

# The Global Cannabis Report

Second Edition





# Prohibition Partners Team

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.



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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.



**Will Sloane**  
Head of Growth

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# Definitions

## Adult-use or recreational cannabis

Adult-use cannabis refers to the use of cannabis for reasons other than medicinal, i.e. recreational purposes. The term adult-use is used to emphasise the fact that where cannabis is legalised, it is intended for consumption by adults of legal age only and for reasons more broad than recreation, including, for example, increasing physical performance, engaging in creative activities and for spiritual purposes.

## Industrial hemp

Industrial hemp refers to cannabis plants cultivated for high yields of materials like seeds, fibre and oil, with low concentrations of psychoactive compounds. The common limit for Tetrahydrocannabinol (THC) content in hemp materials in Europe is 0.2% w/w but this varies and can be as high as 0.6% and 1% in Italy and Switzerland respectively. For the purposes of this report, industrial hemp includes hemp-derived Cannabidiol (CBD).

## Medical cannabis

Cannabinoid-based medicine not holding marketing authorisation and therefore sold as an unlicensed medicine that is supplied through health systems and prescribed by a doctor;  
Or  
Active Pharmaceutical Ingredient (API) to be manipulated and/or compounded by a magisterial pharmacy in order to prepare a cannabinoid-based medicine without marketing authorisation (unlicensed).

## Medicinal cannabis

Term used to indicate all cannabinoid-based therapeutic products (medical and pharmaceutical).

## Pharmaceutical cannabis

Formulated, processed or synthetic cannabis sold as a finished product, which has undergone full medical trials, and holds (in one or more geographical areas) a medical marketing authorisation e.g. Cesamet®, Marinol®, Syndros®, Sativex®, Epidiolex® and any derived generic medicines (such as dronabinol).

## Over-the-counter (OTC) drugs

Medicines sold directly to a patient without the need for a prescription from a healthcare professional, as opposed to prescription drugs, which are supplied only to patients possessing a valid prescription.

## Minor Cannabinoids

Cannabinoids found in low concentrations in the cannabis plant such as Cannabigerol (CBG) and Cannabinol (CBN). Many have been shown to be bio-active though evidence for their therapeutic benefits is, as yet, lacking. Many researchers hope these will provide a host of new ways of modulating the endocannabinoid system.

## Cannabis 2.0

Cannabis 2.0 products are cannabis derivatives that include cannabis infused edibles, beverages, topicals, concentrates and vapes. They arrived on markets later than products like oils and flower and are anticipated by some to be the future of cannabis.

## THC

Tetrahydrocannabinol (THC): the other primary cannabinoid, and the main psychoactive cannabinoid of cannabis. THC is considered the primary source of the 'high' produced by ingesting cannabis. Evidence suggests that THC exhibits medicinal properties that are useful in treating chemotherapy-related nausea, pain and spasticity. THC can also be synthesised and, in general, is more widely controlled than CBD.

## CBD

Major cannabinoid extracted from cannabis sativa (mostly low THC hemp). Claimed to provide wide-ranging properties useful for health and wellness including anti-anxiety, anti-inflammatory, anti-pain, anti-arthritis and neuroprotective effects. Recommended by some as treatment for conditions such as epilepsy as well as pain and insomnia.

# Methodology

## MARKET RESEARCH

Prohibition Partners conducts research with industry experts to provide 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 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 Global Report 2021 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 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 timeframe 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 exercises are:

- Official data obtained from regulators, insurance companies and monitoring institutions.
- Company financial reports and news releases.
- Review of current clinical trials and patents in the cannabis space and 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 Global Report 2021 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.

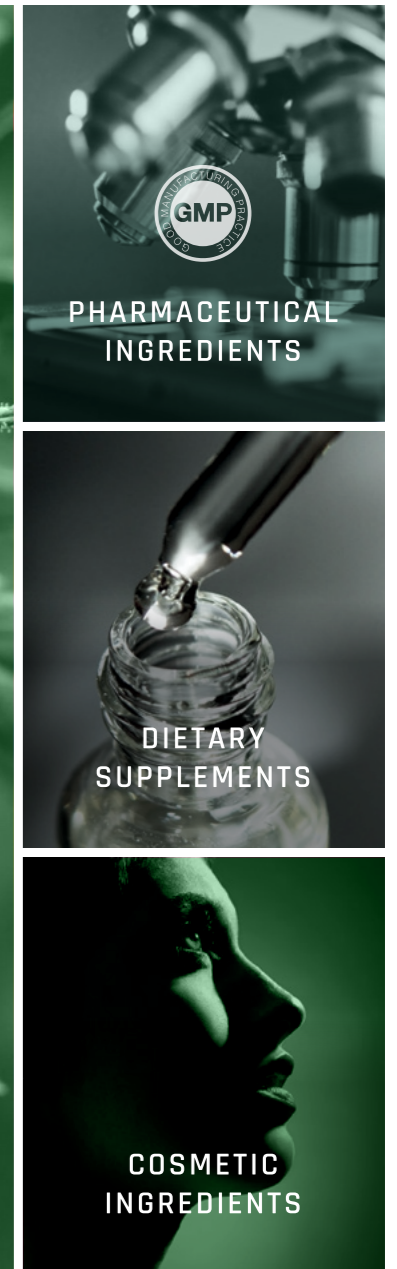
### ADULT-USE SIZING

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 countries 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 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.

### CBD SIZING

CBD sizing was calculated for each country and for several categories of CBD products. Prohibition Partners' CBD sizing is based on data gathered by extensive surveys of tens of thousands of respondents across Europe, North America and Asia on their usage of CBD products. The surveys were commissioned by Prohibition Partners and carried out during 2020 by Attest, a renowned global survey firm. This data was modelled alongside real world sales data, where available, which provided the foundation for estimates in countries without such data.



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## Expert Interviews



**Giorgio Ferdinandi**

Chief Procurement Officer  
Chief Sales Officer  
Linnea

**Linnea monitors its Cannabis supply chain from seed to ingredient. That's a rather large undertaking, which surely comes with a number of challenges.**

It definitely is a large responsibility, but from the day the company was founded nearly 40 years ago, Linnea SA has always chosen to guarantee quality by constantly monitoring its supply chain, from seed to finished product.

We purchase raw materials from European farmers who adhere to Good Agriculture and Collecting Practices (GACP) and who are inspected regularly by our Quality Department and local authorities. Our suppliers have to guarantee the complete traceability of each seed as the plant is grown and harvested. Last but not least, we require that our Cannabis farmers are suitably licensed to grow medical-grade plants, and the seeds used must be listed in the European Plant Variety Database. No exceptions. The selection of growers is fundamental to ensuring constant production (and thereby supply), especially for our CBD and CBG extracts.

The quality controls continue even in-house. In fact, end-to-end supply chain monitoring is so important to Linnea that we've obtained Good Manufacturing Practice (GMP) certification from SwissMedic for our Swiss production facilities—an added guarantee for all our products, not just Cannabis.

**Has the Cannabis market slowed at all in the last three years? What's changed since Covid?**

The Cannabis industry is entirely unique and is constantly evolving. In the last three years, we've seen growth in the market for pharmaceutical products and food-grade supplements in countries whose regulations are aimed at the use of Cannabis.

There is currently a lot of interest revolving around Cannabis and Covid, in which the World Health Organisation's data speaks loud and clear: more than 264 million people of all ages suffered from depression and related disorders in 2020.

There are a number of studies on this topic, but their findings are all relatively similar: cognitive impairment expanded across the board since lockdowns began, and at a worrying rate. A representative sample<sup>1</sup> conducted in the United States before and during Covid-19 showed that depression symptoms were over three times more prevalent during the pandemic than before, and an early large retrospective cohort study based on the electronic health records of 69 million people (also in the US) showed that infection with Covid-19 indeed increased the risk of developing psychiatric sequelae, and psychiatric disorders, dementia, or insomnia. So, it seems that anxiety and depression are widespread knock-on effects of the pandemic, as Covid-19 negatively impacts mental health on two fronts: one

<sup>1</sup> Ettman, 2020. DOI:10.1001/jamanetworkopen.2020.19686

tied to lockdowns and the other as a direct consequence of having had the virus.

Most of these studies reported good outcomes for CBD in the treatment of social anxiety disorder, short-to-medium-term effects for the symptomatic improvement of schizophrenia, and a lack of effect in the short-to-medium-term on cognitive functioning in psychotic disorders.

**As a company that works with clients around the world, how does Linnea deal with national regulatory differences, especially when dealing with industries such as pharma, nutrition and cosmetics?**

Linnea has decades of experience working with an international clientele, so flexibility is paramount to us. We often have to manage the laws and regulations of different States, and it's a matter of staying one step ahead of and constantly keeping an eye on the legal situation.

**Where do you currently see the biggest opportunities for Cannabis-based products?**

At present, we have customers in Latin America, Europe and Australia who have developed different pharmaceutical products for post-traumatic stress disorder (PTSD), pain, anxiety and refractory epilepsy in children. We're very proud of our ingredients and their possible uses. In the last 15 years, the number of clinical studies and trials that have given us a broad overview of the potential applications of CBD have increased exponentially.

From depression to different types of anxiety, now even more widespread due to Covid-19, the use of Cannabis-derived products is proving to be important and supported by numerous scientific studies. CBD acts as a neuro-protector, and one study conducted by Linnea and an important European neurology institute produced optimal results, highlighting its potential in combating diseases like Parkinson's<sup>2</sup>.

In Europe, things are very fragmented, despite the WHO having published the CBD Critical Review Report in 2018, which stated that cannabidiol is generally well tolerated with a good safety profile. Moreover, in 2020, the United Nations recognised the therapeutic value of the plant, removing it from its strict list of dangerous and highly-addictive drugs.

The UN reclassification gave hope to producers and doctors that there might be new opportunities for research into therapies and cures for countless illnesses.

There's a long road ahead of us, and Linnea will continue to apply its pharmaceutical experience to the production of high-quality Cannabis-based extracts and pure powders destined to become part of products sold in the pharmaceutical, dietary and cosmetics industries. To us, creating a pharma-grade ingredient from Cannabis means taking the enormous potential of the plant and placing it in the hands of our clients, so that they can create the life-changing pharmaceuticals of the future.

<sup>2</sup> Giuliano, 2021. DOI: 10.3390/ijms22168920

# Executive Summary

## OVERVIEW

- Prohibition Partners estimates that, in 2021, the global sales of CBD, medical and adult-use cannabis amounted to US\$37 billion and could be worth more than US\$102 billion by 2026.
- Adult-use markets in the US and Canada remain the most important regions in the world for cannabis sales, but international markets including Germany, Israel and Australia will develop considerably over the next five years.
- While the COVID-19 lockdown period saw record-breaking sales of cannabis in multiple regions, legislative developments have been interrupted, bringing delays in the development of cannabis market value across the globe.

## LEGALISATION TRENDS


- As of late 2021 only Uruguay, Canada and a handful of states in the US have fully legalised cannabis for adult-use, but these will be joined by several international markets soon.
- Mexico is primed for full legalisation of adult-use cannabis in 2022, while the Netherlands and Switzerland are preparing for their legal pilot trials.
- In November 2021, the coalition of parties set to lead the next German Government released a statement confirming that they have agreed to legalise the use and sales of adult-use cannabis in the country. This could signal the beginning of the largest cannabis industry outside of North America.
- Medical cannabis and CBD are now legal, in some form, across most of North America, the European Union (EU) and the United Kingdom (UK), as well as Latin America; with Africa and Asia-Pacific lagging behind.
- In December 2020, the United Nations (UN) recognised the potential medical utility and the safety of cannabis implicitly by removing it from Schedule IV of the Single Convention on Narcotic Drugs.

