces stiffer competition in many cases, it is becoming increasingly attractive for US operators to consider expansion into their neighbour in the North. While many US companies have listed on Canadian stock exchanges, few have focussed heavily on their presence in Canada, rather making use of the stock exchanges there in advance of adult-use companies being allowed to list on US exchanges. Some companies are setting up partnerships with Canadian firms to facilitate sales in the country without investing in new infrastructure. In May 2022, Kiva confectionaries partnered with Quebec-based Greentone to supply edibles, and Boston Beer Co. announced the launch of a new line of THC-infused tea products. Another phenomenon that is expected to increase in the coming months is the purchase of distressed assets in Canada by US operators. An early example of this came in 2020, with the purchasing of assets from the large Canadian trade expo company Lift & Co. by Virginia-based MCI USA after the former company went bankrupt. With the increasing competition at most every level of the industry, it is expected that when consolidation advances further in Canada, it will not be only domestic companies making the purchases.

Canadian consolidation

In terms of north of the border, some of Canada's largest licensed cannabis producers have aimed to grow domestic market share through consolidation. In an effort to grow brand loyalty, Ontario-based licensed producer Canopy Growth has acquired Ace Valley in April for US\$41.2 million; a vapes, gummies and pre-roll subsidiary of Toronto-based Ace Hill beer. At the time, a company statement said that Ace Valley's 'ready-to-enjoy' product line had a 'strong following among millennial and Gen-Z consumers' and 'held top five and top ten market positions in Ontario across its range of SKUs'. In June, Canopy completed its acquisition of Supreme Cannabis Company for US\$346 million, the Ontario-based cultivator behind six brands, including 7ACRES and Blissco. Citing the company's ability to grow premium, sought-after cannabis flower strains, the move aimed to grow Canopy's reported pro forma market share of 18.1% in Q4 2021 and capture approximately US\$23.8 million in synergies within two years.

Quebec-based HEXO Corp., known for its commitment to infused drinks, R&D and significant investment from beermaker Molson Coors, has also made three major licensed producer acquisitions in 2021: Ontario-based Redcan for US\$736 million in cash and stock, Ontario-based 48North Cannabis Corp. for US\$39.7 million in an all-stock deal, and British Columbia's Zenabis Global Inc. for US\$187 million in an all-stock deal.

So far, the deals, totalling approximately US\$954 million, have not reaped rewards. By mid-October, its share price had slid to just US\$1.73, and auditor PricewaterhouseCoopers has expressed 'substantial doubt' about the company's future in a note accompanying its annual consolidated financial statements. 'Existing funds on hand, when combined with operational cash flow, are not sufficient to fund existing debt repayments, capex budgets, and potential cash requirements under the Senior Secured Convertible Note', the auditor warned.

Activist shareholders accused CEO and co-founder Sebastien St-Louis of negligence and 'poor financial performance'. St-Louis stepped down and has since been replaced by long-time Molson Coors executive Scott Cooper. By November, Cooper was announcing significant layoffs and cultivation facility closures, some of which had just recently been acquired, as part of an aggressive cost-cutting scheme designed to keep the company afloat.

In March 2022, Tilray and HEXO announced a new 'strategic alliance', whereby Tilray acquired US\$211 million worth of senior convertible notes issued by HEXO to HT Investments. The agreement is designed to help HEXO strengthen its balance sheet and the two companies plan to find nearly US\$40 million in efficiencies.

Technology

The e-commerce, data, digital marketing and retail point-of-sale system landscape has become increasingly competitive and sophisticated in 2021, with tech. companies—which are alluring to institutional investors who can put money into non-plant-touching cannabis companies—raising hundreds of millions in funds and executing strategies aimed to meet the unique needs of the cannabis industry.

Cannabis technology sector draws major investment

Company	How	Raised (US\$)
Weedmaps	IPO via Special Purchase Acquisition Company (SPAC) with Silver Spike Acquisition Corp.	\$579 million
Dutchie	Privately raised in two rounds	\$550 million
Leafly	IPO via SPAC with Merida Merger Corp.	\$532 million

Source: Weedmaps, Dutchie, Leafly news releases, 2021

E-commerce market leader Weedmaps, based in California and known for its not-too-distant history listing illicit cannabis sellers, reached a major milestone by going public in 2021 via a SPAC with Silver Spike Acquisition Corp.. The US\$579 million in proceeds was put to use building out WM Technology, extending the company's offerings from e-commerce, information and product reviews on the app. and website into point of sale, logistics, wholesale and ordering solutions software for retailers in legal Canadian and American markets. In November, the company reported US\$51 million in revenues, a total 9% increase year-over-year and 46% increase in the US.

Competitor and privately owned, Dutchie, based in Oregon, has raised US\$550 million in two rounds, bringing the company's value to an estimated US\$3.75 billion. Founded by brothers Ross and Zach Lipson, it too complies to the patchwork of regional regulations to give Canadian and US dispensaries online ordering and point of sale capabilities, but focuses less on industry news or search engine optimisation (SEO) content. So far, the company

claims to work with 5,000 stores, with subscriptions ranging between US\$500 to US\$1,000 per month. Revenues reportedly grew from US\$5 million in 2020 to US\$45 million in 2021.

In August 2021, competitor and Seattle-based Leafly also announced it was going public via a SPAC with Merida Merger Corp., valued at approximately US\$532 million. Also, Canadian-based data and artificial intelligence (AI)-powered product recommender, Hifyre, owned and operated by retailer Fire & Flower, has officially entered the US market through a licensing agreement.

Each company is discovering similar successes, powering online shopping for retailers while adhering to each region's unique compliance requirements, such as purchase limits, distance-from-store maximums, checking consumer IDs and tracking products.

When it comes to challenges, cannabis inventory moves more quickly than other types of consumer packaged goods, and every

Over 250 Businesses Successfully Licensed!

CannDelta

Regulatory & Scientific Cannabis Consulting

Licensing, Compliance & Operations Support
Expertise. Precision. Results.

America's #1 License Consulting Firm

info@canndelta.com

1-877-274-6777
TORONTO • NEW YORK • NEW JERSEY

company is working to develop methods to serve as a kind of digital budtender which can recommend new or similar products to previous purchasers, or assist in navigating huge numbers of products and categories. Some rely on consumer reviews, mimicking sites like Yelp or Google reviews. Others, like Hifyre, add a layer of AI to its backend, looking instead at specific product characteristics to pull suggestions for consumers.

That also means every tech. company serving the cannabis industry is laser-focused on data collection, feeding it back to clients and then developing market research insights and reports to help steer the ship in the right direction.

One major challenge is payment processing. US retailers still largely process cash transactions and cannot process credit cards without federal banking reform. Importantly, when that does happen, it is natural to wonder if existing digital e-commerce and home delivery powerhouses such as Amazon and Uber will join the competition, if and when it is legal for them to do so.

In April 2021, Uber CEO, Dara Khosrowshahi told the consumer news and business channel (CNBC), that his company would 'absolutely' explore cannabis delivery in the US when it was legal for them to do so. Then, in an apparent PR stunt, the company partnered with Canadian retailer Tokyo Smoke in summer 2021 to offer cannabis on its app. Due to strict regulations, however, orders could only be picked up at the store, and not actually delivered to consumers.

Building brand loyalty

Efforts to build brand awareness across state and national borders began to resonate with consumers in 2021, although consumers in the US do not yet name 'reputation of a brand' as a top-ten driver of purchasing, according to Deloitte's report, 'Pricing: It's Complicated'. In Canada, however, consumers are beginning to demonstrate brand awareness, and in both markets a few standout brands are overcoming marketing and legal restrictions to grow interest in the North American market.



Colorado-based Wana Brands was named as one of America's fastest-growing private companies by Inc. Magazine in August 2021. By licencing its intellectual property (IP) to trusted partners in various regions across North America, the brand now has the largest edibles footprint in North America thus far, with Wana brand gummies available in Arizona, California, Colorado, Florida, Illinois, Maryland, Michigan, Missouri, Nevada, Ohio, Oregon, Oklahoma and Massachusetts.

In Canada, its Ontario-based licensing partner Indiva has renewed its contract with Wana in 2021 after its Sour Gummies earned one of the top three spots among edible SKUs in the country and won several awards.

Founded by former rapper and legacy cannabis entrepreneur Berner, San Francisco-based and vertically integrated Cookies has emerged as one of the most globally recognised cannabis brands outside of North America and possibly the world. It is the only cannabis brand to make AdAge's 2021 list of America's Hottest Brands, and has expanded into several countries; Canada, Spain and Israel with both products and storefronts via partnerships with licensed cultivators.

In the US, there are now Cookies storefronts in Michigan, Massachusetts, Oklahoma, Colorado, Puerto Rico, Nevada, Washington and Oregon. Cookies has also entered the Ontario market for the first time in 2021 with a partnership with Gage Cannabis and Canadian cultivator Noya, bringing its Georgia Pie and Gary Payton flower strains to Ontario consumers.

In December, Cookies announced another partnership with Israel-based InterCure, with plans to establish Cookies stores and medical dispensaries, probably with a focus on CBD, in Austria and the UK in 2022.

Brand awareness and hype does not necessarily translate to sales, probably because Cookies products are priced at a premium. Instead, many of America's top-selling brands have focused on emerging domestic markets rather than looking abroad.

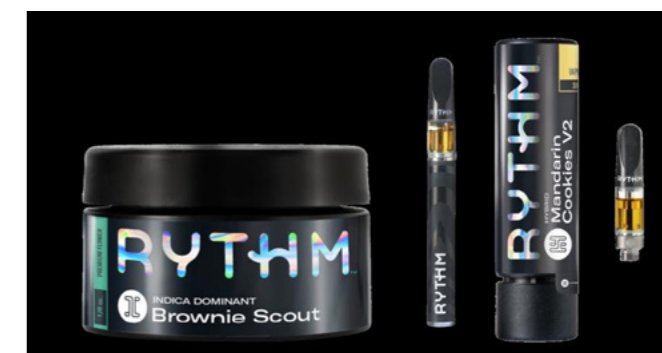
While Cookies has been successful in Nevada, Cresco Cannabis by Chicago-based Cresco Labs. was one of the top-selling brands in the US, bringing in US\$227 million in sales comprised of: vape sales (35%), flower sales (42%), and dabbable concentrates (20%) in Arizona, California, Illinois, Massachusetts, Pennsylvania and Maryland in the first half of the year.



Rythm brand by Chicago's Green Thumb Industries is a best-selling brand in Massachusetts. Its product portfolio includes flower (44% of Rythm sales), vapes (52%) and concentrate products (4%), and brought in approximately US\$224 million in sales in the first half of 2021 in Massachusetts, Illinois, Pennsylvania and Nevada.

Select Oil, by Massachusetts-based Curaleaf, is another brand building a national presence in 17 states with its vape products. In the first half of 2021, Select reached US\$111 million in sales in Arizona, California, Colorado, Illinois, Massachusetts, Maryland, Pennsylvania and Oregon. In addition, Raw Garden, which includes both dabbable and vape products, is making waves in California, selling US\$96 million in the first half of 2021.

According to the Ontario Cannabis Store's quarterly report for April to June 2021, the most popular flower brands are Pure Sunfarms (9%), Good Supply (7%) Original Stash (4%) Redecan (4%) and Shred (3%). Between July and September 2021, Pure Sunfarms again took the lead in flower sales (12%), followed by discount brand Shred (7%), recently acquired Redecan (6%), Cronos-owned Spinach (6%) and premium brand Edison Cannabis Co. (4%).



Top five brands per category based on sales 1 July-30 September 2021

Retail Stores

Beverages

XMG	21%
Tweed	10%
Houseplant	8%
Quatreau	7%
Collective Project	7%

Capsules

Redecan	62%
Tweed	13%
Kin Slips	7%
Daily Special	4%
Mood Ring	3%

Concentrates

Original Stash	17%
Good Supply	9%
RAD	8%
Kolab Project	7%
San Rafael '71	6%

Dried Flower

Pure Sunfarms	12%
SHRED	7%
Redecan	6%
Spinach	6%
Edison Cannabis Co	4%

Edibles

Wana	30%
Bhang	12%
Spinach	9%
Chowie Wowie	7%
Aurora Drift	6%

Oils

Redecan	44%
Pure Sunfarms	10%
Solei	8%
MediPharm Labs	8%
Dosecann	4%

Pre-Rolls

Good Supply	13%
Redecan	12%
Pure Sunfarms	6%
Hiway	5%
RIFF	4%

Seeds

34 Street Seed Co	53%
Humboldt Seed Co.	16%
Pristine	7%
Pure Sunfarms	6%
CRG Pharma	6%

Tropicals

Solei	16%
Eve & Co.	13%
Proofly	12%
LivRelief	12%
Tidal	8%

Vapes

Back Forty	17%
Good Supply	9%
Kolab Project	6%
Pure Sunfarms	5%
General Admission	5%

OCS.ca

Beverages

Tweed	21%
Houseplant	10%
Ripple by TGOB	9%
Quatreau	9%
Mollo	7%

Capsules

Tweed	30%
Redecan	24%
Dosecann	8%
Emprise Canada	7%
Indiva	6%

Concentrates

Original Stash	11%
Good Supply	8%
The Batch	6%
RAD	6%
Simply Bare	5%

Dried Flower

Pure Sunfarms	8%
SHRED	6%
Redecan	5%
Good Supply	4%
Daily Special	4%

Edibles

Chowie Wowie	16%
Wana	13%
Foray	11%
Bhang	10%
TWD.	5%

Oils

Redecan	24%
Solei	19%
Five Founders	9%
TWD.	7%
Tweed	5%

Pre-Rolls

Redecan	13%
Good Supply	7%
Tweed	5%
TWD.	5%
Pure Sunfarms	5%

Seeds

34 Street Seed Co.	35%
CRG Pharma	19%
Humboldt Seed Co.	11%
Parkland Flower inc.	8%
Pure Sunfarms	8%

Tropicals

Proofly	24%
Tidal	10%
Wildflower	8%
LivRelief	7%
Solei	7%

Vapes

Back Forty	10%
TWD.	5%
Hexo	5%
Redecan	4%
Good Supply	4%

Source: Ontario Cannabis Store

Limits on marketing

In both the US and Canada, particularly in regions where marketing opportunities are limited by regulations, and the ability to see products up close before buying is near-impossible, brand success is associated with THC potency and value – the higher the THC, the more popular the product, particularly when it comes to flower.

For this reason, in 2021, licensed cultivators have increasingly focused on budtenders, the employees who staff cannabis stores. Branded merchandise, non-infused free product samples, social events sponsored by brands, and in some US markets, even financial incentives are directed at cannabis store employees in an effort to increase recommendations and sales.

Oklahoma stores, for example, sometimes use software called SparkPlug to gamify and pay out bonuses to employees if they sell certain products. San Francisco's Plus Products uses two pieces of software, Lucid Green and Leaf VIP, to create incentives for store employees to learn about their edibles products.

In the more tightly regulated Canadian markets, these types of incentives aren't allowed. Further, the Alcohol and Gaming Commission of Ontario has announced clarification on regulations in early 2022, 'which prohibits licensees from entering into agreements for items, benefits, payments, or services with licensed producers and their representatives with the purpose to promote or increase the sale of a particular product by the licensee or their employees. In other words, licensees are not allowed to ask for or accept material inducements'.

Social media marketing can also be a challenge when it comes to building brand loyalty. Mainstream social media networks have taken different approaches to moderating content pertaining to the still-federally illegal industry.

With its younger user demographic, TikTok has the lowest tolerance for cannabis content and it still wasn't welcome on the app in 2021. On Instagram, brand accounts and influencers have had mixed experiences, frequently encountering account deactivation for reported breaches to the app's terms of service. Even when brands and influencers strictly adhered to the terms of service by curating more lifestyle-oriented content rather than showing products or promoting cannabis sales of any kind, moderators would not always reactivate accounts.

It's not a sure thing that social media networks will welcome cannabis content post-federal legalisation in the US either. In Canada, content is also strictly moderated and accounts are frequently deactivated. Though there are few details so far, the instability within digital communities has motivated Weedmaps and Cookies to announce in November 2021 that they are partnering to create a cannabis-friendly social media network in the near future with more to come in 2022.

EXPERT INTERVIEWS



Tej Sidhu
CEO
Akanda

Who is Akanda? Tell us more about the company?

Akanda is an international medical cannabis and wellness platform company seeking to help people lead better lives through improved access to high quality and affordable products. The company's main mission is to democratize and increase access to cannabis-based medicine. With this in mind, we are building a seed-to-patient supply chain and connecting patients primarily in the UK and Europe for now, with diverse products cultivated at our competitively advantaged grow operations in Portugal and the Kingdom of Lesotho, and with other trusted third-party brands.

With this model, we aim to create and connect the largest medical cannabis cultivation zones on the planet with patients in large and fast-growing international markets. This is no easy feat, but we are determined to become the world's leading platform for medical cannabis and wellness products.

Tej, what inspired you to get started in the cannabis industry?

I actually started my career in investment banking and spent 15 years with BMO Capital Markets, where in my last year, I focused on cannabis companies and fell in love with the industry. From there, I worked with several medical cannabis companies, including Tilray, Khiron Life Sciences, and Canopy Growth Corp., where I was the Managing Director of Europe. I was also a founding member and executive group stakeholder for Project Twenty21, the UK's largest medical cannabis study, which published the first real-world data collected on medical cannabis in the UK. All these experiences, plus my mother's personal experience using medical cannabis to treat chronic pain, led me to launch Akanda in 2019.

What is Akanda working on now?

At Akanda, we look to meet patient demand with diverse products from owned, licensed, and third-party brands, and all three pieces of that model are crucial. Currently, our focus is on creating synergies and partnerships with third-party brands including Lumin, Tilray, Bedrocan, Aurora, and more. In the UK, we are also prioritizing work with B2C telemedicine companies and B2B wholesalers like CanMart, one of a number of fully approved importers and distributors of medical cannabis products in the UK. Overall, our strategy is to open the marketplace and fast-track the creation of an access platform to the European medical cannabis market. We are also continuing to engage with leading doctors and patient groups to enable access.

Additionally, we recently announced that we will be supplying Tetra Bio-Pharma with pharmaceutical grade cannabis flower in a microdose cap form, for use in a Storz & Bickel Mighty Medic Vaporizer for global commercialization of Tetra's QIXLEEP™ and related products. I'm excited about this new partnership and our expansion into the pharmaceutical arena, as it aligns perfectly with our mission to help people lead better lives.

What do you think is next for the industry?

From the NFL beginning to look at cannabis as a treatment option for a multitude of injuries to celebrities like Mike Tyson starting their own cannabis companies, we are seeing cannabis become more mainstream across the board. For this reason, I see the continued de-stigmatization of Cannabis as a medicine in international markets in North America, supported by continued R&D. We are already seeing this lead to more adoption in the U.S., with 37 states, four territories, and the District of Columbia now allow-

ing the use of medical cannabis products. This continued adoption will be particularly important as the pandemic and other world events like the war in Ukraine, climate change, and more, continue to weigh on our mental health.

This continued destigmatization will help usher in greater acceptance in places like the United States where there has traditionally been some hesitancy in legalizing cannabis. But it is a crucial moment for cannabis in the U.S. – there are clear signs of growing bi-partisan support at the congressional level that could lead to long overdue reform and could fundamentally change the industry.

Additionally, I anticipate greater adoption of telemedicine channels to access medical cannabis in international markets. Given the mixed ability for patients to access medical cannabis across international markets, telemedicine will help to create efficiencies, reduce friction, and improve access.

Finally, we are seeing the medical and recreational markets beginning to converge, so having a business model that is set up to support both will allow for supply to keep up with demand.

Trends Canada



01

Canada's smaller craft cultivators and producers have ramped up, growing market share with premium cannabis products. Many of the country's largest LPs are downsizing and struggling to retain market share.

02

The Canadian industry is firmly in its right-sizing phase, with the market still vastly oversupplied and a glut of retail storefronts, particularly in the populous province of Ontario.

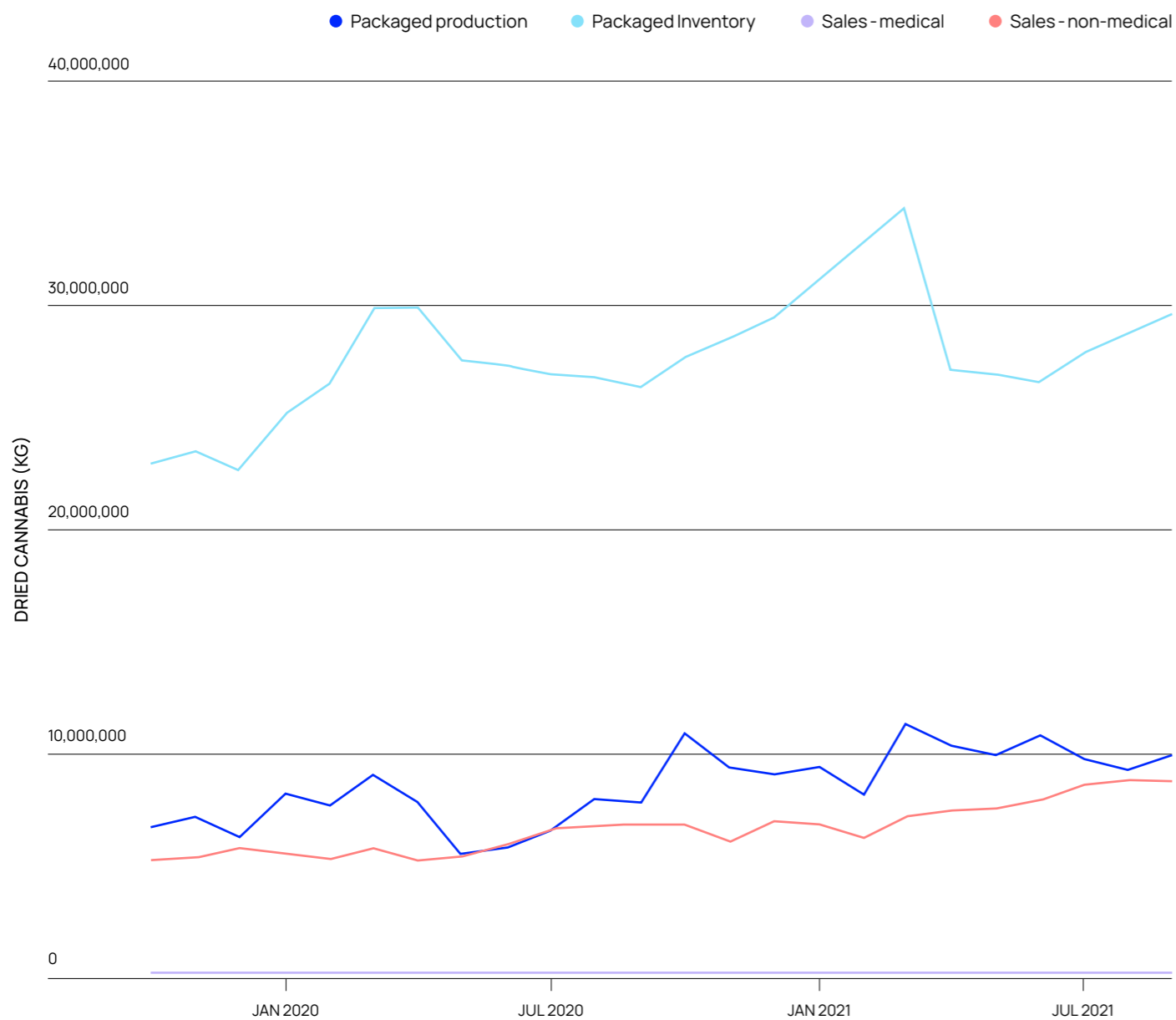
03

The federal Cannabis Act is scheduled for a review, and there are high hopes for a change to the rates of taxation, marketing restrictions and more representation of visible minorities in the workforce.

Large LPs scale down, micro-production proliferates

Despite numerous mergers and acquisitions designed to find synergies and grow market share, Canada's is a vastly oversupplied market, with a staggering number of federally licensed cannabis producers: as of October 2021, there were 776 and it's now up to more than 850.

Canadian cannabis inventory vs. sales, 2020-2021



Source: Statistics Canada, 2021, Prohibition Partners

Over 2020 and 2021, an increasing number of new licensees are 'micro-producers', smaller craft-oriented cultivators who focus on premium or limited-run products. There are now more than 250 micro-producers competing for market share, with the majority of them being located in Ontario, British Columbia and Quebec. Some of Canada's largest licensed cannabis producers have lost ground to these smaller cultivators and processors.

For example, in May 2021 licensed producers Aphria (with a portfolio of brands including Solei, RIFF, Good Supply and Broken Coast) and Tilray (with its Canaca brand), completed their all-stock merger, which they had announced in December 2020.

On a pro forma basis, according to a December 2020 conference call about the merger filed with the US Securities and Exchange Commission, the two companies held a combined market share of nearly 20% between August and October of that year. The new company, which operates under the Tilray banner, set the goal of reaching 30% market share by 2024.

By October, data by Hifyre, which looked at sales among 320 stores in Alberta, British Columbia, Ontario and Saskatchewan, showed that Tilray had lost approximately one-third of its market share, falling to 12%.

Tilray is not alone. Many of the largest cultivators and processors have seen market share slide in 2021, including Alberta-based Aurora Cannabis, Toronto-based Cronos Group, Quebec's HEXO Corp. and Ontario's Canopy Growth Corp..

According to the wealth management and investment banking group, Stifel, more than 40% of the market share was held by companies outside of the top ten largest operators by the end of 2021, with no signs of decreasing. Currently they're streamlining, finding synergies, and focusing on R&D, developing premium products and increasing quality.

So who's winning? New Brunswick-based Organigram Holdings, with its premium flower, vape, oils and edibles brand, Edison Cannabis Co. and the very successful Shred discount pre-roll, milled flower and edibles brand, saw its market share increase from 4% at the beginning of the year to 7% by October.

Another winner: Toronto-based Auxly, with its vape, pre-roll, edible, dried flower and concentrate brand Kolab Project; vape and infused chocolate brand Foray; and flower, vape, pre-roll and edibles brand Back Forty, kicked off the year with a 5% market share. By October, its portfolio of brands had hit the 10% mark, according to Hifyre.

Notably, Auxly also surpassed Canopy Growth in all four provinces measured by Hifyre: Alberta, British Columbia, Ontario and Saskatchewan, despite Canopy's efforts to grow market share through its acquisitions of Supreme Cannabis and Ace Valley.

Auxly's management team attributed its success to its Cannabis 2.0 products, leading the vapes category in October with 25.6% of national vape sales in October, according to Headset Canadian Insights. The company released a total of 52 new products in 2021, expanding into the Cannabis 1.0 category with slim, potent pre-roll multi-packs under the Back Forty brand as well as innovative products like the Kolab Project 232 Series Live Terpene Sticks, a premium high-THC pre-roll combined with 'terp sauce', a substance with 5% terpene content, designed to enhance the experience.

Another secret to Auxly's success is that its products are well-liked by Canadian budtenders. At December 2021's Kind Awards, a cannabis awards event hosted by Toronto-based Kind Magazine, a national panel of 250 budtenders gave four different products an award: Back Forty's indica stick won Pre-Roll of the Year and Best Indica Cartridge; Kolab won Best Sativa Cartridge of the year; and Dosecann Daily Relief CBD Cream, which has 1,200 milligrams of CBD in each 60 millilitre unit, won Best Topical.

Craft cannabis brands, also known as micro-producers, have also won big at the 2021 Kind Awards, showing that they too are resonating with budtenders. Ontario-based Carmel Cannabis, which specialises in rare genetics and limited runs, tied with Auxly for four awards: Brand of the Year, Craft Brand of the Year, Best Indica Flower and Best Sativa Pre-Roll. MTL Cannabis, a Quebec-based craft producer, won Best Sativa Flower.