## MARKET REALITIES

- The large US multi-state-operators now rival the Canadian players for their size, and for the most part, exceed them in immediate financial performance.
- This year, 2021, has been a significant one for cannabis Mergers and Acquisitions (M&A) for example; the acquisition of GW Pharmaceuticals by Jazz Pharmaceuticals for US\$7.2 billion on 2 May, the merging of Aphria and Tilray, and the recent acquisition of Harvest Health and Recreation by Trulieve for US\$ 2.2 billion.
- Investor sentiment was shaken during the lockdown of 2020, and while stock prices are down, capital raises are now on the rise once again.

## GLOBAL SUPPLY CHAIN

- The balance of cannabis production is shifting away from the traditional strongholds of Canada and the Netherlands, with exports coming online from regions with warmer climates, cheaper land and labour; such as Latin America, the Mediterranean and Africa.
- The most important import markets, including Germany and Israel, are currently engaging in domestic cultivation but it is yet to be seen how much future demand will be covered by this.
- Ancillary services such as technology, professional services, extraction, distribution, packaging and construction are becoming increasingly important, with multi-billion dollar valuations for several cannabis technology companies.





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## Expert Interviews



**Sally Cassidy**  
Chief Commercial Officer  
Always Pure Organics

Always Pure Organics offer the highest quality wholesale legal cannabis and cannabinoid products, as bulk and raw ingredients, bulk products, white label, and bespoke formulations. This is coupled with regulatory and legal expertise and supported by delivery globally. APO's unique bespoke formulation service allows clients to create their own product from scratch, backed up by regulatory and product knowledge alongside product production.

**2021 has been a year of challenges for businesses, globally, following the Covid pandemic, Brexit and more. During this time Always Pure Organics has experienced significant growth, what do you attribute this to?**

I attribute this to a number of things. Firstly, our product is used by many around the world to help with some of the human conditions that many people suffered from as a result of Covid and lockdown, so that unlike some other sectors, the restrictions on our lives didn't negatively impact the use of our product. In addition to this, as a young business with a lean and agile team, we were able to structure our business in such a way that growth was still very much possible. WFH worked well for our sales team and in preparation for Brexit and new border controls, we won by sourcing hubs within the EU that allowed us to fulfil our logistical obligations to clients.

**According to Forbes\*, the CBD industry could reach \$19.5 Billion by 2025. How are APO positioned to support clients globally?**

Today, we supply 1.2 million daily doses of CBD to over 500 clients globally and this number is set to increase exponentially. With our HQ in The UK and hubs in the EU and Japan, holding stock of raw materials and finished brands in these locations, not to mention our ability to navigate local and international regulations puts us in a strong position to react quickly to the needs of our global growing client base.

One of the biggest challenges faced by any business looking to grow a global footprint is scaling into countries out with home soil. Our success next year is heavily dependent on global customer acquisition and our secret sauce here is working with sales enablement experts and channel partners to gain boots on the ground to grow our footprint at pace. We have invested heavily in technology across our sales and operational functions as we know that success will come not only from improving how efficient we are but also how well we delight our customers. I come to APO not as an expert in the world of Cannabis (I'm still a determined student in this field) but rather, as a sales and growth professional. My expertise and strategic alliances combined with what's happening within APO and the cannabis sector make for a really exciting future for us and we believe we're well positioned to continue on our next curve.

**As the industry moves forward into 2022, what are the key trends and innovations you foresee?**

Always Pure Organics has always been at the cutting edge of the CBD market, whether that means being on top of regulations and legislation (such as Novel Foods) or in offering unique and creative products to our clients – for example, we were one of the first white label manufacturers to offer terpene flavoured oils. Our NPD team of formulation chemists will keep us at the forefront, whether that's to do with bespoke requests from our clients or the development of our own in-house products and raw materials. There is a predictable reduction in interest for CBD isolate products and with our knowledge, state of the art facilities and experience, we're on the verge of bringing some new and exciting products to market that we believe will reinvigorate the raw materials market.

**Congratulations on your recent move into role of Chief Commercial Officer at APO, what are you planning in 2022 at APO?**

It's a real pleasure to be here. APO and I first became bed fellows almost two years ago when they hired me as a growth consultant to work with their sales team. It soon became apparent that having someone with a perspective from out with the cannabis space was an advantage and for me, the prospect of working within such a new, exciting and male dominated space was an opportunity that was just too good to miss.

If I reverse engineer back from our eye watering revenue targets for next year, then my plans revolve around growing our sales function globally both with our own people and skilled channel partners. Our facility in Tokyo is up and running and so the next priority comes growing market share in Asia with this improved infrastructure.

Most importantly for me, our growth will be determined by our commitment to improving everything that our customers touch. This is historically a very 'transactional' sector but it's maturing now, and our customers deserve better. The team and I are committed to acquiring and retaining loyal and raving fans, whether they be the end users of our products or those who we work with in the supply chain.

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References: <https://www.forbes.com/sites/irisdobian/2021/07/28/cbd-market-to-reach-195-billion-but-likely-with-fda-approval-says-top-researcher/>

# Introduction

We are currently living in an era marking the end of prohibition on cannabis. The global cannabis industry is heading into a period marked by widespread legalisation, innovation and considerable economic growth. Any engagement with the industry needs to be guided by comprehensive strategy, as competition is high, and the risks are as real as the opportunities. As such, this report provides an overview of the development of cannabis markets at the international level, and considers how they might develop in the near future. As the cannabis industries are now so large and diverse, no single publication could possibly cover all sectors in sufficient detail. As such, this report attempts to cover some of the most interesting and pertinent trends in the industry, providing an overview to accompany Prohibition Partners' more specialised reports. Special attention is paid to the medical cannabis market, as this is most relevant for emerging markets across the world in the short term.

The report is split into four sections;

- An overview of the major trends in legalisation and market development across the globe,
- An overview of Prohibition Partners' global market sizing estimates for the next five years,
- A review of key region-specific trends,
- Interviews with industry experts in key areas of the global market.

Prohibition Partners calculates the global cannabis and CBD market was worth US\$ 37.4 billion in 2021 and could be as much as US\$102 billion by 2026. After a tough year for cannabis in 2020, this year brought along a rebound in development towards legalisation, record-breaking sales of medical and adult-use cannabis as well as a massive influx of capital raises and M&A activity.

Lessons must be learned from the first boom-bust cycle for the cannabis industry experienced over recent years. Up to 2019, investors poured capital into large Canadian and US cannabis firms, with little oversight as to how the capital was to be used. There were several highly publicised examples of companies overreaching and investing heavily into cannabis segments and regions without consideration of considering paths to profitability in the foreseeable future and the effects of this are still being felt globally, with the withdrawal of large firms from international markets in Europe and elsewhere. We are currently in a new era for large cannabis firms where a reasonable path to profitability is necessary for investor support, which often means focusing on the developed markets of the US and Canada. However, over the coming years, the consumer markets in Europe and Latin America cannot be ignored by any of the larger cannabis firms lest they get left behind.

Great strides in the legalisation of cannabis have been made across the globe in recent years, for example; the US legalisation of

hemp and CBD in 2018, the UN rescheduling of cannabis in December 2020, the legalisation of CBD in Europe in 2021 and all of the key national level developments also. Adult-use legalisation is becoming of increasing importance as the reality of US federal legislation moves closer. We expect the addition of new adult-use markets in 2022 such as Mexico; the Netherlands and Switzerland on a trial basis, and the potential addition of Germany within the current legislative term.

The international supply chain for medical cannabis is currently in flux. This report outlines some of the major developments in the supply chain for medical cannabis, which will inevitably influence the shape of the adult-use supply chain upon legalisation of more international markets. This report also considers which products are currently most sought after in the international medical cannabis markets and what effect the legalisation of adult-use cannabis might have on existing medical markets.

Overall, the industry is poised for a very exciting 2022, with the spread of legalisation being followed by strong industry growth. Large benefits will be felt across justice, public health and the global economy. Huge opportunity is attended here by substantial risks, and with a changing legislative and regulatory landscape, operators need to have the best strategic intelligence at their disposal in order to compete and to best serve their consumers and cannabis patients. This report is designed to assist business leaders, health professionals, investors and regulators with understanding and engaging with the nascent cannabis markets across the world.



# Expert Interviews

## CULTIVATORS

### What are the top challenges for cannabis cultivators at the moment?

With over 25,000 licensed cannabis cultivators across the globe, we at Cantourage see two main challenges:

- How to differentiate your offering
- How to navigate the regulatory requirements necessary for different medical cannabis jurisdictions.

### How does the Cantourage Fast Track Platform work? How can Cultivators profit from the Cantourage platform?

Cantourage accelerates its cultivation partners' route to market. We guide them through all the necessary regulatory and compliance hurdles to enter the European ecosystem. Our innovative path allows for a faster and more cost-efficient market entry for cultivators from around the globe, as opposed to the traditional route to market. Cantourage acts as the link between cultivators and patients, working closely with our partners and distribution network to streamline medicinal cannabis supply chains for patients. We support the cannabis ecosystem by providing cultivators a turnkey solution to distribute their products in Europe. It is a market with a large population as well as an increasing number of medical cannabis patients and therefore holds the largest potential growth. Our goal is to bring a wider variety of medicines and more affordable prices, lowering the barrier to entry for patients and accelerating the uptake of legal medical cannabis consumption in Europe.

### What kind of additional services do you provide for your partners?

In addition to the regulatory and manufacturing aspect of the business, we support all our partners in sales and brand activation to drive sales. Our experienced team works with our partners to identify, develop and launch best-in-class medical cannabis brands. Cantourage



**Dr Florian Holzapfel**

Founder  
Cantourage

provides assistance in creating educational and communication materials for patients and prescribers. We see this as a key component to building trust in medical cannabis as a viable treatment option and to further develop the industry. Leveraging our years of first-hand experience and long-standing networks, we register and distribute cannabis medicines in various jurisdictions across Europe.

### How many partnerships does Cantourage have to date? Where are the cultivators you work with based?

To date, we have onboarded over 15 producers onto the platform and several more are currently undergoing our vetting processes. Our supply network spans every continent excluding Asia and Antarctica. We pride ourselves on sourcing producers from all around the world, each with their own USP: whether it be their cultivation techniques in ideal climates, a genetics programme or highly specialised indoor facility. We want their products to be available to patients in Europe.

### What does the product roadmap for 2022 look like?

To the disappointment of patients, the overall market still has some issues with the consistent supply of high-quality cannabis flowers. Our main focus is on tackling this problem. Over the next couple of months, we will introduce new dried flower products as well as extracts from around the globe. That being said, our R&D teams are keeping a close eye on alternative delivery methods outside of the existing monograph. Suffice to say that Cantourage always aims at being a disruptor in all current and future segments of the medical cannabis industry.

## WHITE LABEL SOLUTION

### What does Cantourage offer within the scope of its White label offering?

Cantourage offers white label solutions for companies looking to establish a medical cannabis brand in the European ecosystem. Our clients can choose genetics from our existing network of producers from around the globe, define their product names, the design of the packaging and, naturally, the general brand experience.

### What products are available as white label solution?

Cantourage offers white label solutions for all cannabis products that are defined within the existing monographs, namely EU GMP certified extracts, neat THC (Dronabinol) and neat CBD as API as well as medical cannabis flowers.

### How do you guarantee a steady supply for white label customers?

The selection of cultivation partners, appropriate genetics and suitable partners for all steps of the supply chain are key for a successful offer in the medical market. Therefore, Cantourage conducts extensive auditing and inspection procedures for all of its partners throughout the entire supply chain. We have carefully selected our cultivation partners as well as specific genetics to offer an unprecedented variety of products to our clients and, consequently, patients. The team at Cantourage has been operating within the medical cannabis market in Germany for over five years and therefore knows that a stable supply and high quality of medicines are the prerequisites for success in the medical market. We strive to support our clients' processes and all their endeavours.