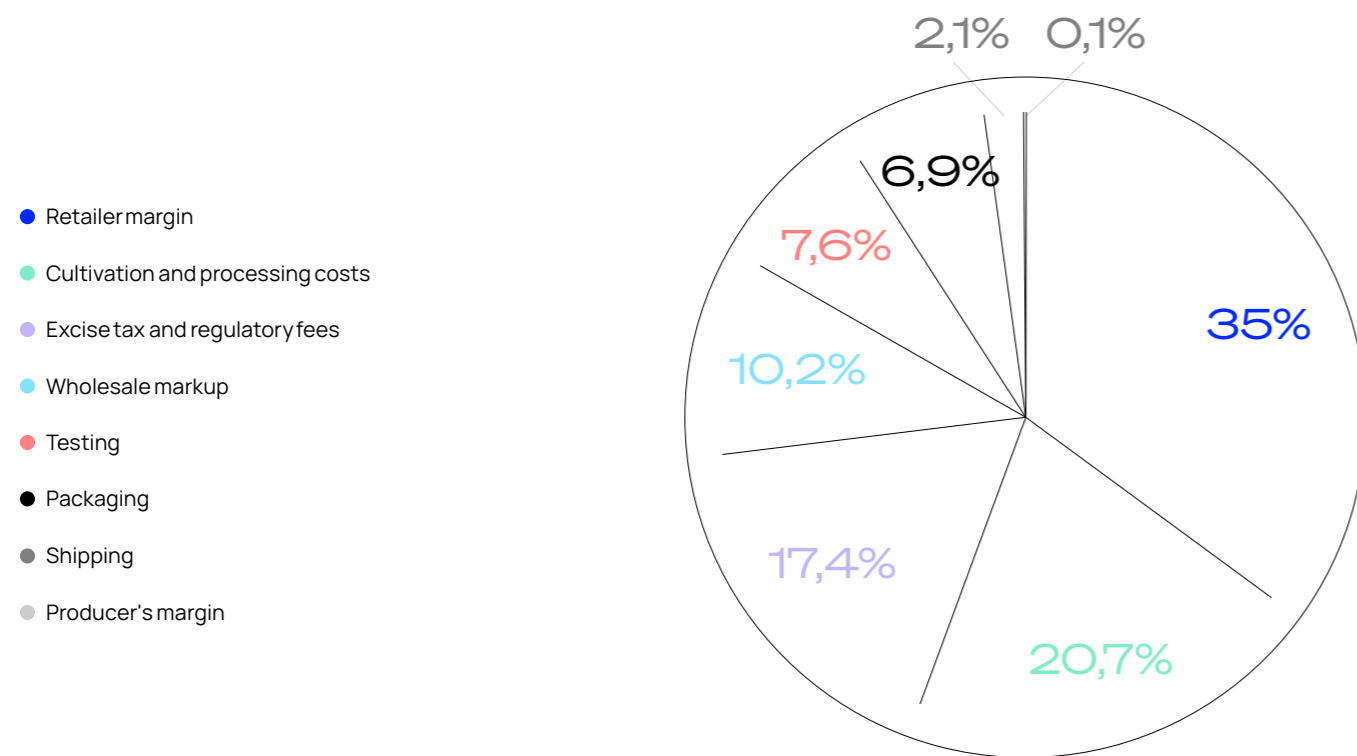
Craft cannabis flower commands a premium of approximately 16-41% depending on THC potency, according to Deloitte and Canadian craft cannabis sales grew by 158% in the last two years.

That said, high excise taxes—currently at a flat rate of CAN\$1/gram instead of a percentage of sales—are 'killing craft business', according to Stand for Craft, a Canadian craft cannabis advocacy group that was launched in 2021 by Dan Sutton of B.C.-based Tantalus Labs. Micro-producers are paying between 20-30% of their top line revenues, which can be an even higher expense than employee salaries.

For a single gram of cannabis priced at CAN\$7.25, for example, Stand for Craft says:

- CA\$2.54 goes to the retailer margin
- CA\$.74 is the wholesale markup and fees—the provincial distribution cost
- CA\$1.26 goes to the excise taxes and regulatory fees
- CA\$.15 goes to shipping
- CA\$.50 accounts for packaging
- CA\$.55 goes to lab testing
- and CA\$1.50 goes to cultivation and processing costs.

That leaves just CA\$0.01 for the producer's margin on each US\$7.25 gram. To help craft cannabis cultivators thrive, the group started a petition to the Canadian government to change the flat rate to a percentage of sales.



Source: Stand for Craft, 2021, Prohibition Partners



AJG.com/ca | The Gallagher Way. Since 1927.

Building Confidence. Together.

For more than 90 years, we've been a trusted insurance, risk management and consulting partner for businesses, communities and people around the globe. Customizing programs and solutions tailored to your needs. Driving better outcomes for your people and your organization. Helping you build the confidence to handle whatever comes next.



Insurance | Risk Management | Consulting

© 2022 Arthur J. Gallagher Canada Limited ("Gallagher")



Unique Insurance Coverage for the Cannabis Industry

Gallagher in Canada is continuously evolving solutions to help protect your business.

CONNECT WITH US

David Kerr
Senior Vice President, Commercial
david_kerr@ajg.com
647.381.6469

Right-sizing and retail ramps up

A common pattern has emerged in newly legalised adult-use cannabis markets: an initial undersupplied market, with long line-ups, high demand and high prices. That short-lived period is followed by an oversupplied market, low prices, layoffs and a contraction in the number of cultivators, processors, brands and distribution channels.

Three years into legalisation, Canada is firmly in the right-sizing phase, with larger consolidated cultivators continuing to shutter facilities, terminate employees and streamline production in 2021, as well as focusing on increasing quality and innovation.

While 2020 saw more layoffs than in 2021, significant employment losses have continued among cultivators. Edmonton-based Aurora Cannabis, which had already laid off more than 1,000 employees in 2020, laid off another 8% of its workforce in September and shuttered a 2,787 square-metre production facility located near the Edmonton airport that had reportedly cost nearly US\$40 million to build.

Now, the company seems to have abandoned many of its previous aspirations in the North American adult-use market, focusing instead on emerging global medical markets such as those in Germany, which are profitable for the company, its US CBD brand Reliva, and it is not anticipating US legalisation to happen any time soon.

As part of its merger with Aphria, now New York-based Tilray has shuttered its Nanaimo, B.C. facility, laying off between 160 and 170 employees as a result. Then, in November, along with announcing it would be shuttering three production facilities, Quebec-based HEXO Corp. has said the closures would affect 155 employees.

At the same time, the retail landscape has ballooned in 2021, with an estimated 2,369 licensed stores across the country as of November according to RBC Capital Markets. That's one store for every 16,044 people. That said, many large, populated municipalities such as Mississauga, Ontario, Richmond and B.C. still haven't allowed regulated storefronts to open in their city limits, meaning some areas are overly crowded with stores.

In Ontario, for example, there were only 67 stores open in early 2020 and around 500 at the beginning of 2021. Since the spring, another 900 stores have been licensed, bringing the total to more than 1,400. By comparison, Alberta has around 800 licensed stores, according to the Alberta Gaming, Liquor and Cannabis Commission, and British Columbia has licensed more than 400 as of November, 2021.

In some parts of Toronto, Canada's largest city, the concentration of stores is so high (more than 200 across the city as of November) that a Member of Provincial Parliament (MPP), Marit Stiles, attempted to pass a bill that would force the Alcohol and Gaming Commission of Ontario to consult city councils to show, 'proof of the needs and wishes of the residents of the municipality' before it could be licensed. It did not pass.

Instead, stores are predicted to close and consolidate. Average quarterly sales have been halved in 2021. In Q2 of 2020, according to data from the provincial wholesaler Ontario Cannabis Store, each store brought in approximately US\$795,000. In Q2 of 2021, by comparison, stores brought in an average of US\$287,000.

'We are worried that 2022 could be a year of retail closures in Ontario,' warns a Bank of Montreal (BMO) analyst, Tammy Chen, in a research memo. 'Unless more municipalities opt-in for cannabis stores, this could lead to a (year-over-year) decline in industry sales.'

Despite all stores in the province buying the same products from the provincial wholesaler, they've found some ways to differentiate themselves. Alberta-based Nova Cannabis has transitioned the bulk of its stores into Value Buds, a discount retailer aiming to deliver the lowest prices on the market. Alberta-based High Tide has also transitioned all 100+ of its CannaCabana retail stores into discount clubs similar to stores like Costco, designed to build loyalty by rewarding consumers with discounts. As of November, the club already had 270,000 members.

Still, many retail operators have penned op-eds in news media expressing that they would prefer to make exclusive deals with cultivators to create even more differentiation and stronger competition between them. So far, that's only possible in one province, Saskatchewan, which has both privately run stores and allows them to purchase directly from LPs.

Instead, Ontario allowed LPs to open so-called 'farm-gate' stores, or stores adjoining cultivation and processing facilities to sell directly from the site to tourists and visitors in the area. Thrive Cannabis, for example, an LP located in Simcoe, Ontario and which operates the Greybeard brand, opened the first farm-gate store in the country there in May 2021.

In April, the Alcohol and Gaming Commission of Ontario (AGCO) said it had received 14 retail operator licence applications for farm-gate sales. Six have been approved: Thrive, Tweed Inc.,

Dykstra Greenhouses, Medz Cannabis Inc., Muskoka Grown Ltd. and Level Up Infusions. The AGCO had also received nine retail store applications for farm-gate and approved Thrive and Medz.

Unlike craft breweries or farmers' stalls which frequently offer lower prices for products found at stores, farm-gate retailers still have to technically buy their own products back from the provincial wholesaler.

Another point of retail differentiation is what's available province-to-province. The proliferation of micro-producers with smaller outputs means some products are only available in limited regions. Importantly, cannabis consumers like to 'shop local'. In Nova Scotia, for example, sales of locally produced cannabis products grew by 46.9% between October and December 2021, making up 26% of all cannabis sales.

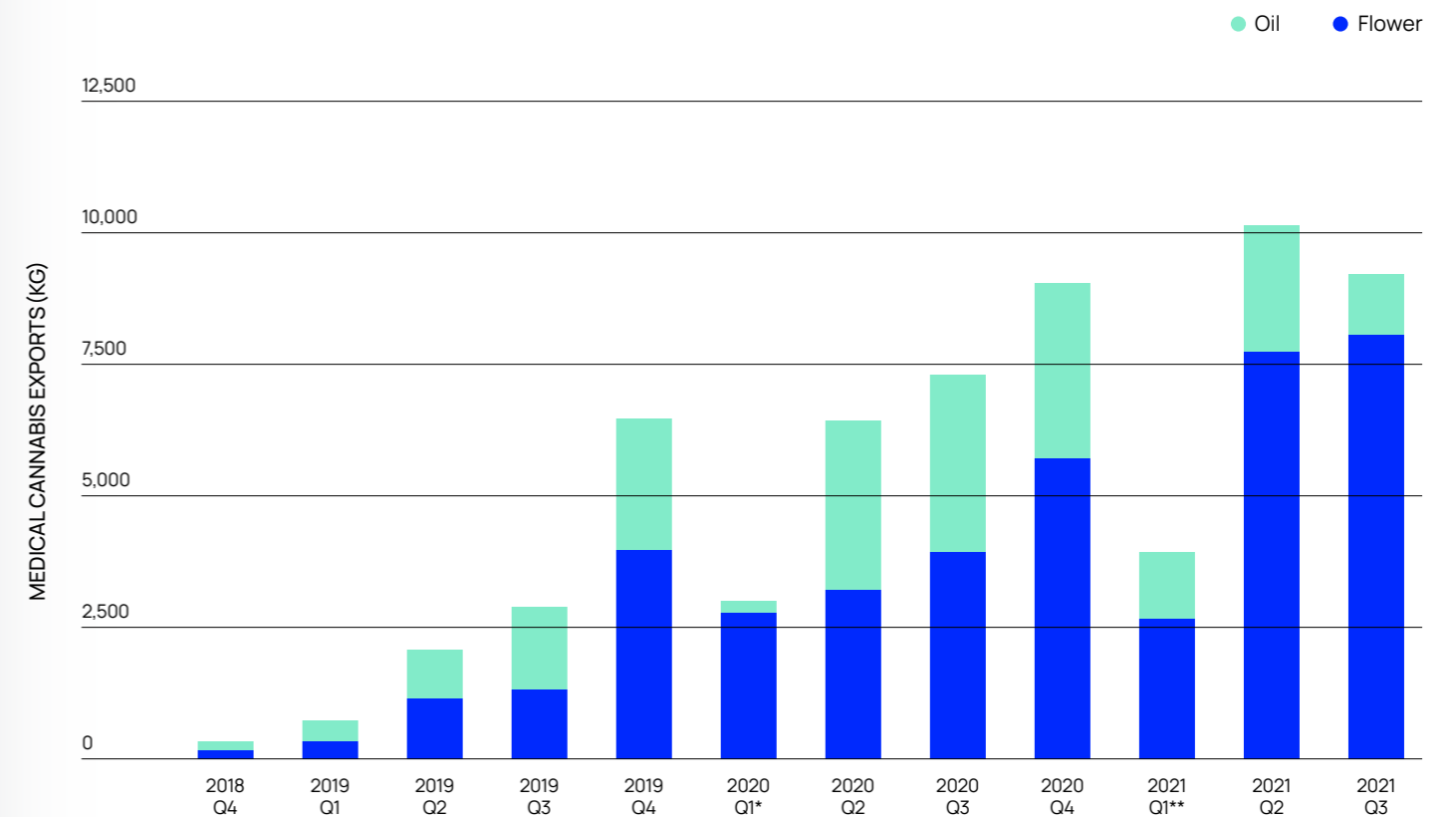
Other provinces that have retained government control over retail sales are ramping up more gradually. In Nova Scotia, for example,

36 of its 175 alcohol stores run by the Nova Scotia Liquor Corporation, also sold cannabis in 2021. With its population of 969,383, that's one store for every 26,927 people. With cannabis sales growing between October and December to US\$25.2 million, an increase of 13.7% compared to the same period in 2020, the province plans to open more cannabis outlets in 2022, pending provincial budget approval.

Canada is the #1 global medical cannabis exporter

Canada is the largest exporter of medical cannabis in the world, after a dip in the export of oil and flower in Q1 2021. This was in a large part caused by the change in rules for imports to Israel, a major consumer market for Canada. Those particular regulations have since been lifted, and it can be seen that exports have made a full recovery. Canada is increasingly competing for exports with countries like Portugal and Denmark in Europe. However, the federal illegality of cannabis in the US, means Canada will probably enjoy this top-ranking spot for many years to come.

Exports of medical cannabis from Canada



Source: Prohibition Partners, Health Canada

Note: * COVID-19 related disruptions, ** Regulatory reform in Israel causes disruptions

Cannabis reform 2.0

Many in the industry hope that Canada's initial approach to adult-use legalisation will now evolve with tweaks to both federal and provincial frameworks which will improve business conditions and equity.

The federal Cannabis Act is scheduled for its lengthy 18-month review, which was supposed to kick off on the third anniversary of adult-use legalisation in October 2021, (but it hasn't yet formally launched). As of June 2022, the Canadian Government has no official launch date for the process.

Provincially, there have not been any signs that Ontario's provincial wholesaler plans to step aside or stop competing with private retailers in e-commerce with its own online store, but Alberta's provincial regulator has handed online sales over to private retailers in 2021, which is scheduled to begin in earnest in spring 2022.

Minorities are underrepresented

Regulators and the industry have started taking a closer look at diversity in the Canadian cannabis market and the underrepresentation of visible minorities thus far. In 2021, Health Canada announced that a consultation process would happen in 2022 to examine the barriers that black and communities of colour may face when trying to obtain licences.

People of colour are significantly underrepresented, according to recent studies. A 2020 study by the Centre on Drug Policy Evaluation and the University of Toronto surveyed 700 executives and directors at 222 cannabis companies, and found that; 73% were white men, 12% were white women, 14% were men of ethnicities other than caucasian and just 2% of these owners and managers were women of ethnicities other than caucasian. Among this cohort, 40% were people of South Asian origin, 19% were East Asian, 15% were Indigenous, 12% were Arab and 7% identified as Hispanic and Black.

In 2019, a study from the Canadian Venture Capital Association showed 5.5%, or eight partners at 145 private equity firms surveyed identified as 'visible minorities'. According to Statistics Canada, 22.3% of Canadians were visible minorities in 2016.

Now, stakeholders are tasked to brainstorm solutions. So far, some are advocating for putting a portion of cannabis tax revenues toward allocating licences to women and racialised communities. They have also called to expand a programme called Navigator which is designed to deliver culturally sensitive assistance to indigenous applicants and to black and other racialised groups.

In the meantime, Health Canada has launched a survey to collect more data on all cannabis licensees.

Changes to the Cannabis Act

In addition to equity, there is a long list of tweaks to the Cannabis Act that stakeholders would like to see.

A major hurdle to the industry which isn't shared by most legally conformist states in the US is the tough marketing and packaging restrictions on cannabis, which critics say create bland brands that can't compete with the illicit market.

Those barriers include:

- Any marketing activity or branding that could be appealing to young people, such as references to candy or the use of cartoons or animals. All marketing and access to products is age-gated.
- Celebrity endorsements or customer testimonials pertaining to products.
- The intended effects of a product, such as energising, sedating or otherwise.
- Plain packaging on all products, and no fluorescent or metallic colours on containers.

In addition, despite packaging being tightly restricted, cannabinoid information on cannabis labels is not consistent across different products, which can be confusing for consumers who are trying to contrast and compare as they shop. Many believe that certain aspects of labels should be standardised and included in the Cannabis Act to improve the shopping experience.

Advocates say that the excise taxes, often referred to as a 'sin tax', should be removed from medical cannabis products. Excise tax stamps have to be manually applied to every product to show that it's legal and if it enters a new jurisdiction, can cost up to 30-35% of the sale price of a cannabis product. The Cannabis Act should be amended to make this process more efficient, less expensive and less burdensome by nationalising the excise stamp and removing the requirement to replace stamps with new ones when a product is shipped to a different province.

Another major issue is low limits on both the maximum amount of THC allowed per edibles package, which is restricted to 10 milligrams per package, and the questionable, volume-based limit to how many cannabis drinks can be purchased at any one time.



Well-loved legacy products and innovation

Currently, consumers are limited to buying a maximum of 2.1 litres of cannabis-infused drinks at a time—which is less than a six-pack of beer.

Another issue is that licensees have to notify the Ministry at least 60 days before bringing a new product to market. That should be reduced to 30 days, say stakeholders, to make it a more efficient process, and Health Canada should also commit to a timeline to respond to the notification with any comments or feedback. That way, licence holders aren't left waiting and wondering.

Dissenters from the above positions have noted that some companies who are calling for reforms are underperforming in the Canadian market, and may therefore be seeking to shift any blame for underperforming operations in the eyes of their stakeholders to various market restrictions. There is possibly some truth to this position as well.

Nevertheless, while there are many hopes for cannabis reform, the government is likely to take a cautious, public health-focused approach, similar to the way legalisation was initially rolled out.

'Public advocacy and education will continue to play an important role in the process, particularly with respect to any proposed amendments to the marketing and promotion regime and the limits on cannabinoid content,' advise Dentons' attorneys; Eric L. Foster, Stuart Ruffolo, Emeleigh Moulton and Kimberly Burns in a December 2021 op-ed on the topic published in Lexpert. 'Ultimately, cannabis industry stakeholders will need to be patient and appreciate that cannabis legislation is likely to evolve over the course of many years as the industry matures and plays an increasingly important role in the Canadian economy.'

Canadian cannabis products suffered from poor quality in the early days of legalisation, but a wide array of high-quality, premium and innovative products have come to market in the third year of adult-use cannabis.

Infused pre-rolls, popular in both the Californian and pre-legalised (also known as 'legacy') markets, are joints that combine flower with kief, hash, shatter or other extracts to the mix. Sundial Growers launched Canada's first in September 2021, which they called Forbidden Fruit Caviar Cones under the brand Topleaf. Each 0.5 gram joint contains premium flower soaked in oil with kief, and exceeds 30% THC.

Saskatchewan craft cannabis cultivator North 40 has introduced Magnums, another infused joint, this time with flavourless extract. Ontario's Kolab Project by Auxly also has introduced its 232 Series Live Terpene Sticks, which are infused pre-rolls that combine single-strain cannabis with 5% total terpene content. Alberta-based General Admission, a brand by Decibel Cannabis, has launched three flavours of infused pre-rolls: Tropic GSC, Berry G33 and Strawnana. Each joint is terpene-infused and kief-coated.



Kolab Project's 232 Series Live Terpene Sticks

General Admission's infused and kief-coated pre-rolls

Brands behind new products like infused sublingual strips and lozenges have overcome the 10 milligrams THC per package limit for edibles because they, like cannabis capsules, are categorised as extracts and not edibles. Edison Jolts, a product by New Brunswick-based Organigram, is a package of 10 x 10 milligrams THC lozenges, designed to be absorbed under the tongue or on the side of the cheek.

Sublingual strips like the Fast Acting Oral THC QuickStrips by Thrive Cannabis's Being brand are also sold in packages of ten, with each strip containing between eight to ten milligrams of THC. Ontario-based Aleafia Health's version, which launched at the end of 2020, comes in three versions: Cloud Buster, Float On and Park Life.

Other new cannabis categories are 'niche', but worth noting. In 2021, the first regulated suppositories arrived to the medical market via Alberta's Prairie Grass LP. They are inserted anally or vaginally for medical purposes.

In November 2021, Ontario-based CannabCo revealed that their innovative, proprietary Odourless Cannabis™ is just that—a cannabis flower strain without the distinctive aromas and flavours of cannabis that clocks in at 35% THC. While some scratched their head at the appeal, the makers argued that property managers of shared apartment complexes and other communal areas may permit scent-free cannabis use where it has thus far been banned. Similar products have been proposed as a solution for patients vaping in hospitals and other health centres.

Trends USA



01

State-by-state legalisation efforts are growing, particularly in the Northeastern United States, where massive economic opportunities are emerging in the near future. While there is bipartisan support for federal reform, there is a lack of consensus on how it should be implemented.

02

The major issues being debated are; rates of taxation, criminal record expungement, equitable economic opportunities for communities impacted by the war on drugs and banking reform.

03

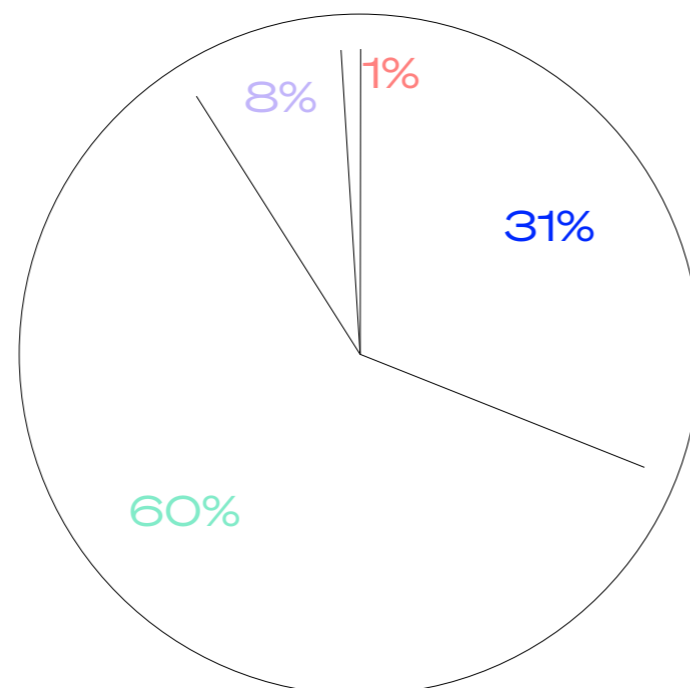
State cannabis legislation has thus far implemented a wide variety of approaches to these issues, as well as; licensing availability, lab-testing standards, products available to medical cannabis consumers as well as what conditions qualify for access to medical cannabis.

Legalisation update

In 2021, after the election of President Joe Biden in 2020 and the Democrats taking control of the Senate, hope has been high for federal cannabis reform. Support from the American people for cannabis legalisation is as strong as ever. A study released in April by Pew Research has shown 'overwhelming support' for

federal cannabis reform. According to the study's results, 91% of US adults say cannabis should be legal to some extent and fewer than one in ten Americans say cannabis should not be legal for any use by adults, at 8%.

US public opinion on cannabis legalisation



- Medical only
- Adult-use and medical
- Should not be legal at all
- Declined to respond

Source: Pew Research Center (Survey of US adults, 5-11 April 2021), Prohibition Partners
 Respondents were asked: "Which comes closer to your view about the use of marijuana by adults? It should be legal for: [options]"

Interestingly, cannabis has emerged as one of the few bipartisan issues in America, but views do differ between demographic age groups and also among those who tend to vote for the Democratic Party as compared to those who usually vote Republican.

Generally speaking, older adults are less likely to approve of cannabis legalisation as compared to younger adults. For example, among those surveyed who are aged 75 or over, only 32% say cannabis should be legal for both adult and medical use. That's quite a discrepancy compared to the next age cohort. Among those

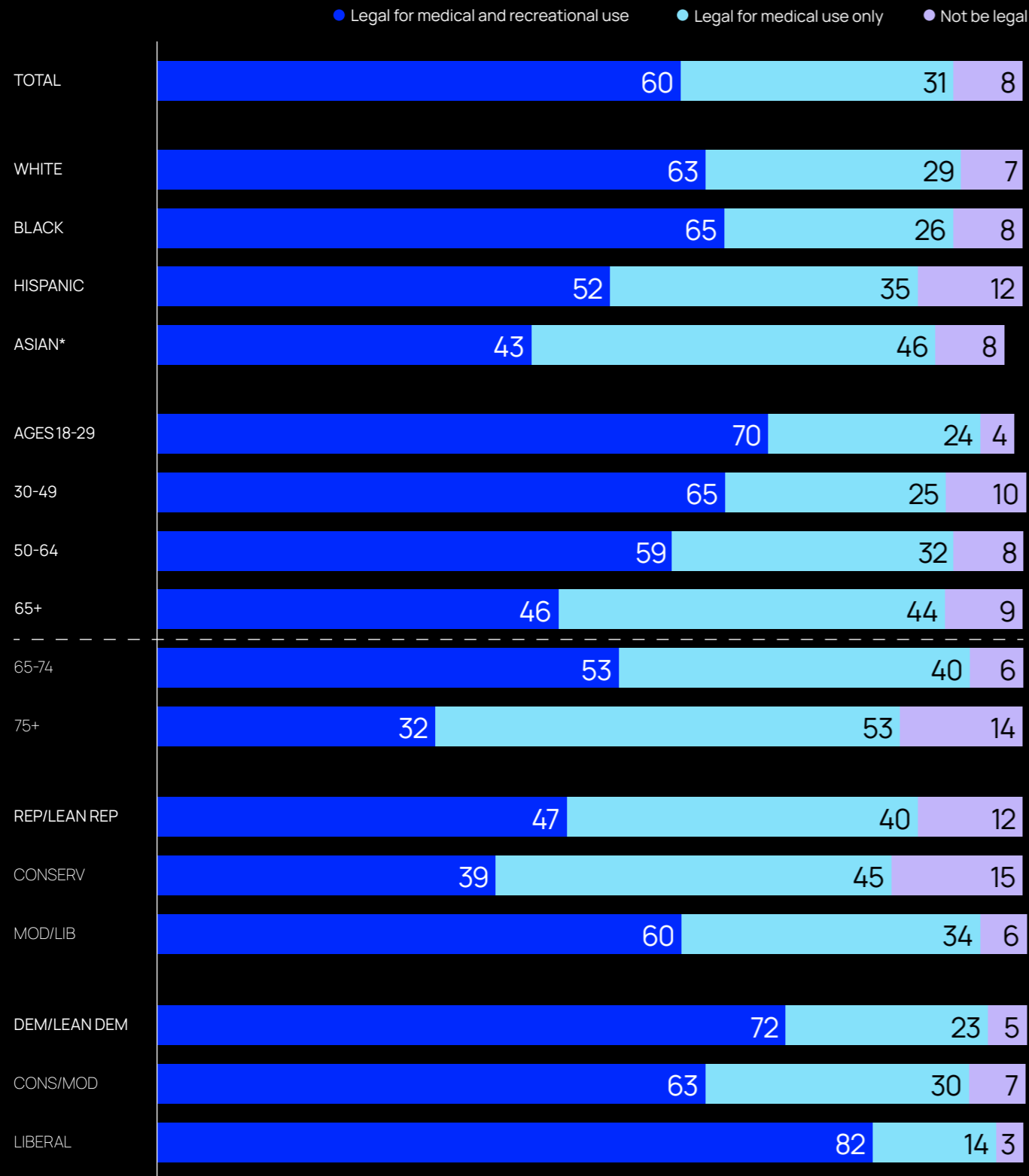
surveyed between the ages of 65 to 74, 53% say cannabis should be legal for both adult and medical use.