### Why is Cantourage's white label solution more beneficial than cultivating/producing own medical cannabis products?

The production of EU GMP-compliant cannabis products is a lengthy and costly process. Our



**Philip Schetter**

CEO and Managing Director  
Cantourage

customers can choose from a broader selection of genetics and a variety of cultivation techniques, while leaning on the specialised expertise within Cantourage's global supplier network. The team of Cantourage has years-long experience in navigating various legal systems for medical cannabis. We handle all the relevant regulatory and compliance-related tasks on behalf of our clients so that they can focus on their core business with the assurance that Cantourage will deliver cleared cannabis products that comply with all regulatory approvals.

Furthermore, at the request of our clients, Cantourage takes care of all elements for a successful launch into European medical markets. Our offered services range from sales and marketing to fulfilment and distribution. We offer our clients a turnkey solution, so that they don't need to invest in their own 'boots on the ground' in Europe, but can still actively distribute their own brands in different jurisdictions within the European ecosystem.

### Would you be able to provide white label solutions within a recreational cannabis setting?

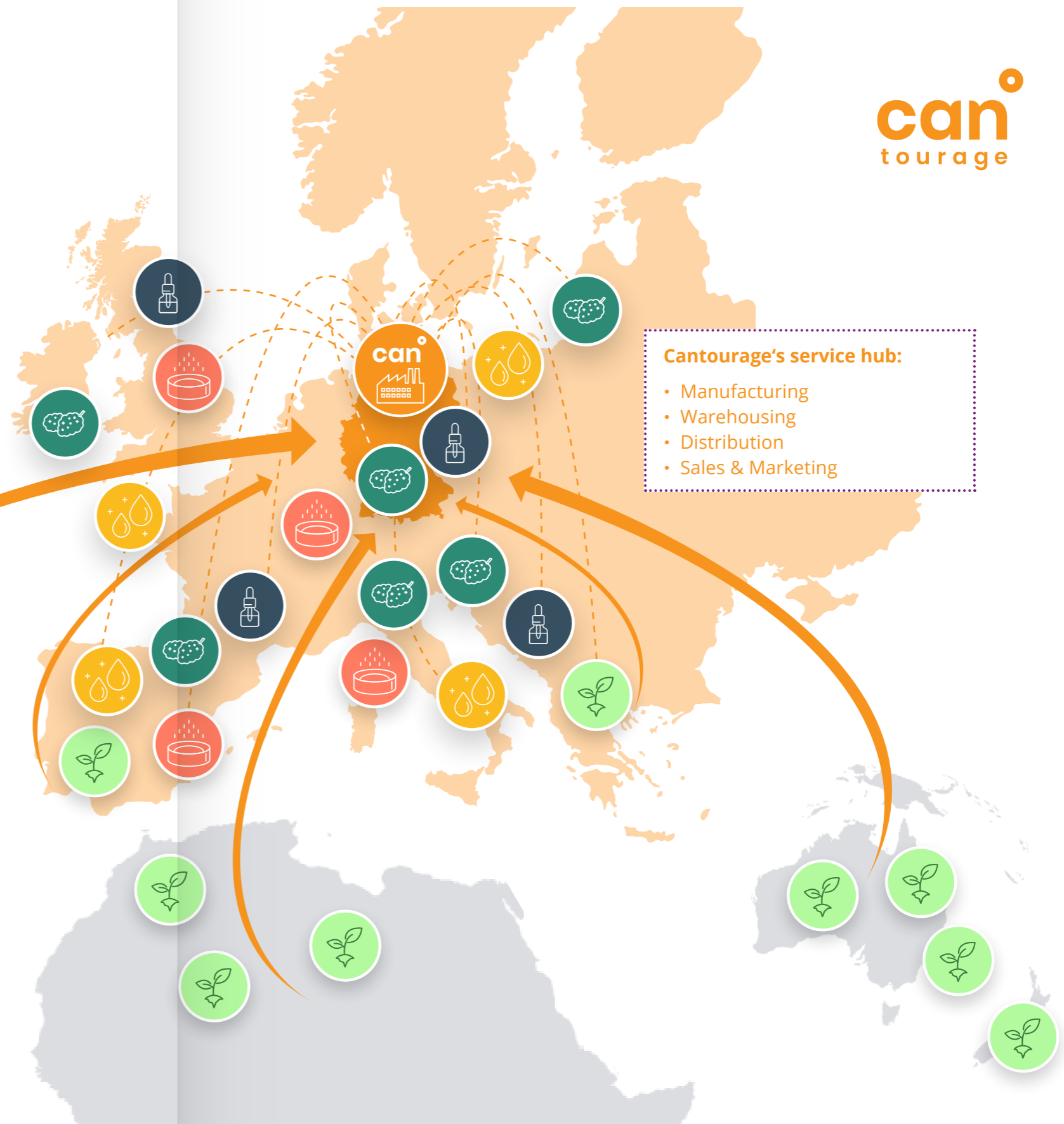
The short answer is simply: yes. Our business model allows us to scale operations in and take on a large number of cultivators from across the globe. This is also the case for a regulatory setting in which cannabis is made legal for recreational purposes. We are well positioned to adapt to a liberalised market environment.

### Do you have existing white label partnerships?





We have a number of white label deals signed, which are lined up to ship from Q1/2022.

## Increase diversity of offerings. Strengthen security of supply. Encourage innovation.

With our Fast Track Access platform, we enable cannabis cultivators from around the world to become part of the rapidly growing European medical cannabis market. Our focus is on long-term collaborations, instead of rigid vertical integration: each partner along the value chain can focus on what they do best – from growers to logistics, manufacturers to pharmacies and wholesalers. All with one clear goal in mind: to provide patients in Europe with an unprecedented selection of the highest quality cannabis medicines at affordable prices.



### End products offered:

-  Dried Flower
-  Extract
-  Dronabinol
-  Cannabidiol



# Key Global Trends



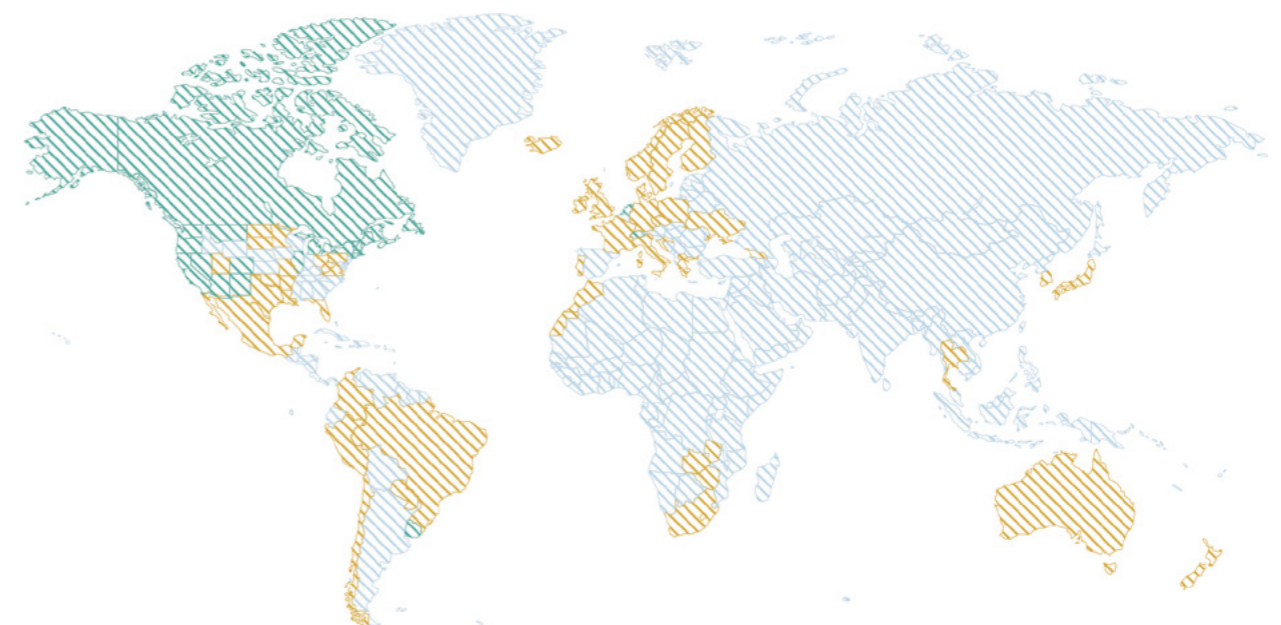
## OVERVIEW OF CANNABIS LEGALISATION TO DATE

We are currently living in the end of the prohibition era of cannabis regulation. After a decades-long 'War on Drugs', and over a century of redundant taboo, governments around the world are opening up to the use of the cannabis plant in all its varieties; medicinal, recreational, industrial and beyond. The basis of cannabis control in international law has been its inclusion in Schedule I of the UN Single Convention

on Narcotic Drugs. However, many countries are opting to take cannabis regulation into their own hands. The criminalisation of the cannabis plant is now being repealed, led by developments (e.g. in Canada and the US) where the success of the industry is setting an example for other countries to follow, and is showing the medical and financial benefits to be wrought from legalising the use of the plant.

## Legality of medical and adult-use cannabis globally

— Legal medical and adult use    
 — Legal medical    
 — Illegal



Source: Prohibition Partners.

\*Legal status as of late 2021. Decriminalised use of cannabis is not considered legal here.

**Medical cannabis:** The legalisation of medical cannabis is spreading quickly across the globe, and is being followed more gradually by the acceptance of commercial adult-use cannabis. As of late 2021, over 55 countries have legalised medical cannabis in one form or another; whether that be the production or use of medical cannabis, or the import of pharmaceutical cannabinoid medications. This amounts to just over one in five people on the planet living in a country or state with some access to cannabinoid medications, up from essentially zero at the turn of the century. Over the past 12 months, countries all over the world have begun to liberalise medical cannabis. During 2021, trial access to medical cannabis began in France and the first pharmaceutical cannabis medications became available in the Ukraine. In Latin America; Peru and Panama opened access to high THC medications and Zambia and Rwanda legalised the use of medical cannabis. Morocco passed a Bill legalising medical cannabis in July 2021. Asia remains the most conservative continent for the control of medical cannabis but even there, Thailand is taking a pioneering position and allowing access to tens of thousands of patients. In December 2020, the United Nations voted to finally recognise the medical potential of the cannabis plant by moving it from Schedule IV to I of the international 1961 UN Single Convention on Narcotic Drugs and Prohibition Partners expects this to further embolden governments around the world to legalise medical cannabis for patients who need it.

**Adult-use cannabis:** As can be seen on the map of legality (p16), several countries are currently taking the pioneering step of regulating the commercial sale of adult-use cannabis. In recent years, the rate of legalisation has been increasing, with several countries in Europe beginning to explore adult-use legalisation. Colorado and Washington are approaching ten years with legalised adult-use cannabis sales and they currently bring in over a billion in tax revenue from sales taxes alone, contributing to the >\$2.7 billion collected from all states. Furthermore, the success of the

systems of regulation e.g. for justice<sup>1</sup>, economy and health<sup>2</sup> are serving as examples for other states and nations to adopt and improve on. As discussed below, we are now seeing progress on the legalisation of adult-use cannabis in countries such as Mexico, Switzerland, the Netherlands, Germany and, at a more gradual pace, New Zealand, Israel and Australia.

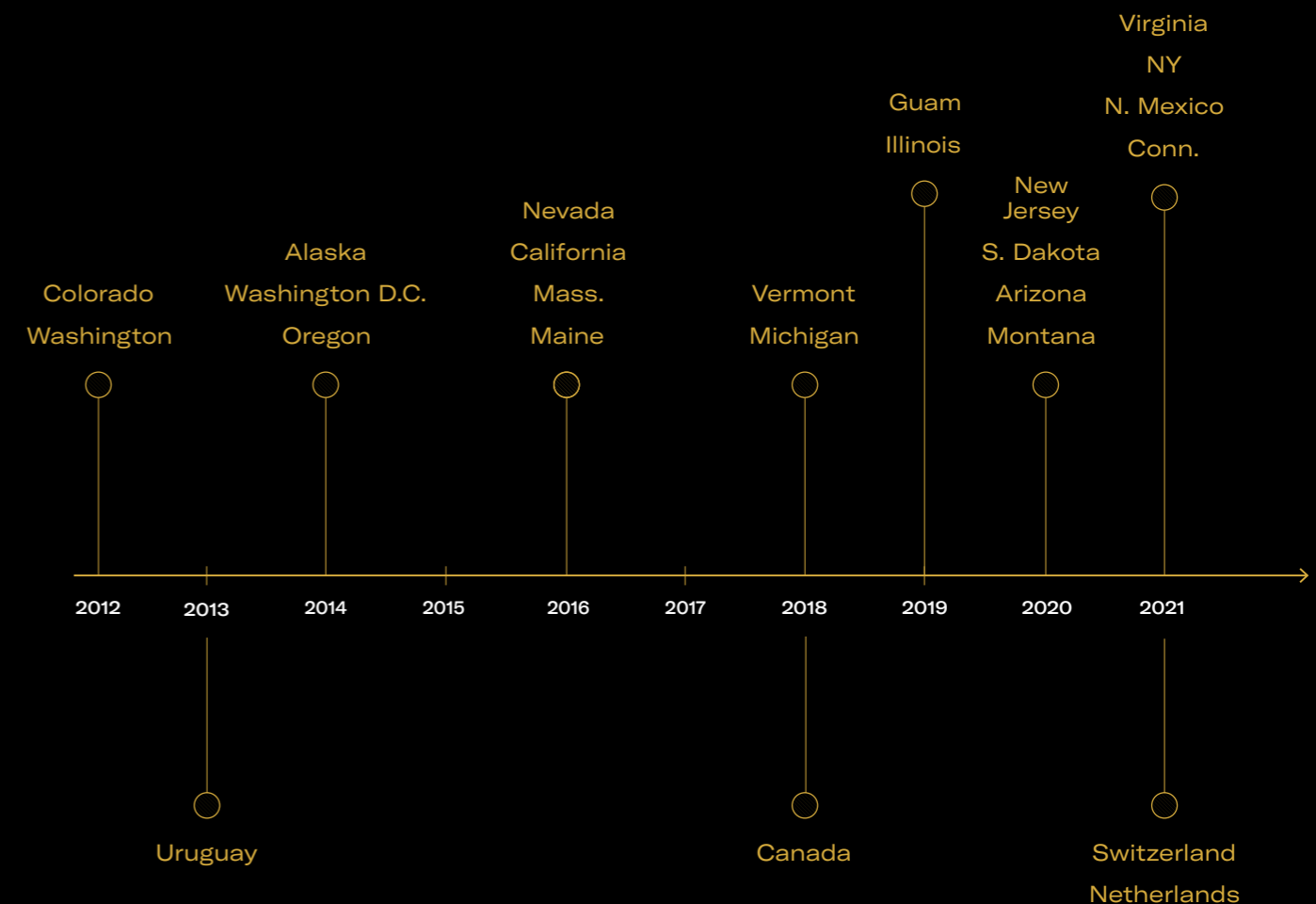
**CBD and hemp:** While cannabis and hemp both derive from the same species of plant, the differing levels of psychoactive THC mean the two are following divergent paths in regulation and legalisation. While cannabis plants are specifically listed as controlled substances under UN treaties, many countries interpret the rules in such a way that CBD products are exempt. Exemptions to the bans on cannabis include Article 4(b) of the 1971 Convention which explains that governments 'may permit [...] The use of such substances (e.g. cannabis) in industry for the manufacture of non-psychoactive substances or products'.

In the past three years, huge strides have been made towards full normalisation of uses of the hemp plant, including the use of CBD products. One major step in the global liberalisation of the use of hemp and CBD was the 2018 Farm Bill in the US which federally legalised the cultivation of hemp for commercial uses in the US including CBD products with THC concentrations of less than 0.3%. Another major step came in November 2020 when the European Union ruled that CBD should not be considered a narcotic under the 1961 UN Convention, as CBD does not 'have any psychotropic effect or any harmful effect on human health', which paves the way for the legal production and use of CBD. While the EU and North America are now embracing the production and use of CBD, other regions are slower off the mark. Many countries are only offering CBD under prescription, such as Singapore which offers pharma-

<sup>1</sup> Farley, E.J. and Orchowsky, S., 2019. *Measuring the criminal justice system impacts of marijuana legalization and decriminalization using state data.* JRSA, Justice Research and Statistics Association.

<sup>2</sup> Hsu, G. and Kovács, B., 2021. *Association between county level cannabis dispensary counts and opioid related mortality rates in the United States: panel data study.* *bmj*, 372.

# Adult-use legalisation timeline



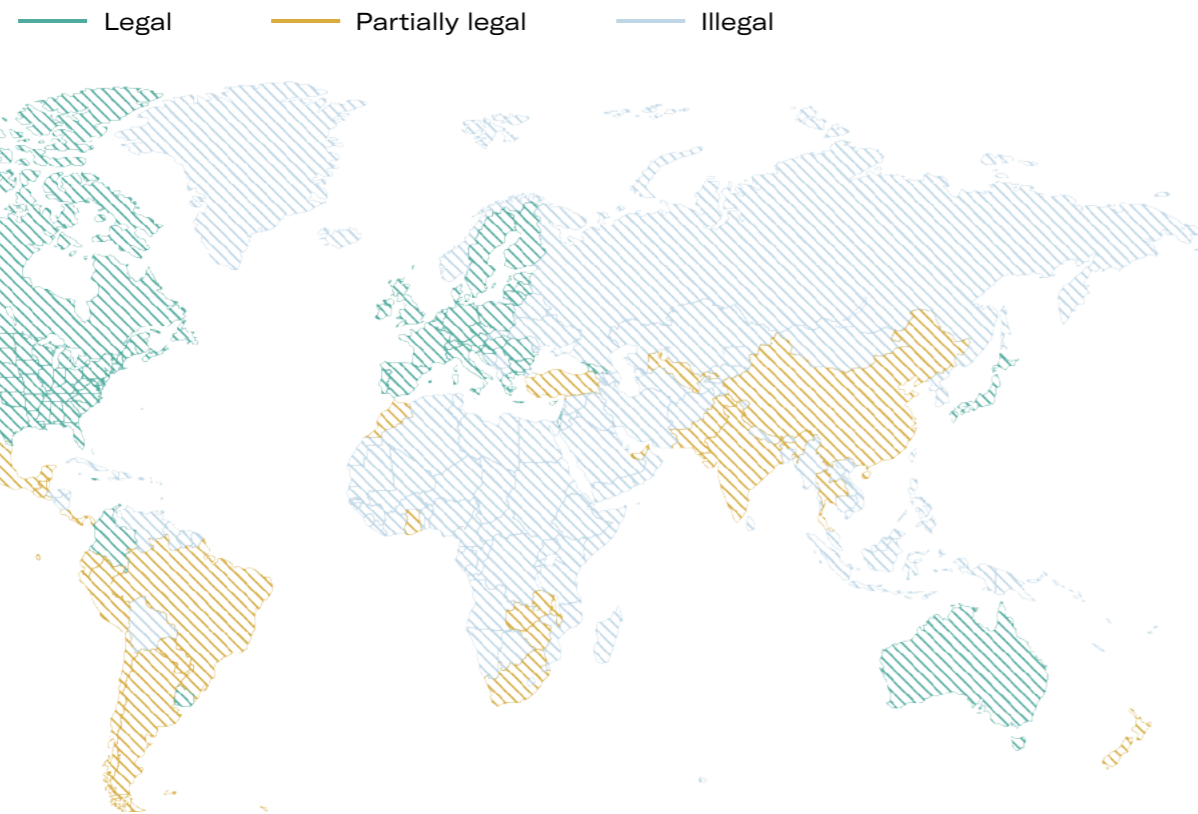
Source: Prohibition Partners

ceuticals and Brazil which offers pharmaceuticals and medical CBD. Until recently, China allowed for sales of CBD only in cosmetics but as of June 2021, even this is no longer permitted, despite the growing hemp industry in provinces like Yunann and Heilongjiang.

While CBD products remain in a legal 'grey space' in many regions, the products are now available on mainstream marketing channels, especially in Europe and the US. CBD is mainly marketed and used in the west as part of the health and wellness sector, with

products being sold by the largest pharmacy chains in the world such as Walgreens in the US and Rossman and Boots in Europe as well as the largest online marketplaces of Amazon and Alibaba. In the US, the popularity of CBD has been boosted by innovative uses as seen in the marketing of CBD as a workout supplement, where many National Football League (NFL) players have endorsed CBD products as workout-recovery products, and some institutions like the NFL and the Ultimate Fight Championship have also established CBD partnerships.

### Global legality of CBD sales



Source: Prohibition Partners  
\*Legal statuses as of late 2021

# Good, for all.™

We're building an international family of cannabis brands that improve life's journey for the wellbeing of humankind, and the earth on which we live.

## PURE SUNFARMS™

Pure Sunfarms is one of Canada's largest and most respected cannabis growers. We artfully blend traditional greenhouse expertise with hands-on knowledge of legacy growing practices.

[puresunfarms.com](http://puresunfarms.com)

## BALANCED HEALTH BOTANICALS

Balanced Health Botanicals is a family of brands, producing the highest quality health and wellness products derived from hemp.

[balancedhealthbotanicals.com](http://balancedhealthbotanicals.com)

## ROSE LifeScienceVie

ROSE LifeScience is revolutionizing responsible cannabis for Quebecers and Canadians by enhancing how cannabis grows, then creating and distributing innovative products.

[roselifescience.com](http://roselifescience.com)

## VF village farms®

NASDAQ: VFF

[villagefarms.com](http://villagefarms.com)

# Expert Interviews



**Michael A. DeGiglio**

*President & Chief Executive Officer  
Village Farms*

## How has Village Farms managed to maintain their bottom line while other Canadian firms struggled? What do you do differently?

Our business model leverages more than three decades of low-cost, controlled-environment agriculture (i.e. high tech greenhouse growing) with building brand(s) that meet consumer needs.

A key part of our learnings over our long history has been the necessity to operate at low-cost, including prudent capital investment. Our legacy produce operations (tomatoes, cucumbers, bell peppers) have been under pricing pressure from imported Mexican grown product for well over a decade. Managing our costs has become part of our DNA. We pursued a unique business model among the Canadian licensed producers – greenhouse cultivation – also informed by our deep experience. We converted existing facilities with existing operations, which enabled us to transition expert growers, trained labor forces and maintenance teams in facilities they knew very well to growing cannabis. And we have the benefit of decades of climate data at our facilities, which is essential. It typically takes five years or more to ramp up a new greenhouse operation and benefit from efficiency. The greenhouse we converted to cannabis had been operating for 20 years.

Finally, we assessed consumer needs. Quality matters, and we target specific cannabis cultivation expertise to grow premium quality at scale. That, combined with our deep under-

standing of cannabis as a product, as well as the cannabis consumer, enabled a differentiated approach to the market. Our “Everyday Premium” strategy has resonated very well with consumers and has been core to our market success – we have been the number one flower brand in Ontario over the last two years. And we have been EBITDA profitable literally in every quarter from our first full quarter of commercial sales in late 2018.

## Regarding Village Farm’s recent investment in Leli Holland: What is your impression of the adult-use market in Europe and how much more attractive is it to your company than the medical market there? What do you hope to achieve in Europe in the mid to long term?