Younger adults are much more likely to approve of legalising both medical and adult-use cannabis. For example, 70% of adults under the age of 30 have expressed support.

Political leanings also play a role. Just 47% of Republicans and Republican-leaning independent voters say they supported legalising cannabis for both medical and adult use, and 40% say it should be legal only for medical purposes.



Percentage of Americans who support legalisation, Pew Research Survey



Source: Pew Research Centre, April 2021
*Asian adults were interviewed in English only

When age is layered onto political leanings, again younger groups are more likely to support reform.

Among Republicans between the ages of 18 and 29, 63% support both adult-use and medical cannabis reform, compared to those between 30 and 49 (53%) and those between 50 and 64 (48%). Yet only 12% of Republicans aged 65 and older say all cannabis should be illegal, showing that the vast majority support some amount of cannabis reform.

Those attitudinal discrepancies speak partly to why it has been difficult for legislators to pass cannabis reform bills. Rather than asking if reform should happen, legislators, advocates and industry stakeholders can't agree on how to approach reform in a way that will be business-friendly, tax-generating, socially responsible and protective of public health. In H1 of 2022, we saw two states make big advances in their legislation regarding cannabis. Mississippi finally legalised the use of medical cannabis via state legislature. In May, the State legislature of Rhode Island introduced the legalisation of adult-use cannabis, with sales expected by the end of 2022.

Stalled efforts at federal reform show lack of consensus

Representative Ed Perlmutter's (Democrat, Colorado) Safe and Fair Enforcement (SAFE) Banking Act was first introduced back in 2013, and has passed through the House of Representatives several times with increasing bipartisan support. The bill is designed to legally protect financial institutions such as banks if they deliver services to the state-regulated, but still federally illegal cannabis industry, and does not apply to legalising cannabis itself. With cannabis being still listed as a Schedule 1 substance, the bill would benefit the US industry in a myriad of ways, from allowing credit card and smoother debit card transactions in retail outlets and then online in terms of easing the path to raising capital for burgeoning businesses.

It has been difficult to garner enough support for SAFE Banking in the Senate. Rather than the Republicans standing in the way, it's actually the Democrats who are difficult to persuade. High-profile Senators such as Cory Booker, Ron Wyden and Majority Leader Chuck Schumer argue that reform should have a much wider scope, and issues such as equity and social justice need to be taken into consideration to prevent unbridled corporate influence from gaining an advantage.

In fall 2021, SAFE Banking language was added to a larger bill called the National Defence Authorisation Act, and passed through the House of Representatives for the fifth time. In early January, however, it was removed from the omnibus defence spending bill before it went to the Senate.

Representative Ed Perlmutter has advised that he will not run in the next election, but that he isn't giving up on SAFE Banking in the meantime. At the beginning of 2022, he added it to the manufacturing and research-focused America Creating Opportunities for Manufacturing, Pre-eminence in Technology, and Economic Strength Act (America COMPETES Act) as an amendment.

The Marijuana Opportunity Reinvestment and Expungement (MORE) Act is based on broader cannabis reform legislation that was first introduced in 2019 by Rep. Jerry Nadler (Democrat, New York) and now Vice-President, then Sen. Kamala Harris (Democrat, California). It would; remove cannabis from the Controlled Substances Act, expunge the criminal records of non-violent cannabis convictions, and it proposes taxing cannabis at 5% to fund criminal and social reform programmes in an effort to right the wrongs of the war on drugs.

The MORE Act was passed in the House in 2019, but later died in committee. In 2021, a new version was re-introduced, and notably Amazon, which has also relaxed its rules on drug-testing for cannabis among employees in June 2021, has lent its support to the bill. But although the bill passed through the House of Representatives in fall 2021, it has been unable to garner enough support to make it to the Senate. The MORE Act passed through the House in March of 2022, but it is unlikely to make it through the Senate.

Following New York legalisation and then building on Schumer's earlier efforts with the Marijuana Regulation and Taxation Act of 2018, Sens. Booker, Wyden, and Senate Majority Leader Chuck Schumer have released a discussion draft of the Cannabis Administration and Opportunity Act (CAOA); another approach to broader cannabis reform legislation. States would retain control over cannabis regulations, and the draft of the bill also emphasises racial equity and social justice, with the establishment of restorative justice and opportunity programmes in the cannabis industry.

The general tax rate would be 10% when the law is enacted and for the first full calendar year after. Then it would increase each year: first to 15%, then 20%, then 25%. In the fifth year, the tax would be levied per-ounce rate for cannabis flower and per-milligram of THC rate for extracts. That rate would be determined by the Secretary of the Treasury and equal to 25% of the price of cannabis sold in the US in the previous year. Schumer has advised that after soliciting feedback from colleagues and making tweaks to the draft, he will formally introduce the bill in spring 2022.

In November, Rep. Nancy Mace (Republican - South Carolina) introduced the States Reform Act, the first Republican-led reform initiative. It would remove cannabis from the Controlled Substances

es Act and regulate it on a similar basis to alcohol. It, too, would respect state regulations, but would allow interstate commerce and would allow cannabis businesses to access financial services.

Its tax rates are much lower, with a proposed 3% excise tax that would be in place for ten years after enactment. While it has been formally filed, it hasn't made much progress. Importantly, because Mace has not been endorsed by former president Donald Trump for re-election, because she assigned responsibility to the former president for the 6 January attacks on the capital, it's not clear if she'll win in the up-coming primary.

Interestingly, not all stakeholders have expressed a desire for federal cannabis reform. While companies such as Weedmaps and others say operations would be less onerous and expensive in a federally legal landscape, some leaders of US MSOs warn that federal legal-

isation would open the doors for Canadian companies and other competitors to engage in plant-touching activities, putting domestic economic and social justice opportunities at risk. Instead, they prefer the state-by-state expansion model, which allows them to gradually expand into new markets without as much competition.

US states on the move

In 2021, New York, New Jersey, Virginia, New Mexico, Montana and Connecticut have all enacted, amended or passed adult-use cannabis legislation. Alabama, Georgia, Louisiana, Minnesota, Pennsylvania, Tennessee and Texas have passed or expanded access to existing-but-limited medical programmes by; adding more qualifying conditions, increasing purchase limits, lifting the prohibition on certain types of products such as smokables and/or opening medical dispensaries. Nevada has also passed legislation that would allow cannabis lounges to open.

State-by-state legalisation update during 2021

Alabama	medical legalised
Connecticut	adult-use legalised
New Jersey	adult-use legalised
New Mexico	adult-use legalised
New York	adult-use legalised
Montana	adult-use legalised
Georgia	expanded access to low-THC for medical
Iowa	low-THC medical dispensaries opened
Louisiana	ban lifted on raw/crude, smokable cannabis products
Minnesota	expanded qualifying conditions, allowed raw and flower
Pennsylvania	medical cannabis improvement law passed
Tennessee	expanded access to low-THC for medical
Texas	increased medical limit from .5% THC to 1%, added more qualifying conditions
Virginia	adult-use legalised

Source: Prohibition Partners

Type of legalisation

Several states now have legalisation of cannabis set for voting under ballot initiatives and referendums as of June 2022. If all of these ballots are passed in November, it will represent a large step forward for sensible drug policies which defend the rights of patients and users in the country. It would also mean a large influx of addressable consumers for the adult-use cannabis industry.

State-by-state ballot initiatives for November 2022

State	Type of legalisation
Arkansas	Adult-use
Missouri	Adult-use
Oklahoma	Adult-use
Maryland	Decriminalisation (Adult-use to follow soon)
North Dakota	Decriminalisation
South Dakota	Decriminalisation
Nebraska	Medical Use

Source: Prohibition Partners

States to watch in 2022

In early 2022, South Carolina has passed medical cannabis legislation in the state Senate, but it's not yet certain how the legislation will fare in the House. The legislation is also restrictive, meaning no smokable products will be allowed and medical consumers would only be permitted to obtain two weeks' worth of medicine at a time. North Carolina is also evaluating medical cannabis legislation, but it is similarly limited, with just a limited number of qualifying conditions such as human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS), cancer, post traumatic stress disorder (PTSD) and sickle cell anaemia on the list so far.

Medical cannabis legislation has passed through the House and committee in the state of Kentucky, and it also limits the number of qualifying conditions. The bill's sponsor, Republican Rep. Jason Nemes, is fiercely opposed to legalising adult-use cannabis and has had to reassure opponents to the medical cannabis legisla-

tion that passing it will not mean sales of adult-use will follow. That said, its success in the Senate is not certain. Similar legislation died in the Senate in 2020, and there are other pieces of cannabis legislation at play.

In Wisconsin, there are duelling medical cannabis proposals from both Democrats and Republicans and thus far a lack of consensus on how it should proceed. In Nebraska and Idaho, advocates are aiming to put medical cannabis on the ballot in November 2021 for voters to decide whether or not reform should be implemented. Wyoming advocates were hoping to do the same, but weren't able to collect enough signatures on time and are now aiming to put the issue to voters in 2024.

Emerging US mega-markets

Despite the slow pace of federal cannabis reform in the United States, some sizable legal state markets have either kicked off impressive adult-use sales or have big plans for the near future.

Anticipation is highest for the Northeastern states in the US. New York's incoming adult-use mega-market isn't going to be ready until 2023 at the earliest, according to regulators. With medical sales reaching US\$ 467.2 million in the state in 2021, it should be worth the wait: Prohibition Partners projects the market will reach nearly US\$1.5 billion in its first year of sales, and US\$2.87 billion by 2025. It will be a boon for tax revenues, too, with analysts predicting adult-use sales to bring in an estimated US\$300 million annually.

In the meantime, New York has expanded its medical programme and allowed medical dispensaries to sell cannabis flower. Possession of up to three ounces is also now legal, although the state has seen a proliferation of illegal activity as regulators hammer out the details around licensing, marketing and retail operations.

New Jersey will begin selling adult-use cannabis long before New York in spring 2022, so New York residents are probably going to visit next door to purchase, which will be a boost to sales. For that

reason, Prohibition Partners estimates sales will exceed US\$740 million in its first complete year of sales. By 2026, sales could reach nearly US\$4.4 billion.

Adult-use sales in Illinois have more than doubled in 2021, hitting US\$1.38 billion for the year and setting a sales record in December at US\$138 million; up 14% from the previous month, according to the Illinois Department of Financial and Professional Regulation. That has been helped a great deal by out-of-state shoppers, who have made up 28-30% of sales between January and April.

MTY EXPO
CANNABUSINESS
2022

POWERED BY
Familia Cannabis
de México

Monterrey Expo CannaBusiness 2022
MEDICINAL · INDUSTRIAL · RESEARCH

www.mtyexpo.com

Understand the medical cannabis and hemp industry
Free online information and on-site network

BUY

1. Access: Conference Expo
2. Exhibit spaces
3. Sponsor opportunities

SOCIAL

- in Cannabis de México
- @Cannabisdemex
- @cannabisdemex
- @c4annabisdemexico

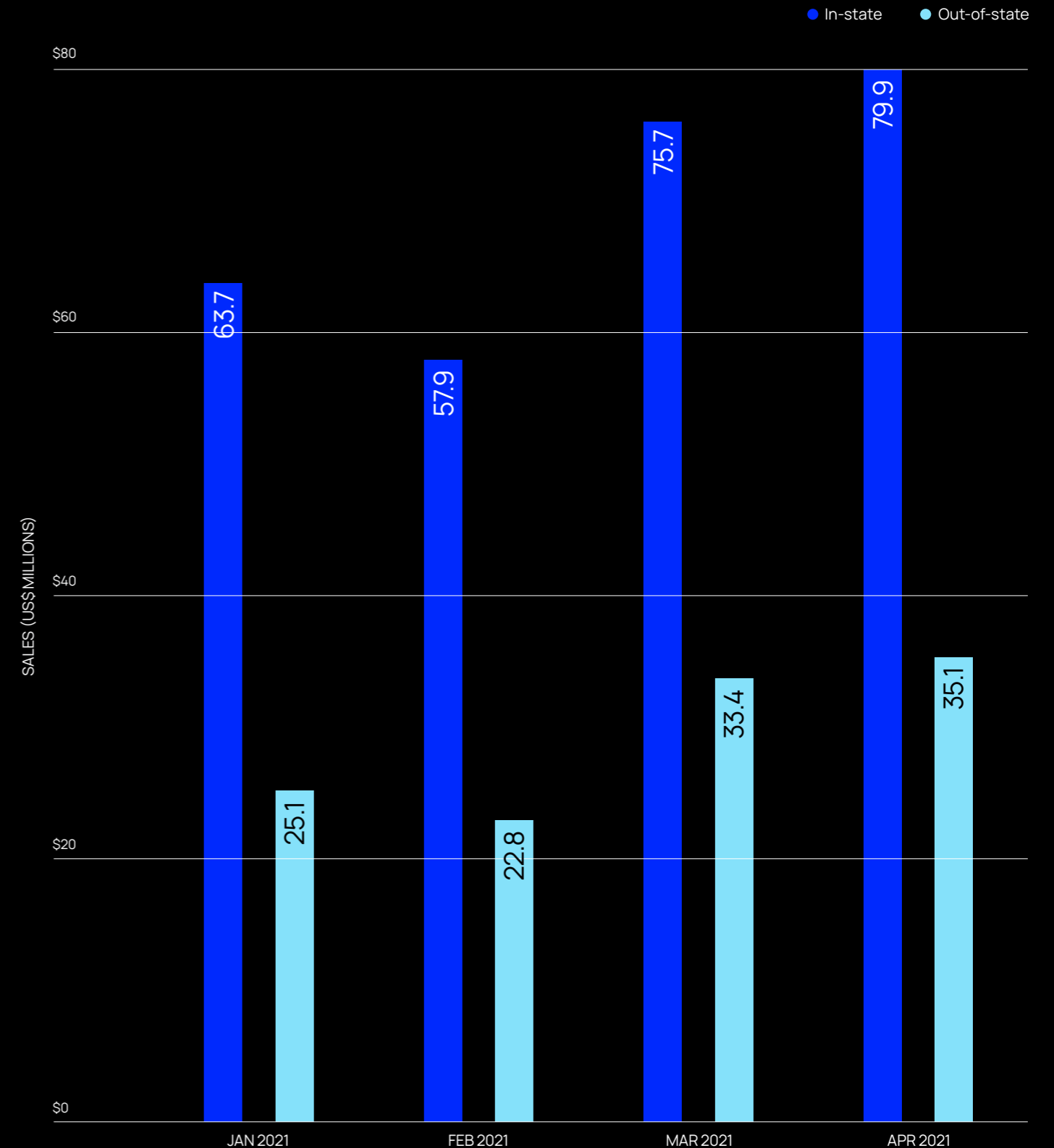
APPLY

Staff
Mail: hola@mtyexpo.com
Commercial:
Alfredo Sánchez
55 5402 1260
alfriend@mtyexpo.com

Cintermex
Monterrey, México
Saturday
October 22
8am - 20pm

HempMeds | Por Grace | PERELIO | kanna

In-state vs out-of-state shopping in Illinois, 2021



Source: Illinois Department of Financial and Professional Regulation

Prohibition Partners forecasts that Illinois' sales will reach US\$7.25 billion by 2026.