To start, mid- to long-term is the way we think about Europe. It’s our belief that, ultimately, a legal medical market that pre-dates a legal recreational market will to a large degree be subsumed into that legal recreational market. A legal recreational market will be far larger and have a much greater opportunity for profit. As we have proven in Canada, the recreational market is where we shine.

Netherlands is poised to be the first legal recreational cannabis market in Europe with the implementation of what is known as the Dutch Supply Chain Experiment, which is intended to legalize the production and supply of high-THC cannabis in that country. It will be a highly regulated market, an environment in which we have proven we can not

only succeed but thrive. We view the Dutch Supply Chain Experiment as a critical step toward the broader legalization of recreational cannabis in Europe. Our majority ownership of Leli is both an opportunity to participate in the first recreational market in Europe but also a potential springboard to becoming a major participant in a broader recreational market in Europe.

Pure Sunfarms is currently awaiting EU-GMP certification. Once EU-GMP certification is awarded, we could begin shipping product to Europe or Israel soon after.

## Do countries like Netherlands and Germany currently look like the market pre-legalisation in Canada why/why not?

As you would expect, each country is unique, with some similarities and some differences to Canada. The Netherlands, like Canada, will be a highly regulated market – likely even more regulated than Canada – at least for the initial period of the Supply Chain Experiment. The Dutch appear to be even more concerned about the potential for additional criminal activity, as well as zoning matters related to such things like the potential for odour, and concerns around potential contaminants.

Perhaps the most notable uniqueness to the Dutch market is the fact that the recreational distribution and consumption of cannabis in what are known as “coffee shops” has been tolerated by the government since the 1970s – it is an accepted part of Dutch culture that

exists in the open through an established retail channel – the coffee shops – even though the supply is from illicit legacy suppliers. Once the production side is legalized, suppliers under the Dutch Experiment will sell directly to those retailers. The legacy customer that existed illegally in the shadows in Canada has existed out in the open in the Netherlands. Suppliers will have much greater insight into their preferences out of the gate.

With respect to production, under the Supply Experiment, there will be a very limited number of producers – no more than ten – which obviously creates opportunity for those with licenses but also concentrates the risk amongst that small group of suppliers. And with the licensees having been selected by lottery, it remains to be seen how many of those awarded licenses have the capability and the funding to successfully follow through on their plans.

Germany perhaps looks a little more like Canada pre-recreational legalization. Currently, there exists a fairly robust medical market in Germany, although most of that supply is imported (from Canada and the Netherlands), whereas Canada supplied its medical market from within its own borders. Also similar to how things unfolded in Canada, the incoming government has publicly committed to federal legalization of recreational cannabis use, although it is expected that addressing all the details up-front will take time. These details include the distribution system and importation versus domestic cultivation.

**How important is it to connect with the legacy market in terms of production, staff and consumers?**

It is very important. One of the reasons we like the recreational cannabis market is that you start with a large existing customer base. In fact, when we met with the Canadian government as it was considering legalization of recreational cannabis in 2017, one of their top objectives was conversion of the legacy market to the legal market. From day one, we have considered the legacy market, as the top competitor. That was the impetus behind Pure Sunfarms “Everyday Premium” strategy – providing premium quality products that has been so successful in Canada.

We recognize and embrace the deep lineage and history legacy growers have in cultivation. That’s why we supplemented our deep experience in cultivation with the experience of legacy growers in our greenhouse. It’s foundational to everything we do in cultivation. We’ve taken what we’ve learned from legacy growing and scaled it for our operations. With respect to consumers, especially in our early days we considered what was happening in the legacy market, how people have consumed in the past, and what they were looking for in their cannabis products – and we have used those learnings as a frame of reference for our product strategy and offerings. And of course, we have been able to do this, and be profitable, because of the business model and capabilities that I described earlier.

**Are there other international markets that Village Farms is looking at right now such as Israel or Australia? (You have a greenhouse set up in the U.S. and are awaiting federal legalisation before you commence operations in the adult-use market, if I understand this correctly.)**

Let’s come back to the US, but I want to note here that we don’t consider it to be an international market. Village Farms was founded in the U.S. by myself, an American, the vast majority of our executive team is based in the U.S., and more than half of our greenhouse

footprint is in the U.S. So, we really look at the U.S. and Canada as jointly being our domestic market.

Beyond the U.S. and Canada, and Europe and Israel, we are pursuing the broader Asia Pacific CBD and cannabis markets through our investment in Altum International. Altum is a platform for large-scale importation, distribution and marketing of cannabinoids, as well as medicinal cannabis opportunities in certain geographies. Altum already has commercial operations and has launched CBD products in Hong Kong. And they have launched their first high-THC flower products into the Australian medical market, with Pure Sunfarms as a supplier. Altum provides us with an early mover advantage in a region with a population of more than 3 billion, and a long, long runway of opportunity, which includes countries like Greater China, Japan, South Korea and New Zealand.

That said, we are at the beginning of what is a global industry for many years of growth ahead. We will continue to pursue selected, strategic international opportunities for the long-term where we can combine our cannabis experience with local expertise through investment that meets our thresholds for return on investment.

**When do you see federal legalisation occurring in the US? And when this happens, would you think about the possibility of exporting cannabis from the US or would production there be solely for the domestic market for the foreseeable future?**

The timing, as well as the composition of federal legalization is difficult to predict, as is anything that is ultimately rooted in politics. Certainly, we are encouraged by what we see and are building our business, and are ready to participate, when regulations will allow us to do so. With one of the largest greenhouse footprints in the US – certainly the largest of any existing cannabis player – in one of the best growing environments for cannabis, we are as well positioned as anyone for a federally legal cannabis market, especially with

the benefit of our experience and success in Canada. And our recent acquisition of Balanced Health Botanicals out of Colorado, adds another potential path to a legal cannabis market.

With respect to potential exports from the US, at this point we are focused on the opportunity within US borders. The US is likely to be the largest legal recreational market in the world for some time and we expect to be a significant player. The most recent bill proposed by Rep. Mace would allow for the importation of cannabis from Canada, where we are a market leader in cannabis, and from where we have been successfully shipping our Canada-grown fresh produce to the US grocery and big box market for over 20 years. With the ability to more than double our cannabis capacity in Canada through our 2.6 million square foot Delta 1 facility, such an outcome in US legislation would have tremendous upside for our cannabis operations. While the likelihood of that bill passing is probably somewhat low – it is a possible outcome at some point in time.

Even in a market with only domestic production, we believe the future US cannabis industry looks very different from the somewhat artificial construct under individual state legalization. Most notably, the current requirement for vertical integration, including production, within state borders, is very inefficient. In addition, we expect larger retailers will want to participate. Thus, the most successful companies in a federally legalized industry will be those like Village Farms that can combine large, centralized, low-cost production with the ability to build great brands and the experience to meet the high standards of large retail customers.



## The future of medical cannabis in a Rec-legal world

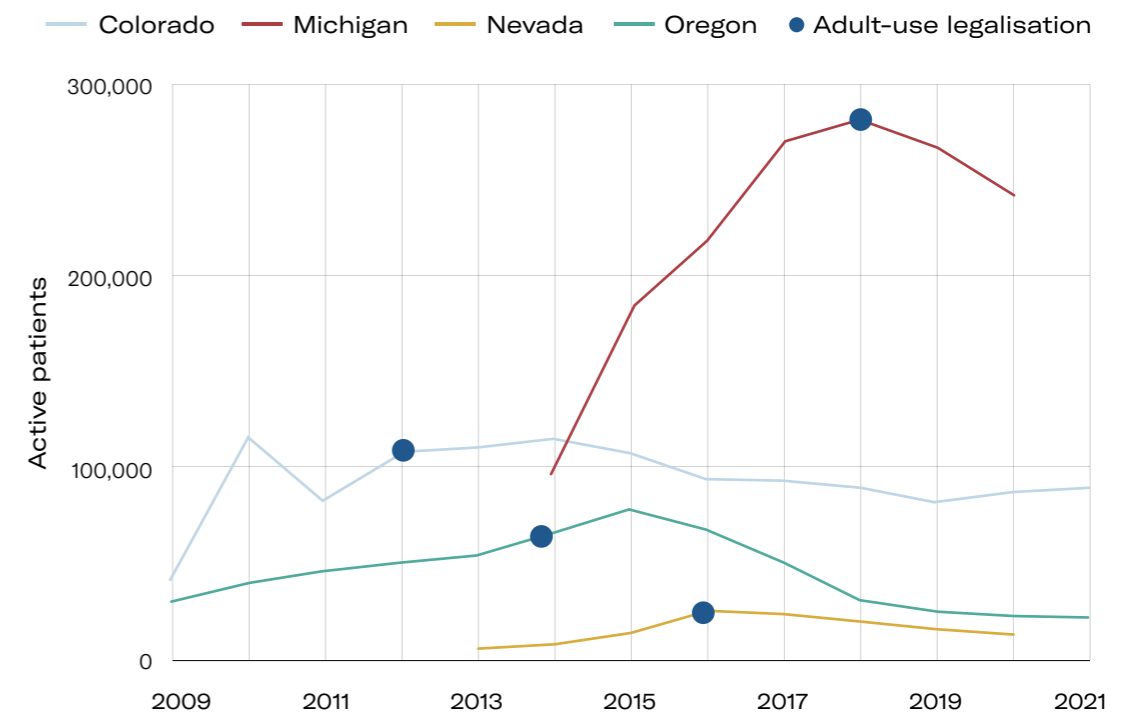
Widespread legalisation of adult-use cannabis now seems inevitable for most of North America, Europe and Latin America; but the effect on the medical cannabis markets has not been widely discussed. It should be expected that the legalisation of adult-use cannabis sales is to have a considerable effect on the medical cannabis market given that they share a large intersection of consumers/patients. Underlining this, Prohibition Partners' 2020 survey of over 15,000 respondents across North America and Europe indicates that 58% of people using cannabis do so for both medical and recreational uses. At the time of writing, only Canada, Uruguay and 21 states in the US, including Washington D.C. and Guam, have legalised adult-use cannabis

but this is expected to increase at a fast pace over the next five to ten years, as the economic, health and justice benefits become clearer to regulators around the world. Below we consider some of the possible effects of adult-use legalisation on medical cannabis.

### Effects on patient numbers

Legalisation of adult-use sales can have a considerable impact on the number of new registrants. This trend has been seen in several states in the US, as well as in Canada. It can be expected that this occurs due to existing patients choosing not to renew their medical authorisation, as well as new consumers opting to obtain their product straight from the adult-use market without ever getting an authorisation.

## Impact of adult-use legalisation on patient numbers



Source: Prohibition Partners, Official data from relevant state agencies

As can be seen, the introduction of adult-use cannabis laws had a large impact on the number of people registering as medical cannabis patients in Colorado, Michigan, Nevada and Oregon. The effect is clearly variable, e.g. in Colorado, patient registrations have stagnated compared to Oregon, where patient numbers have dropped to just 22,500 patients, less than a third of the 78,000 patients in the state at the peak levels. It should be noted that not all states that introduced adult-use cannabis sales saw such a drastic impact on the number of patient registrations. Massachusetts patient registrations have climbed from 40,000 at legalisation of adult-use cannabis in 2016 to over 100,000 in 2021. **The largest deciding factor in whether patient registrations stagnate after recreational legalisation is the ease with which a consumer can obtain medical or adult-use cannabis.** Oregon has seen the most drastic decline in patient registrations of any state, owing largely to the fact that it has the highest number of adult-use dispensaries per population, at 179 per million inhabitants compared to 9.3 per million for Massachusetts. Other aspects such as cannabis prices, tax rates and available ranges of products are likely to factor into the equation for the decline or maintenance of medical registrants.