Adult-use and medical numbers have also been impressive in neighbouring Michigan, with medical sales reaching US\$ 861.2 million in 2021 and adult-use sales doubling to US\$1.3 billion. There have been sales of US\$135 million in December 2021 alone. There are more than 500 licensed cultivators in the state. Prohibition Partners forecasts adult-use sales in 2026 will reach US\$3.4 billion.

In Massachusetts, sales have also doubled in 2021, reaching US\$1.33 billion in adult-use sales alone. Medical sales have reached US\$318.3 million in 2021. But not all of the action is happening in the northeastern states.

In Florida, where adult-use cannabis isn't even legal yet, sales have reached US\$1.3 billion in medical sales alone in 2021. There are fewer licences available in the state, with first-movers wanting to preserve that advantage. Prohibition Partners forecasts sales will reach nearly US\$3.2 billion by 2026.

In Arizona, with 7.2 million people and where adult-use cannabis sales just began on 22 January 2021, total cannabis sales have reached US\$1.4 billion in 2021, according to the Arizona Department of Revenue. Adult-use cannabis has brought in almost US\$650 million, and medical cannabis, which has been up and

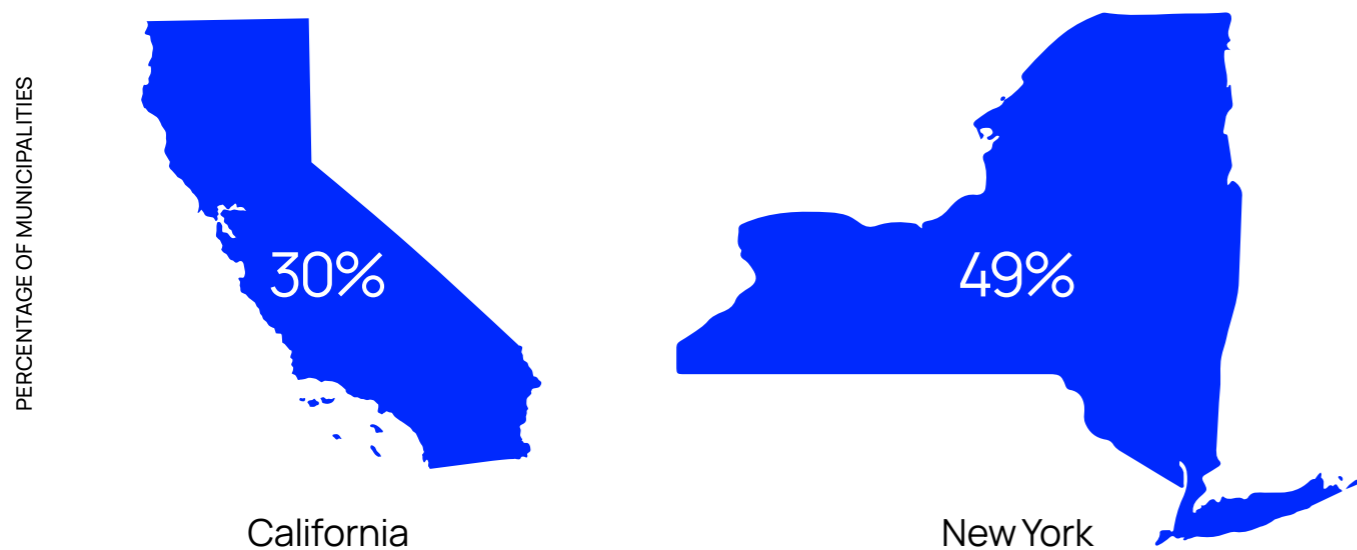
running for a decade, has brought in US\$752 million in 2021. Prohibition Partners estimates medical sales will reach nearly US\$1.5 billion by 2026. In December, adult-use sales surpassed medical cannabis for the second time, bringing in almost US\$67.2 million, as compared to US\$53.5 million, respectively. December sales set a record for the third time in a row, exceeding November's US\$64 million in sales. Due to this growth, Prohibition Partners estimates adult-use sales will reach more than US\$4 billion by 2026.

Regional patchwork of regulations

Sales growth has slowed from 2020 to 2021 in states like California, Colorado, Nevada, Oregon and Washington State. Associated business challenges are provoking stakeholders to take a closer look at state regulations and enforcement to find ways to improve business conditions. One of the most challenged markets is California's, where the illicit cannabis thrives, taxation is high and where a high percentage of municipalities have opted out of allowing legal cannabis stores to open.

As of 2020, still only one-quarter to one-third of municipalities have allowed adult-use dispensaries to operate. Bigger cities like Bakersfield and Anaheim still haven't allowed stores to open. In New York, by comparison, 769 of 1,520 (just over 50%) of municipalities have opted out of allowing dispensaries to open, and 884 (58%) have opted out of allowing licensed cannabis lounges to operate within city limits.

California and New York municipalities that have opted into cannabis retail



Source: Ananda Strategy, Rockefeller Institute of Government, 2021

It has been difficult to bring unregulated cultivators and operators into the licensed, legal market, with high taxes and regulatory fees partly to blame. There are around 745 dispensaries in the state of California not including delivery services—just two per one hundred thousand people. However, the number of medical and adult-use dispensaries are in the thousands, and an estimation of more than half are operating without licences. Illicit sales are estimated to be more than US\$8 billion annually, while regulated sales grew from US\$4.4 billion in 2020 to US\$5.2 billion in 2021.

Cannabis industry advocates say lowering taxes would take the pressure off businesses struggling to compete with the illicit market, and could help unregulated sellers and cultivators gain a foothold in the legal system. Currently, consumers pay an 8.5% sales tax on adult-use tax, and retailers pay a 15% excise tax on purchases from distributors. Cultivators, too, are taxed, this time depending on the weight and type of cannabis, for sales to distributors.

While details haven't yet been released, a series of vocal demonstrations by industry advocates have taken place pointing out the challenges facing the industry. In addition to the projected US\$31 billion tax surplus in the state, California Gov. Gavin Newsom has committed to rethinking the state's cannabis tax scheme.

High taxes in Massachusetts have also caught the attention of industry stakeholders. In December 2021, the state announced that the cannabis tax revenue had exceeded that of alcohol for the first time, bringing in US\$51.3 million in alcohol excise taxes as compared to US\$74.2 million in cannabis excise taxes. Adult-use cannabis is subject to a 10.75% excise tax, plus the state's 6.25% sales tax and an optional local excise tax, which can be up to 3%. Since beginning adult-use sales in Massachusetts in November 2018, total gross sales reached US\$2.54 billion in 2021, according to the Cannabis Control Commission, and in 2021, adult-use sales brought in US\$112 million in excise taxes – 206% higher than expected.

State regulators, however, do not have plans to reduce cannabis taxes. Instead, there's a proposal to double excise tax rates on alcohol, which currently range from a few cents on cider to a few dollars per gallon on hard liquor. The state would bring in an additional US\$67 million which would be used to boost health programmes for people with substance abuse challenges.

There are a few important differences between Massachusetts and California, the most obvious being that Massachusetts doesn't share California's legacy of pre-legalisation cannabis cultivators. However, there's another crucial difference; the number of licences available to regulated growers and retailers, as explained in the next section.

Striking the balance between limited and unlimited licensing

Limited vs. unlimited licensing is another hot topic that has become particularly heated in 2021. Massachusetts, Florida, Illinois, New York, New Jersey, Pennsylvania and Virginia are often identified by some MSOs as key states where, because of the limited number of cannabis cultivation licences available, they're coveted and highly valuable. So long as licence numbers stay limited, lucky companies that have acquired them are believed to be well-positioned for long-term sustainability.

Some argue that limiting licences could diminish product quality, hurt small business prospects, create oligopolies and even be an impediment to the success of social equity-focused initiatives.

At the other end of the licensing spectrum are states like Oklahoma, which has a population of just 3.98 million but no shortage of cannabis cultivation and retail licences. The state has so far only legalised medical cannabis, but reached sales of US\$1.1 billion in 2021 and has more dispensaries than Colorado, Oregon and Washington combined. Then, in October 2021, Oklahoma, which some fondly refer to now as 'Toke-lahoma', hosted the highest number of cannabis cultivators, more than 9,000.

It can be tough to return a profit when grams of cannabis flower are as low as US\$3 in towns with more dispensaries than grocery stores. Local authorities also say that the unfettered, underregulated approach has invited illicit cultivators who mistreat and exploit workers and export cannabis to illegal markets outside of the state. Still, the state brought in US\$136 million in cannabis tax revenue in 2021, but is considering a moratorium on retail licences. The state will also implement its first seed-to-sale tracking system with Metrc software in an effort to hinder illicit sales.

Need for lab-testing standards and enforcement

Another issue demonstrating the varied state approaches to legal cannabis is laboratory testing standards. Every state requires cannabis products to be tested for cannabinoid potency and labelled, but standards vary greatly from state to state. To confuse the issue even further, labs, in most states don't adhere to the same standards, and even when they are supposed to, those standards aren't always enforced by local regulators.

With THC potency being so valuable to consumers, cannabis cultivation companies have been accused of 'lab-shopping', or seeking labs, that will produce higher THC results to maximise price and sales.

In Michigan, Viridis Laboratories has sued the Michigan Marijuana Regulatory Agency (MRA) after it recalled US\$230 million, or 64,000 pounds of cannabis products, that had been tested at two of their labs. in the state.

According to the lawsuit, Viridis has alleged that the MRA's recall may have been retribution for an administrative complaint filed by the lab. after it faced questions about its testing methodology which appeared to produce THC potencies of 30% or higher. Then, because of the fact that the lab. conducts 70% of all marijuana testing in the state, representatives of the lab. have said the MRA wants to assist other labs. to grow clientele.

A judge has ruled partially in the lab.'s favour, writing in his decision that the recall of products tested at one of the two labs. was 'arbitrary and without basis', comparable to a 'substantive due process violation' and that 'the threat of irreparable harm to the reputation of the Bay City facility arising out of the recall remains and has largely been left rebutted'.

When it came to the second lab., the judge ruled that there were indeed some valid testing discrepancies identified by the MRA, which could have created safety issues for consumers. 'That the wisdom of such a recall is or could be debatable is not enough to survive rational-basis review or to establish an equal-protection claim', he wrote. Viridis is appealing the decision.

With the suspicion that some labs. could be inflating THC potencies or choosing the highest potency level while still staying within the margin of error, cultivators have been accused of 'lab. shopping' for the highest potencies that they can get for products. Therefore, some are advocating for a national cannabis lab. testing standard where methodology is consistent across the country, and where standards are enforced by regulators. That way, there would be an even playing field for cannabis cultivators to compete in and consumers could trust the labels on all products.

Hemp, CBD and persistent THC taboos

While hemp cultivation has been federally legal since the 2018 historic Farm Bill, no CBD products (except for Epidiolex®, which is a patented medicine and not an over-the-counter wellness product) have been approved or regulated by the Food and Drug Administration (FDA). The US has adopted a legal stance that CBD is not controlled under international law, and so controls CBD under their own laws e.g. the Farm Bill. The US voted against removal of CBD from the Single Convention on Narcotic Drugs in late 2020 with their spokesperson at the vote declaring, 'It is not our position that CBD is under international control under the drug conventions' as

it is not specifically mentioned in relevant legislation. However, the use of CBD in foods and supplements remains illegal at the federal level. Some states are contravening this law, as many are with the use of medical and adult-use cannabis e.g. Texas allows for consumable CBD products with less than 0.3% THC.

There also does not appear to be any sense of urgency to federally regulate CBD products, despite their proliferation across states in the US. One reason could be that the hemp cultivation acreage shrank in 2020, and appetites for CBD appear to be waning. Another is the slow pace of federal cannabis legalisation, which would instruct the FDA and other agencies to regulate all cannabis-derived products.

The FDA and the Federal Trade Commission (FTC) have both intermittently sent warnings to groups of companies marketing ingestible CBD products. The majority of these have been for misleading information on packaging and advertising, most often pertaining to health claims. These bodies have not been proactive in the removal of CBD products under federal law, and the enforcement of this is left mostly to State enforcement.

Regulators are currently focused on policing THC, both delta-9 and the newer delta-8, an impairing cannabinoid that is naturally occurring in the cannabis plant, but in low concentrations. Thus, it is often chemically derived from CBD. In 2021, hemp cultivators and processors zeroed in on the appetite for the more impairing THC cannabinoids, marketing products with THC but still containing less than 0.3%, which is the limit for hemp plants and the most common limit for consumable products. As the 2018 Farm Bill exempts hemp-derived products from Schedule 1 status, many argue that any product derived from hemp, whether it's impairing or not, is acceptable.

In September, both the Centres for Disease Control (CDC) and the FDA have issued warnings about delta-8, writing that, 'these products may be labelled simply as 'hemp products,' which may mislead consumers who associate 'hemp' with 'non-psychoactive'. Furthermore, the FDA is concerned by the proliferation of products that contain delta-8 THC and are marketed for therapeutic or medical uses, although they have not been approved by the FDA. Selling unapproved products with unsubstantiated therapeutic claims is not only a violation of federal law, but also can put consumers at risk, as these products have not been proven to be safe or effective.'

There's been such a proliferation of delta-8 products, particularly in states where access to cannabis is limited, that several states have restricted or banned it outright, such as; Alaska, Arizona, Ar-

kansas, Colorado, Connecticut, Delaware, Kentucky, Idaho, Iowa, Michigan, Mississippi, Montana, New York, North Dakota, Rhode Island, Utah, Vermont and Washington.

Delta-8 is currently legal in Texas, however, where low-THC medical cannabis is legal, it is only accessible to those with a list of qualifying conditions, such as; epilepsy, multiple sclerosis and terminal cancer. Legalisation is slow-moving in the state, although cannabis has been decriminalised.

Similarly, Georgia, Iowa and Tennessee have relatively THC-averse regulators. In Georgia, 30 dispensaries have been approved to sell low-THC (5% THC maximum) cannabis products, and adult-use cannabis is not currently on the table.

In Iowa, low-THC medical dispensaries opened in 2021, but consumers are limited to 4.5 gram of THC every 90 days. To qualify for authorisation, consumers must have at least one of what the state calls 'Qualifying Debilitating Medical Conditions', which include; cancers if they cause severe symptoms such as severe pain or cachexia, seizures, multiple sclerosis, if it's accompanied by severe muscle spasms and Parkinson's Disease. In January, Democratic Senators announced a resolution to put the question of adult-use legalisation to voters in the state, which could happen in November 2024 at the earliest. The process to put an issue on the ballot in Iowa involves a constitutional amendment rather than a collection of signatures, as is the case in most states.

Tennessee also expanded its low-THC medical cannabis access by adding a few more qualifying conditions to its list. There is currently a bipartisan effort underway to pass a bill that would put the question of whether or not to expand access to both medical and adult-use cannabis to a vote in November 2022, sponsored by the state. However, if voters expressed support, it would not have law-making effects. In Tennessee, votes of this kind merely help inform legislators what the general sentiment is toward adult issues.

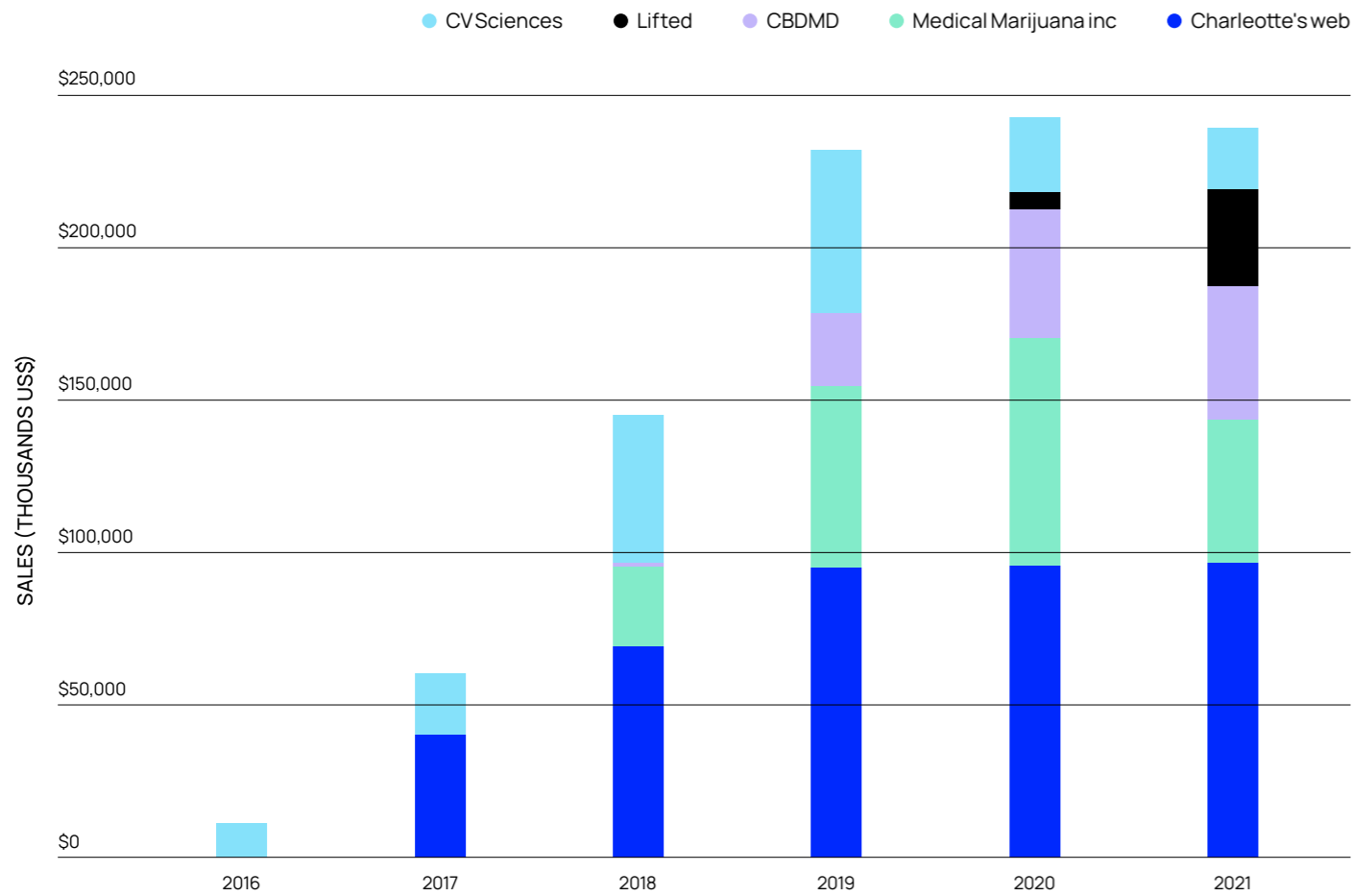
Increasingly, America's fragmented and state-limited hemp-derived CBD cultivators are finding loopholes in order to market products with small amounts of THC and/or produce delta-8 containing products. Many are also advocating for THC legalisation with the hope that they can transform from hemp cultivation to THC-focused cultivation, as is the case in New York. There, hemp cultivators will be allowed to apply for cannabis cultivation licences as the state plans for adult-use sales.

Potentially stagnating CBD sales

As indicated in the sizing for CBD in North America, Prohibition Partners have detected a potential stagnation in the overall sales of CBD in the US. This is based on consensus among operators Prohibition Partners is in contact with. This is partially verified by sources of official data such as Google Shopping Trends and the revenues of large CBD companies.

Prohibition Partners collated the revenue data from some of the largest public CBD companies in the US. As can be seen, the growth in revenues stagnated around 2019, in line with the results from Google Shopping Trends. All companies listed here sold the vast majority of their products in the US and work only in high CBD products rather than high THC medical or adult-use products.

Sales of CBD from 5 large public US CBD companies



Source: Prohibition Partners, financial results of public companies

Google Shopping trends makes search data available from the company's search engine for products. The results for any product range from 0-100 representing the periods with the highest and lowest relative search frequency. In the graph below, we see that "CBD Oil" peaked in popularity on Google Shopping in 2019. This is supported by similar results being found when searching for "CBD" or similar products, when using search trends rather than shopping search trends and when comparing against relatively similar products such as coffee, vitamins which show no such decline since 2019. Similar results are also found for CBD in Canada, though the peak occurs earlier, likely due to the introduction of adult-use cannabis in late 2018.

The agreement of these two independent sources of data seems highly indicative of a real stagnation of CBD sales in US/North America. However there is a possibility that growth continues uncaptured by the above sources. For example, if a large quantity of sales and consumer interest shifted from online sales and sales in large scale products, refocusing on smaller brands and in-person stores or other online marketplaces, then this would hide the real growth of the industry. Prohibition Partners finds it more likely that a decrease in novelty factor, increase in availability of high-THC products and a decrease in CBD price has contributed to an overall stagnation in CBD consumer interest and total sales value in North America.

Popularity of 'CBD Oil' in Google Shopping searches in the US



Source: Prohibition Partners, Google Shopping Trends

EXPERT INTERVIEWS



Chris Beals

CEO

Weedmaps

California-based Weedmaps has steadily matured over its 14-year history, but 2021 may have been its most transformative year yet. In December, the company went public on the Nasdaq under the ticker MAPS through a special purpose acquisition company Silver Spike Acquisition Corp., which renamed itself as WM Technology. In the process, the company raised US\$579 million, and has expanded from being a consumer-facing product and retail database app. to include retail point of sales software and data insights and research.

From his unique position on the North American market, Prohibition Partners asked CEO Chris Beals to share his insights on the future of Canadian and American consumer behaviour, and how he views the growing interest in cannabis from mainstream tech. companies such as Uber and Amazon.

When the pandemic first hit in 2020, sales skyrocketed. Now that growth has slowed, what's coming next?

Cannabis is resistant to recessionary pressures. The trick is how much of that demand is legal cannabis demand. The issue we saw was a lot of leakage of overproduced cannabis products into illegal markets. I think cannabis demand continues to grow and I don't think there's been enough research on where it falls.

Looking forward to 2022, it's important to remember that we've seen these supply shocks before. This is not a new phenomenon. In fact, there was one not that long ago in California. One of the things that we've often seen in the past is people overreact and they go the other way, and so drastically cut production and you end up with undersupply in the following nine to 12 month period.

Does Weedmaps have a preference as to how federal reform should roll out?

We want federal legalisation. We run what I think is the largest marketplace for cannabis anywhere and we cannot charge one single dollar on a transaction anywhere in the entire marketplace. And so you know, when you think about what's on the column, and why I'm so excited about the future of the Weedmaps platform within WM Technology, it's the fact that you see this growth, this revenue, what we're powering right now and we don't charge a single dollar for what is running through this platform. So in my view, federal legalisation can't come soon enough.

People confuse federal legalisation with state de-regulation. The states right now are increasingly making their laws complex and we've had conversations with at least two or three states that are doing it with the intent of making sure that there cannot be interstate commerce because they rely on the vertically integrated cannabis industry for taxes for jobs, for improving real estate values for the general health of the economy. If federal legalisation happened tomorrow, there is not one single product in one single state that would be suitable for sale in another state after

federal legalisation. And most of the states are a-okay with that. Fortunately we don't have to take a side on exactly how it plays out. That is one of the advantages of moving ones and zeros and not a physical product.

Do you see companies like Amazon and Uber expressing an interest in participating in the cannabis industry as a threat?

Any company that doesn't think seriously before they answer this when they talk about Amazon isn't thinking hard enough. But fundamentally, cannabis has a dedicated supply chain, incredibly complex logistics, what we're doing is stitching together point-of-sales data and creating a virtual shopping mall for cannabis without custodising any of the products. The data and software and architectural acumen and expertise that makes that work, just to be honest, has not been solved by eBay or by any other number of large companies that don't physically custody the goods.

In Amazon's case, they have large warehouses where they have all the products. The laws around cannabis do not allow that. But more importantly, when we survey people and how they shop for cannabis, people shop by strain, brands, smell, clinical effect, taste. They're such widely varied factors. This is an entire marketplace built towards a speciality 'good'. And Amazon and these other businesses have had an extremely tough time with speciality goods, because speciality goods almost always need a speciality marketplace. If you look at something like the tyre industry, online sales are dominated by speciality tyre marketplaces.

In our case, with cannabis, you have complex regs., the tax differences based on whether it's medical or recreational. The average retailer has over 400 SKUs with dozens moving in and out of stock during any given day. Most of our menus are driven by real-time inventory, and we've stitched together almost 100 different 'point of sale' systems and we make it look like a sane, unified experience. We wouldn't be able to do that if we hadn't been doing this for 14 years.

Uber can't do cannabis delivery because you have to be an employee to deliver cannabis in almost every jurisdiction. You have to comply with the state track-and-trace system and report to that. Not to be overly glib or sanguine about it, but I think the only thing that makes people think Amazon or Uber can come in and do cannabis is they don't understand how complicated the supply chain and the laws and the regs. and the actual product of cannabis is. Not to sound harsh about it, but I think mostly when I hear that feedback, it's usually coming from somebody who has never shopped for cannabis in their entire life.

EXPERT INTERVIEWS



Jeffrey Raber
CEO & CVO
The Werc Shop

In the US, the process for lab-testing cannabis samples for cannabinoid potency and contaminants varies from state to state. In Washington state, for example, cultivators and processors send samples to labs. for testing. In California, lab. agents go to distribution centres to collect samples. That matters because how a sample is collected and what part of the plant it's selected from will affect its lab. results. The bottom half of a cannabis plant can test as much as 10% lower in THC potency than the flowering tops.

Those variables extend from sample collection to testing methodology to the allowable margin of error to enforcement. With potency being one of the most important ways consumers differentiate between products and value, and since lab-tested cannabis is one of the major differentiators between it and unregulated cannabis products, it's important that test results be trustworthy and reliable. That's why Jeffrey Raber, a medical cannabis consumer armed with a Ph.D. in organic chemistry, founded California-based The Werc Shop, a cannabis-focused lab. committed to improving consistency and transparency in cannabis testing across America. Here, he explains why national lab. standards, regulations and enforcement are so badly needed in the US.

What do current standards mean for medical cannabis consumers? How trustworthy are cannabis labels?

An extract product doesn't have that variability across a batch. You can more easily homogenise a whole amount of oil extract and get a good representative sample. But unfortunately for medical patients, if they're consuming flower products, it may not be exactly what's on the label. And it might be off considerably, and I think that's definitely a challenge.

Some states in the US approached that where they forced the cultivators to grind up all the flower material before it was placed into containers. That way, it's all homogenised before it came out, and you don't have bud-to-bud variability. That's great for medical patients, because then they're saying we know it's all homogenised before there was sample-picking, and that gives us a representative number that should be pretty close to accurate within plus or minus variability of the entire process, between sample-picking all the way through to analytical testing, and then labelling.

There's always some variability. Even the over-the-counter medication like Aspirin, if it says it's 500 milligrams, that means it can be between 450 and 550.

Has a lack of standards created some dishonesty where cannabis companies are shopping around for optimum lab. results?

That is unfortunately going on. I don't know if it's as much a lack of standardisation as it is a lack of a proper regulatory structure. If the regulations allow for wide variability to be considered accurate, that could be a potential problem too, right? So even if you're getting a decent sample, if the regulations allow the labs. to have a large error margin within their calibrations or their actual reporting methods, then you could have somebody reporting on the higher end of that spectrum, as opposed to right in the very, very middle. So standards would help say, here's how we're all going

to perform this, here's how we could all prepare things, and we should get these numbers. And then regulations could follow to say that the margin of variability is much, much tighter and more accurate so that they don't have one lab. that's still technically seen as doing it correctly, but producing much, much higher results than everyone else.