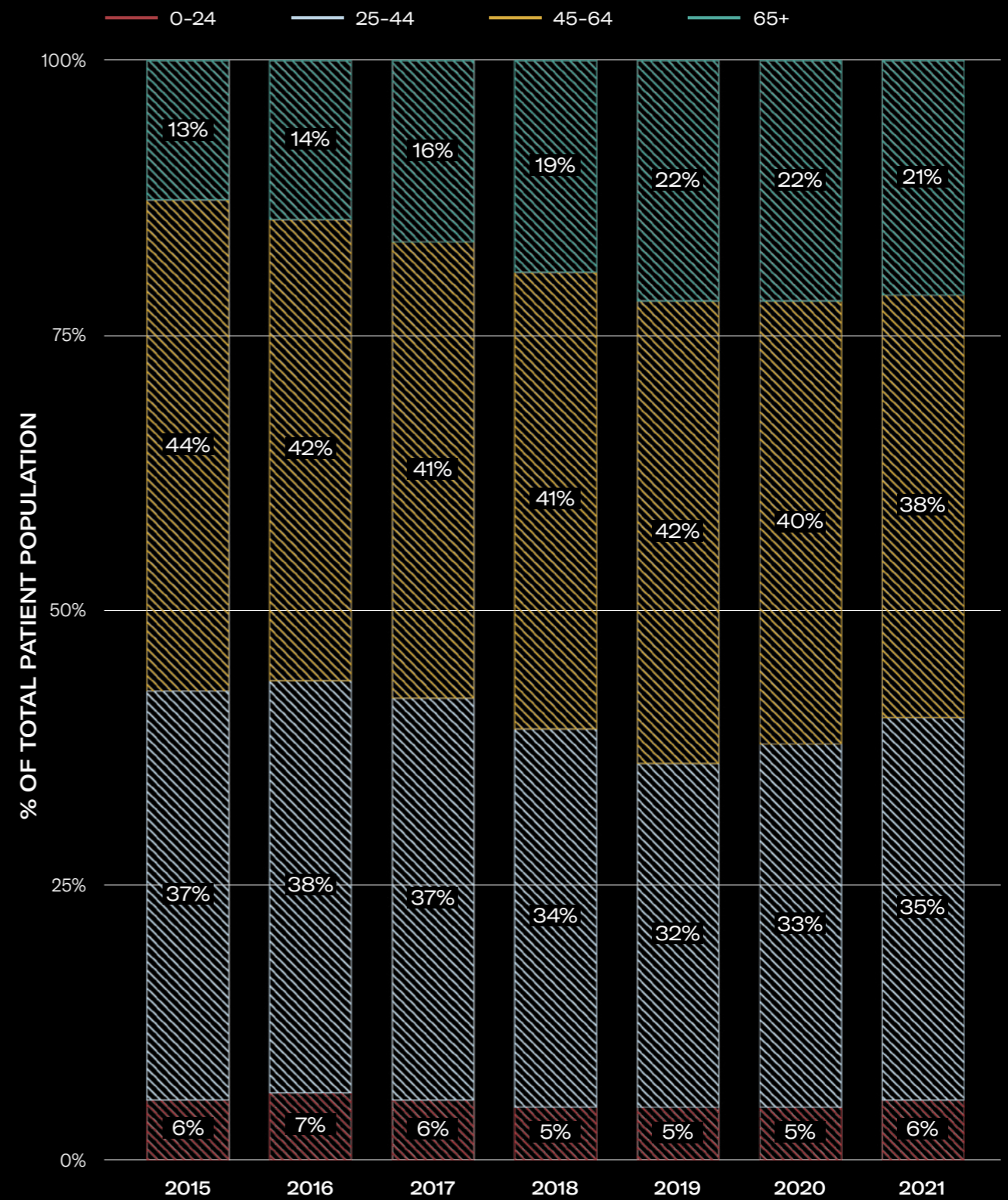
**Effect on patient population characteristics**

The migration of patients from the medical cannabis sector to the adult-use market will probably have an effect on the makeup of the patient population who continue to obtain their product via legal medical pathways. For example, in Oregon there has been a consistent decline in the share of total registered patients up to the age of 65. Registered patients below the age of 65 have been several times faster to leave the medical sector than older patients. The trend is also visible in other regions in the US, where the 70+ age category in Colorado is the only bracket which continues to grow gradually while patient numbers in all other age brackets shrink in that state. Amongst the few states without adult-use sales and who publish statistics on patients

and their ages (Arkansas and Arizona), no such trend in the age profile of the medical cannabis patient population is visible. This could potentially be explained by younger generations being quicker to obtain cannabis without medical supervision owing to more liberal behaviours among consumers of this cohort. This is an example of how the migration from medical to recreational cannabis will be somewhat deterministic, and will shape the future consumer/patient population for each market.

**70+ age category in Colorado is the only bracket which continues to grow gradually while patient numbers in all other age brackets shrink**

# Registered patient age profiles in Oregon



Source: Prohibition Partners, Oregon Medical Marijuana Program  
 Figures do not sum to 100% due to rounding

### Effect on patient experience

There is evidence from the several surveys carried out across Canada that medical cannabis patients experience a range of impacts due to the legalisation of adult-use cannabis. For example, the overall use of cannabis increased in medical cannabis patients in Canada after legalisation, potentially due to the normalisation of the plant and the fact that it was a common topic of discussion in the media leading up to, and after, legalisation<sup>3</sup>. The number of patients reporting recreation to be a driving factor for consumption increased in the three months after legalisation. Importantly, **as many as one in four patients using medical cannabis reported an increased difficulty in obtaining their preferred medical cannabis products after the introduction of adult-use sales**<sup>4</sup>. While adult-use cannabis stores have the potential to bring in a wider range of products than pharmacies or medical cannabis dispensaries, some patients have found that their preferred product either increases in price or decreases in availability following the legalisation of medical cannabis. Researchers on the topic have stressed that these impacts on medical cannabis patients should be considered within the development process of regulated adult-use schemes.

### The many faces of adult-use legalisation outside North America

Adult-use legalisation is a new phenomenon for modern nations, and is being handled differently in each location it arises. To date, only Uruguay, Canada and 21 US territories, including Guam, have legalised the sale of adult-use cannabis. The environment of capitalism and entrepreneurialism in the US, along with the sovereignty of individual states has meant that it has been at the forefront of adult-use legalisation over the past 20 years. The legalisa-

<sup>3</sup> Hawley, P., Gobbo, M. and Afghari, N., 2020. The impact of legalization of access to recreational Cannabis on Canadian medical users with Cancer. BMC Health Services Research, 20(1), pp.1-12.

<sup>4</sup> Abacus Data 2020. CPHA Medical Cannabis study medical cannabis users

tion of cannabis outside of North America is not closely following the libertarian approach to adult-use regulation seen, among others, in Canada or California. Instead, in Uruguay, Mexico and in the handful of European countries who are now considering legislation, each country is carving their own path towards full liberalisation of cannabis.



There are numerous aspects of regulation of adult-use cannabis which will significantly affect the market both for businesses and consumers. These include:

- A.** The restrictions placed on licensing where-in a limit may be placed on the number or frequency of cannabis operating licenses e.g. for production, distribution or retail. This has a large impact on the supply of cannabis and the ease with which consumers access products.
- B.** Taxation determines a large part of the price at which consumers pay for adult-use products and can often be a large factor in whether consumers switch from black market to legal retailers.
- C.** Restriction over customer profiles vary e.g. a region may require consumers; to be listed on a register for adult-use sales, to be over the age of 18 or 21, to be resident in the territory etc..
- D.** The point of sales where cannabis may be purchased e.g. pharmacies, social clubs retailers or coffeeshops.
- E.** Whether or not advertising of cannabis products is legal.

As can be seen below, the systems of regulation of adult-use cannabis in Uruguay and those being prepared in Mexico and the Netherlands vary, with each state taking its own measures to balance considerations such as public health, business interests and law and order. Uruguay is unique in several aspects. For example, consumers of adult-use cannabis register with a national database, and obtain their products from a pharmacy rather than

cannabis specific retailers. This is an example of a measure to maintain a secure distribution, with some potential costs to businesses as this could act as a deterrent to customers. Mexico is not placing restrictions on residents purchasing recreational cannabis which opens the door to cannabis tourism. Cannabis tourism has been a constant feature of the legally 'grey' cannabis market in the Netherlands, but one which will not be permitted under the new trial scheme which will hopefully be in operation, as of 2022.

### Systems of adult-use cannabis legalisation outside of North America

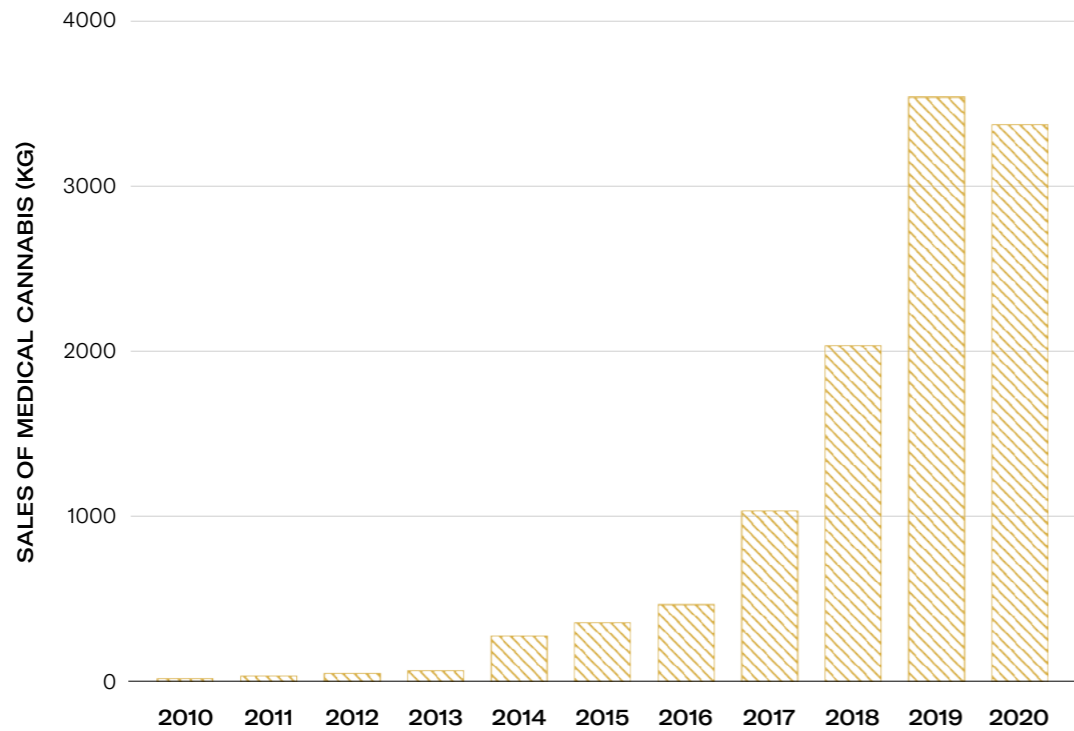
	 Uruguay	 Mexico	 Netherlands	 Switzerland
<b>Legalisation status</b>	Legal since 2013	Legalisation bill expected to pass by early 2022	Legalised on trial basis wherein coffeeshops in ten municipalities will offer fully legal adult-use sales. Sales have not yet begun	Legalised on trial basis wherein pilot schemes will be set up in individual cantons. Sales have not yet begun
<b>Point of sale</b>	Pharmacies	Licensed retailers	Coffeeshops	To be decided within each pilot scheme
<b>Limited number of licenses for retailers?</b>	No	No	No	No
<b>Consumer registry?</b>	Yes	No	No	Yes (5,000 max. per pilot scheme)
<b>Advertising legal?</b>	No	No	No	No
<b>Sales to tourists?</b>	No	Yes	No	No
<b>Imports allowed?</b>	Yes	Yes	No	Yes, must compete with black market prices
<b>Price controls?</b>	Yes	No	No	Yes