And this is the case for CBD as well?

Yeah, there are no standards fully in place on any of that, I think that they're working on it. It's coming. But a lot of the labs. doing that product type of testing are the same state-based THC labs. as well. So you're seeing a lot of the same players, and they may have been just performing the same practice because no one's told them that they had to do otherwise.

Some argue that improving standards and enforcing them could boost the illicit market, the argument being that the additional associated costs could hurt the regulated industry. What is your response to that?

I think taxes are far more hurtful than testing costs in that respect. There's no real testing in the illicit market. They don't have any compliance or regulatory pieces to go after either. But they don't have to deal with taxes, which adds a whole lot more cost than testing does. And I think accurate product labels and product assurance on product purity is definitely valued by consumers. And they'd happily pay for that. But they don't want to pay excessively because of large tax values. And you're starting to see in a place like Canada, where they have very good rigorous testing, they're starting to see if the difference between regulated and tested products is nominal, like US\$1 or US\$2 over illicit markets, people choose regulated products. But we know well, in California, if that value is higher, they choose the illicit product. So it is, you know, a price sensitive piece, but I don't think it's driven as much by testing as it is by taxes or regulatory requirements that make operational pieces cumbersome and more costly.

Are regulators and the industry receptive to your push for better standards?

The regulators certainly are because they really want accuracy, they want to be protective of consumer health and safety. And they certainly don't want people getting mis-dosed or finding contaminants. And those in the industry want a level playing field. It would be great if everybody does the same thing and they could trust that all these labs. are all giving the right results, so they can go to the one with the best service and not just the one that inflates the number. But I don't get rewarded today for getting accurate numbers when everybody else's numbers are inflated. So some folks are willing to inflate values, and it really ends up tipping the system out of balance and impacting everyone. I can be the best honest operator, but I'm not gonna make it. That's obviously a problem, right?

EXPERT INTERVIEWS



Joe Hodas

CMO

Wana Brands

With its assorted flavours of sour gummies and other edibles products, Colorado-based Wana Brands (which is named for the 'juana in marijuana) is one of the most sought-after cannabis brands in the Canadian market, earning a rare level of cross-border brand awareness that makes it a pioneer in the legal North American cannabis market. Its 11 years of hard work appears to have paid off. In October 2021, Canada's Canopy Growth bought the option to acquire 100% of the company—once federal legalisation happens, that is, and they're allowed to do so.

In a Q&A with CMO Joe Hodas, we found out how Wana's early entry in Colorado helped the company discover what kind of products and marketing strategies build loyalty across North America, and how they plan to retain that leadership position as the competition heats up.

When you look at other brands, you see a lot of emphasis on celebrity. At Wana, what's the strategy behind your marketing efforts?

Our internal ethos that we don't really talk about externally is: 'quietly quirky'. That's kind of a guiding principle. We are humble, but we also know who we are and what we are as a brand and paying a million dollars for a contract with a celebrity that doesn't really understand us, maybe doesn't even consume edibles, doesn't make sense to us.

We opted to use a platform called Loud Crowd to begin cultivating influencers organically, finding those who have good reach and saying, 'Hey, look, be part of this programme. Help us communicate a little bit more about Wana.' That pays off in the sense that we have the ability to customise ourselves a little bit per the individual user.

Some people like Snoop, some people don't, right? Celebrities mean certain things to certain people. And so we kind of feel like we want to mean something to each individual person. So allowing them to develop their understanding of the brand based on who we are seems better than having a third-party tell them who we are. Not to say that at some point in the future, we might find the perfect celebrity who encompasses everything that we are at Wana. I'm not averse to that type of an approach, but we just haven't found that person yet.

Are there advantages to focusing on edibles rather than flower?

Well, flower is still the largest category in the industry. But edibles is a category that's continuing to grow, and I think will continue to grow as new consumers begin to understand the value and the benefits of cannabis. Many of them don't want to smoke and don't, frankly, understand the subtle nuances between strains and terpenes. It's also a good viable category when you think about the infrastructure and the focus required to cultivate

quality flower. That's a completely separate skill set than it is to be a manufacturer of a food product like a gummy, right? So to be able to focus and be the very best that we can in this category that we've chosen to be in makes more sense than trying to be broad and getting into multiple categories.

I would say the thing about flower is that it is pegged to the supply and demand economics of a given market. So if you look in California, they're suffering mightily right now. Flower producers are getting crushed because there's an oversupply of product in the market. They build a business model based on, let's say, US\$2,000 a pound, but pounds are now selling for US\$600. That's a really difficult business to be in. We face price compression on the edibles side, but not to the significance of flower. Ours is driven by competitive pressures of various brands and products, reducing their margin, but it's not necessarily pegged to the supply and demand economics of the given market.

Gummies are the number one most desired format when it comes to edibles. What do you think about drinks?

I have a little bit of a unique perspective on drinks because I spent four years as the Chief Marketing Officer for a company called Dixie Brands. Dixie's primary product was an elixir, the Dixie Elixir. Drinks make up a very small percentage of cannabis purchases in the category. In the last six months, more companies have put marketing dollars and put science behind it, the science of how you emulsify a beverage and the effect base of it. Adoption was really slow, but I'm beginning to think that there may be a viable future for beverages. But I have a very strong opinion about this. The companies that are out there trying to create non-alcoholic cannabis infused wines or beers, I think they're barking up the wrong tree. I think the cans of the world that are looking at sparkling beverages, seltzer waters, things like that, that's a much better approach. I like my cannabis and my beer, right? I don't want my cannabis in my beer. I like those two things to be separate and they're separate effects.

Tell me about how different state regulations affect your business. Is it a challenge for you to navigate each state's different regs. as you expand into new markets?

We're in 13 states plus nine provinces in Canada. And we've done that pretty successfully, but it is painful. We have different packaging, different dosage requirements, different product types in every market we're in. In Florida, our gummies are called Chews, and they have to be in a black and white package and the Chews have to be translucent, and we aren't really able to market or talk about them. Thank goodness people knew Wana because we became popular there quickly. But it was because of all of our other expansion efforts.

In Canada, you can only have up to 10 milligrams per package, so our packaging is a little foil pack with two gummies in it. Our Quick line launched there, and here in Colorado they are named after beverages like Peach Bellini and Pina Colada. That allowed us to create a marketing campaign around the new 'happy hour' without the hangover. In Canada, Health Canada says you can't refer to a gummy in an alcohol format. So we had to change it to Orchard Peach. And so we had to change the names every day. It's just insane, but we muddle through it.

The deal with Canopy Growth is contingent on federal reform. Does that put pressure on you in the meantime?

Canopy does not technically have ownership over us currently, so they are at arm's length from our day-to-day operations. The good news is they bought us because they know who we are as a company and as leaders. So our goal is to continue to push, push, push and grow this brand and expand it, because there is no guarantee that legalisation will happen and there's no guarantee of what the future looks like. So it doesn't really change our day to day, right? So, does this add pressure? It doesn't because we're cranking no matter what.

EXPERT INTERVIEWS



Irwin Simon
Chairman and CEO
Tilray



Denise Faltischek
Chief Strategy Officer
and Head of International
Tilray

Last year, 2021, was a massive year for Tilray, which moved its head office from Nanaimo, British Columbia to New York City following the completion of its mega-merger with Aphria, forming one of North America's largest cannabis companies.

But the M&A didn't stop there. Following its 2019 acquisition of Manitoba Harvest, a CBD and hemp food company with cultivation and distribution channels in the US, Tilray acquired a 75% stake in retail chain MedMen's outstanding secured convertible notes from Gotham Green Partners, as well as 65% of its outstanding warrants for US\$165.8 million. It also entered the spirits and beer business, acquiring Georgia-based SweetWater Brewery and Colorado spirits company Breckenridge. The acquisitions move Tilray out of its sole focus on cannabis and into a much more diversified portfolio, with cannabis, beer, spirits and wellness products. After experiencing challenges retaining market share in Canada, we wanted to know how Tilray's global strategy has shifted ahead of US federal legalisation and as European medical and adult-use markets emerge.

There has been some creative deal-making going on between Canadian and US companies. Tell me about your strategy when it comes to the US market.

Irwin: Because we're a listed stock exchange company, we cannot own any US assets that participate in the cannabis industry and recognise any revenue, any profits from it. And the US is the biggest market out there. One day we know legalisation will happen and we know it's about a US\$100 billion-dollar opportunity, so how do we make sure we are in the US with adjacent businesses to the cannabis industry, or industries where we feel there are consumers that cross over? We have made investments or acquisitions in the spirits business, in the beer business and the food business with Manitoba Harvest. Upon legalisation, we would go down a couple of paths. One is to continue in spirits, beer, or food. Or, we could take those brands that hopefully have gotten bigger, and convert them to a THC-infused business. And third, we hope the distribution system from our beer business, our spirits business and our food business can help us get distribution with THC-infused products. And last but not least, we can recognise revenue, we can recognise earnings. We can recognise earnings before interest, taxes, depreciation and amortisation (EBITDA).

Do you still consider Tilray to be a cannabis-focused company?

Irwin: I consider Tilray to be a better-for -you company, a health and wellness company where cannabis is a major common denominator. We see a lot of similarities between cannabis and spirits. But I'm looking at businesses and ultimately, the adjacencies are cannabis. I think every company should be a diversified company. My prior company, Hain Celestial Group, we were a food company, we were a personal care company and we were a protein company with similar customers, the same common denominator. You should not ever be a one trick pony out there because the tricks run out sometimes.

What have you learned so far from the demographic information that you have in Canada and your challenges retaining market share?

Irwin: There are some great learnings there. Consumers today have become quite educated in cannabis in regards to regulatory quality, different strains and potency. They've also become conscious of price. We've also learned that the consumer wants new products and new innovation all the time. The other thing which we've learned is, there's a crossover on a consumer for adult use and medical use. So you may be buying it for a night of relaxation and enjoyment, or for pain, for anxiety, for sleep, too. And last but not least, budtenders have got to be educated about the product. So it's really important to educate budtenders about the product.

Okay, let's talk about legalisation in the US. Is there a bill that you're favouring? How would you like to see legalisation rolled out federally?

Irwin: I would like to see cannabis and alcohol go through a similar system, a three-tier system, where there's going to be a retail outlet, manufacturing and distribution to get to the stores. And the states would control each state. You already have good liquor rules in place and the control boards, they should just run it through that instead of starting it all over again. They should allow you to produce it in other states and ship it in there. Because where it is today, every state wants you to have your own greenhouses and grow facilities within that state. And you can only grow it in that state and sell it in that state. That's an expensive proposition to build our greenhouses in every single state and it creates an overabundance of supply.

Right now, there's so much confusion out there about legalisation, decriminalisation, the SAFE Banking Act, the MORE Act, etc.. Enough is enough. Move ahead with it.

Do you see that happening this year?

Irwin: Absolutely not. You know, there are not a lot of times I hope I'm wrong. This is one I hope I'm wrong.

Tell me more about your global aspirations growing beyond North America. Is a global market realistically opening up in the near future?

Denise: Absolutely. We are looking over at Europe where our medical business is growing very well as more and more countries come online accepting medical cannabis as an alternative to traditional medicines. We also have heard recently of several countries moving toward adoption of adult-use. Germany made a very big announcement toward the adoption of adult-use. They're working on regulations and we expect that there will be a first draft sometime this summer to be looked at. We believe that there will be adult-use actual commercial sales by the end of 2023 calendar year/January 2024. We also know that Portugal is looking at adult-use legalisation and continues to march down the path. And then in France, there's been discussions about adult-use as well. And Malta adopted adult-use from the perspective that you could grow yourself and it's legal from an adult-use perspective. So in addition to the medical markets growing quite nicely, we see big opportunities with adult-use coming online. And we believe that once Germany adopts, other countries will follow suit.

Acronyms



AIDS	acquired immunodeficiency syndrome
AGCO	Alcohol and Gaming Commission of Ontario
America COMPETES Act	America Creating Opportunities for Manufacturing, Pre-eminence in Technology, and Economic Strength Act
AI	artificial intelligence
BMO	Bank of Montreal
B.C.	British Columbia
CA	California
CBD	cannabidiol
CBG	cannabigerol
CBN	cannabinol
CAOA	Cannabis Administration and Opportunity Act
CDC	Centres for Disease Control
CEO	Chief Executive Officer
CMO	Chief Marketing Officer
CVO	Chief Visionary Officer
CO	Colorado
CNBC	consumer news and business channel
delta-8 THC	Delta-8 Tetrahydrocannabinol

EBITDA	earnings before interest, taxes, depreciation and amortisation
FTC	Federal Trade Commission
FDA	Food and Drug Administration
GTI	Green Thumb Industries
HIV	human immunodeficiency virus
IPO	Initial public offering
IP	intellectual property
LPs	Licensed Producers
MORE	Marijuana Opportunity Reinvestment and Expungement Act
MPP	Member of Provincial Parliament
MI	Michigan
MRA	Michigan Marijuana Regulatory Agency
MSOs	Multi-state operators
NV	Nevada
PTSD	post traumatic stress disorder
SEO	search engine optimisation
SAFE Banking Act	Secure and Fair Enforcement Act
SPAC	Special Purchase Acquisition Company
SKUs	stock-keeping units
THC	Tetrahydrocannabinol
UNODC	United Nations Office on Drugs and Crime
WA	Washington



LONDON

A: 31 New Inn Yard, Shoreditch,
London, EC2A 3EY, United Kingdom
T: +44 20 3928 2814

BARCELONA

A: C/ de Bailèn, 11,
08010 Barcelona, Spain

TORONTO

A: 998 Bloor Street West, #10587,
Toronto, ON M6H 1L8, Canada

info@prohibitionpartners.com
@prohibition_p
prohibitionpartners.com

DISCLAIMER

Our publications may contain advertising and sponsorships. We are not responsible in any manner whatsoever for the content of advertisers' or sponsors' materials. All responsibility for the advertisement and sponsorship material rests with the respective advertiser and sponsor. We, Prohibition Partners, do not make any representations, endorse, evaluate, guarantee, warranty (express, implied or otherwise) or recommend the advertised / sponsored products, services, companies or any claims made by the advertisers or sponsors that appear in publications, including in print, online and in digital formats. We accept no liability whatsoever, howsoever arising, in respect of any such advertisements and sponsorships.