## DEVELOPMENT OF MEDICAL CANNABIS SUPPLY CHAIN

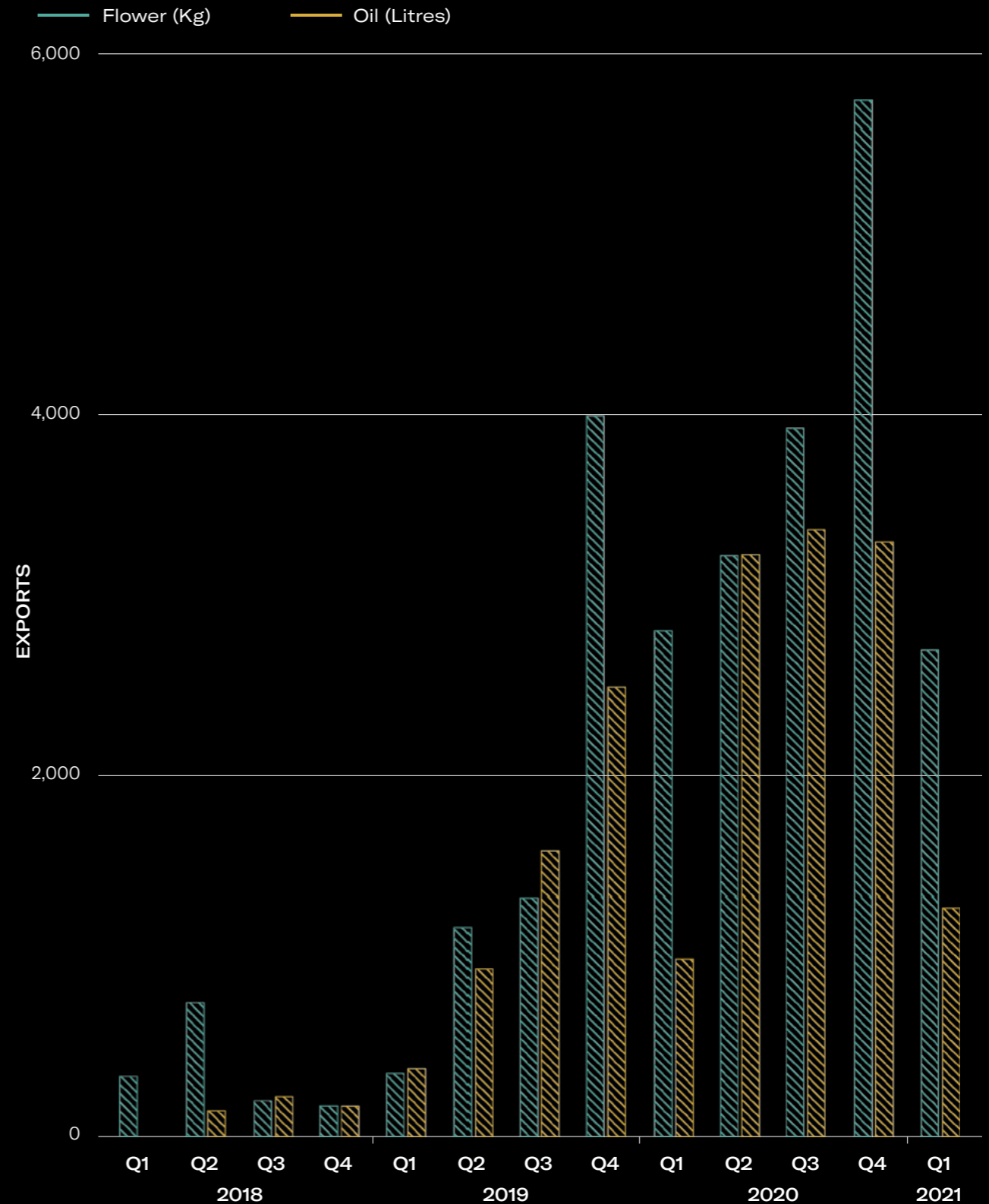
The supply chain of cannabis is currently undergoing a process of globalisation in that the old markets of the Netherlands and Canada are being challenged by producers from all over the world, who are operating in newly legal export markets. The Netherlands and Canada have dominated exports of medical cannabis, having been given a decades-long headstart by legalising medical cannabis in the early 2000s. This has allowed the regulators and producers to establish a robust system of medical cannabis production, with globally trusted quality standards. Each country has its own model of regulation of production, with Canada operating a system of open licensing, with many producers and exporters, while the Netherlands allows just one company, Bedrocan, to produce medical cannabis which is exported by the Dutch Office of Medical Cannabis (OMC).

### Medical Cannabis Exports from the Netherlands



Source: Prohibition Partners, Office of Medical Cannabis Netherlands

## Medical cannabis exports from Canada



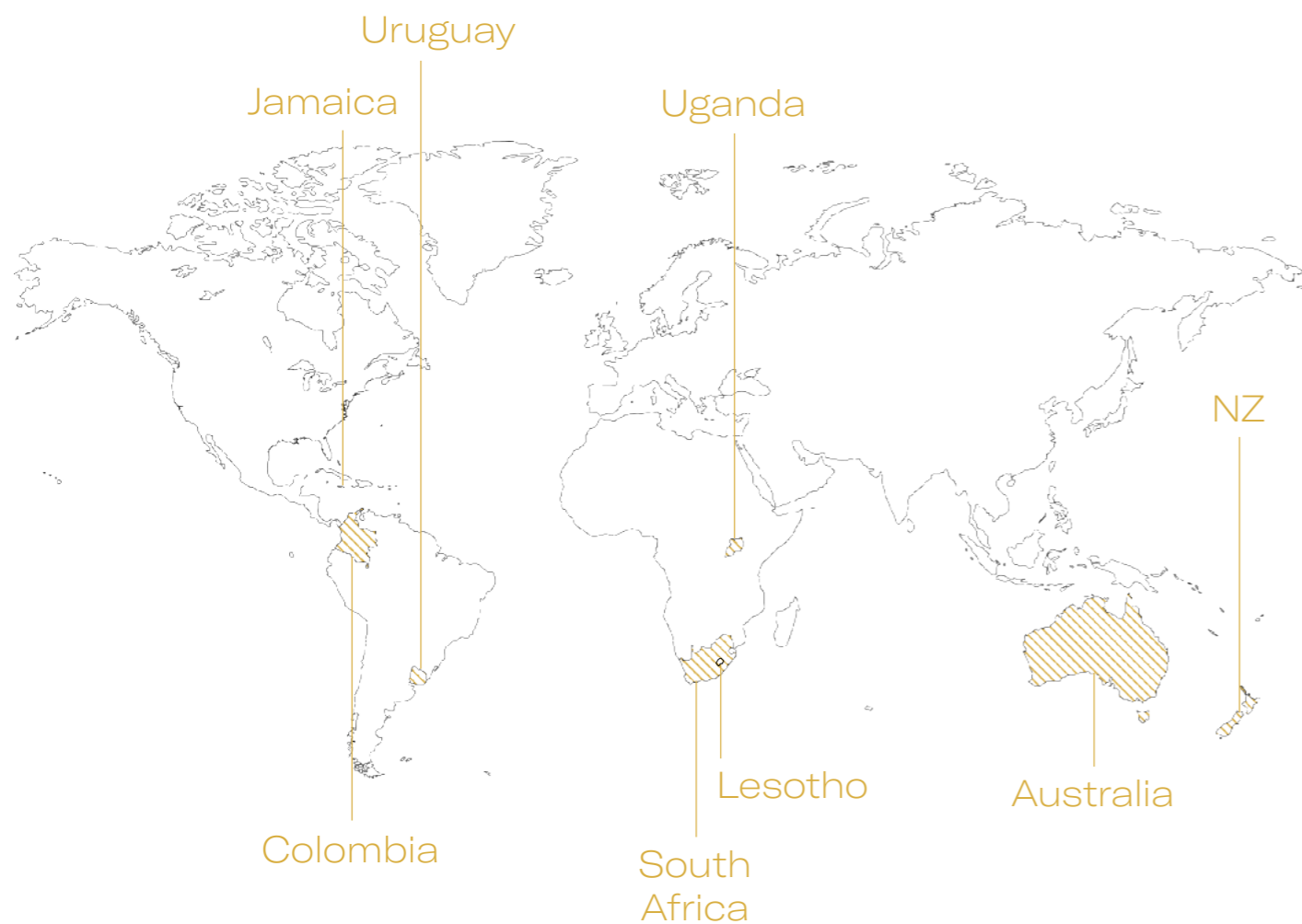
Source: Prohibition Partners, Health Canada

However, recent data uncovered by Prohibition Partners has shown a decline in exports from both major countries, with 2020 seeing a sudden decline in exports from the Netherlands after years of growth, and Q1 2021 seeing the largest decline in Canadian exports to date. The reasons for this reversal at a time when global consumption of legal medical cannabis is skyrocketing, are that there is more domestic production and other exporters are coming online.

It has long been anticipated that cannabis produced in warm climates, with cheap labour

and land would eventually undercut cannabis produced more expensively in the target markets of Europe and North America. As of 2021, we are beginning to see this occur, with at least eight countries in the Global South now exporting at least test quantities of medical cannabis to the North. This is in addition to several Mediterranean producers such as North Macedonia, Malta, Portugal and Spain who now all have fully operational export industries. It should be noted though, that of all these countries, only Australia, Uruguay and Portugal are exporting 1000 kilograms or more per year.

## Southern nations exporting to the Northern Hemisphere



Source: Prohibition Partners

## Countries looking to cannabis to aid in the post-COVID recovery

Many regions are currently planning on cashing-in on the rapidly growing medical and adult-use cannabis sales around the globe. The conversion of the roughly US\$100 billion industry from black market to legal sales is being taken as a sign of economic hope for many countries around the globe who have been impacted by the COVID-19 lockdown. The necessary provision of financial support for companies and individuals by national governments across the globe has caused the global burden of debt to be pushed to nearly US\$300 trillion, with practical implications being that many countries are increasingly cash-strapped. Other nations such as Malawi and Zimbabwe are looking to cannabis to recover losses from declining tobacco exports. Improving national Gross Domestic Product (GDP) has been a factor in the legalisation of cannabis for years now, but it is increasing in the wake of COVID-19. Many nations are seeking to legalise cannabis with the express purpose of exporting to large markets such as Germany, Israel, and any other markets that develop or legalise in the near future.

Fiji- 'marijuana for medicinal purposes .. is a big industry the world over and the suggestion was we should look at that from that perspective so that it can earn us the export funds that we need.'

*University of Fiji Vice-Chancellor, Shaista Shameem, March 2021*

Morocco- Cannabis legalisation offers 'promising and stable job opportunities.'

*Morocco's Minister of Interior, Abdelouafi Laftit, April 2021*

Isle of Man- Cannabis will be a 'key contributor to the Isle of Man's post-COVID economic recovery.'

*Laurie Hooper, Leader of Liberal Vannin Party of the Isle of Man, Jan. 2021*

Barbados- 'The economic benefits are something that we cannot turn a blind eye to. We have to capitalise on any opportunity that confronts us now because later on, it will not be here.'

*Indar Weir, Minister of Agriculture and Food Security of Barbados, Dec. 2020*

Thailand- 'Thailand is already a tourist destination for many foreigners, and marijuana will be another attraction for the country and for medical tourists. Doctors will be able to 'grow, produce and export marijuana,' and farmers will have 'more options for income.'

*Marut Jirasrattasiri, Director-General of the Department of Thai Traditional and Alternative Medicine, August 2020*

While the opportunity for cannabis exporting is strong in the mid-to long-term, **obtaining a significant amount of revenue from cannabis exports in the short-term is no easy task, and carries a high degree of risk.** Germany is potentially the most important import market at the moment, as the larger markets of the US are dominated by domestic producers for the time being. Setting up an export market poses risks because of the high competition for exports. Producers should expect price reductions over the next few years, as more and more low-cost cannabis comes online from countries across the Mediterranean and Global South. In addition, an increasing number of importing countries such as Germany and Israel are growing their own cannabis. One additional factor that introduces serious risk to the prospects of any new exporting market is that many nations may take the route of protectionism.

## THE CHANGING FORMATS OF MEDICAL CANNABIS

### Protectionism vs globalism

In the long term, cannabis produced in warm climates, with cheap land and labour will be more cost-efficient than cannabis produced in the more temperate northern regions, but the ability of producers there to participate in the market will depend on the degree of protectionism or globalism employed in the target markets. Several countries are currently employing protectionism over cannabis market segments or the entire medical and recreational cannabis markets. Canada and the Netherlands, the largest exporting countries in the world, allow no imports of cannabis other than for scientific purposes. This is done in an effort to regulate the local supply of medical cannabis, but also presumably to protect the domestic markets from lower-cost producers, as many first world countries do for other agricultural products. The US does not currently allow imports, given the illegal status of cannabis at the Federal level, though this could change e.g. if the Cannabis Administration and Opportunity Act (CAOA) passes. Switzerland and the Netherlands are both on the cusp of trialling adult-use cannabis in Europe, but in these trials only domestically produced cannabis can be used. Similarly, for Thailand, the largest cannabis market in Asia, no imported medical cannabis may be used. The ability of producers, in lower-cost regions, to compete in the cannabis market will depend on how these policies evolve in the consumer markets. Any producer wishing to export to another country should carefully calculate all factors including the current and future demand, domestic production capacities and third party competition for exports.

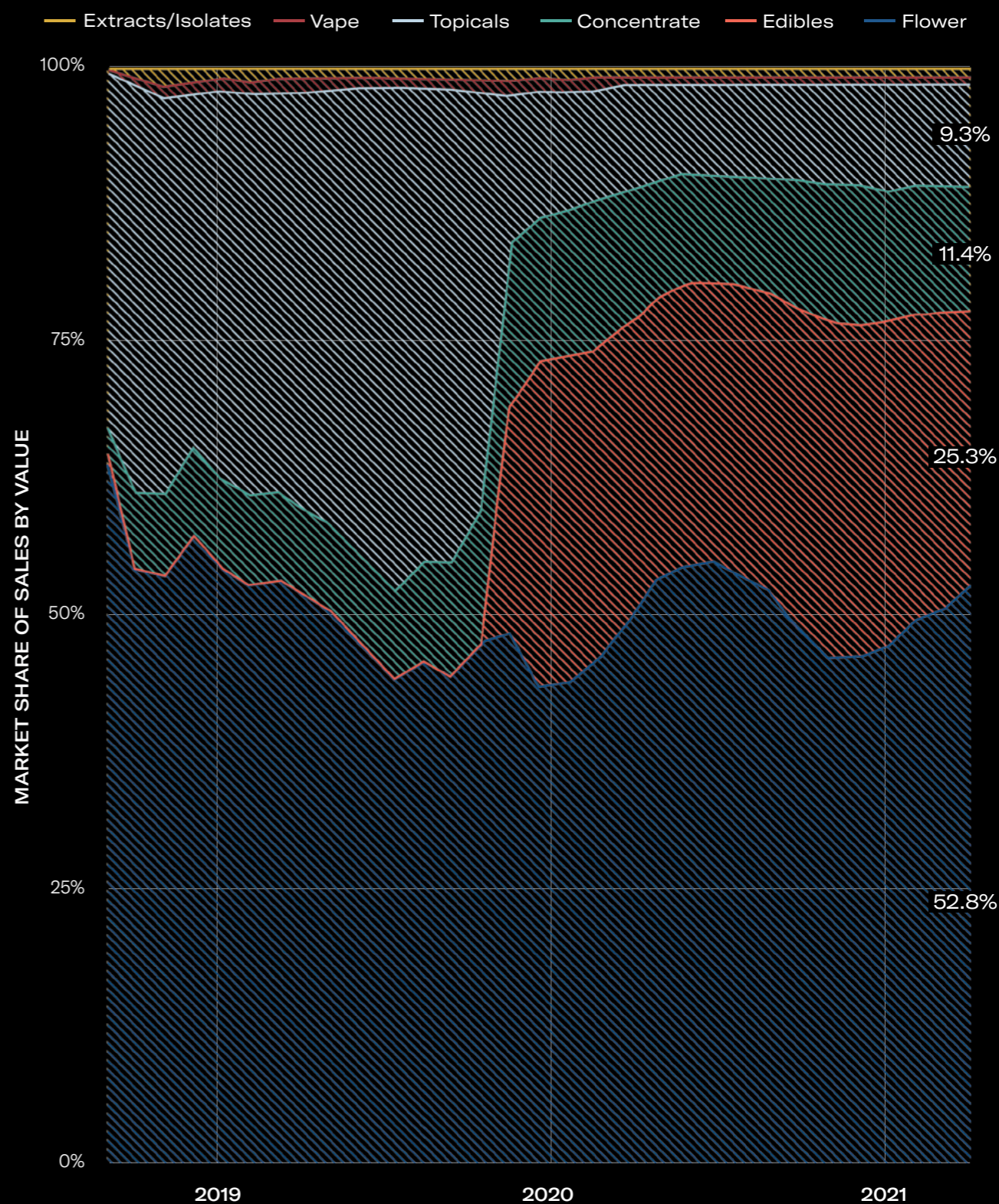
### Overview

Medical cannabis products are used in different ways across the globe, with the legality and popularity of product format varying widely between regions. Prohibition Partners divides cannabis into medical and pharmaceutical products, with medical products being the common flowers, oils, vapes etc., which have been the most popular products to date. Medical cannabis products are marketed without the regular authorisations one would expect of traditional pharmaceuticals, and are instead provided via parallel systems of regulation, but still with physician supervision. Pharmaceutical products, on the other hand, are those such as Epidiolex® and Sativex® which are precise formulations, which have passed through clinical trials and are marketed as any other prescription pharmaceutical product would be (see Prohibition Partners' **Pharmaceutical Cannabis Report** for a deep-dive into this sector). In most regions, there are limits placed on the formats which are permissible to market, both for medical and pharmaceutical products. Below, we explore some of the available data. For a more thorough examination of the trends in product formats, see Prohibition Partners' 'Pharmaceutical Report'. For data on adult-use cannabis sales see data packages available with this report.

### North America

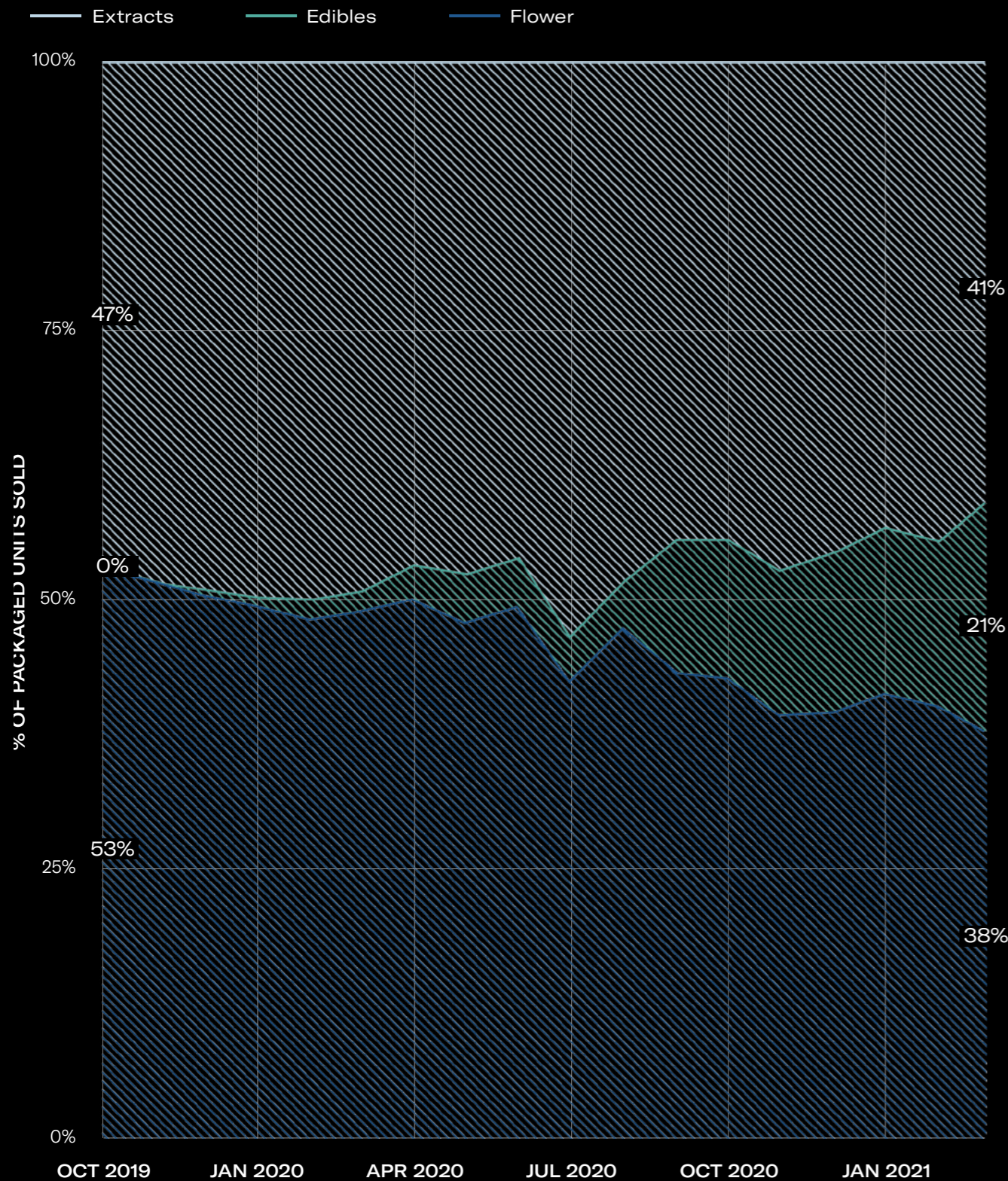
The United States, in many ways, has a unique system of medical cannabis regulation, including in the product formats which are marketed across the country. The majority of states which have legalised medical cannabis have taken a more liberal approach to the regulations than almost anywhere else in the world. Cannabis can be prescribed by in-house doctors and obtained from the same location in a wide variety of product formats. Regions outside the US are tending towards the use of non-inhalable products such as oils and extracts, but market data shows that inhalable products are remaining dominant in the US, with flower and vaporiser products accounting for 70-80% of sales value in states which publish such data.

## Medical cannabis sales in Michigan



Source: Prohibition Partners, Marijuana Regulatory Agency Michigan

# Medical cannabis sales in Canada



Source: Prohibition Partners, Health Canada

In Canada, the addition of ‘Cannabis 2.0’ sales has eaten into the quantities of packaged units of flower product sold. This continues a trend of falling market share for flower products, as doctors and patients turn to the alternative non-inhalable formats such as oils, and now edibles. Since the beginning of 2021, packaged units of flower have lost 15% points to edibles, while extracts have lost just six.

## Europe

Medical cannabis in Europe is treated more similarly to highly regulated, traditional pharmaceutical drugs than in the US or Canada where it is more easily accessible. Product range is limited to a few controlled formats, and for most countries, a few approved strains. In Europe, medical cannabis is only ever dispensed from authorised pharmacies and hospitals with little to no specialised points of retail to be found on the continent, as opposed to the US and Canada. In addition, doctor-patient relationships are generally closer to the standard in western care, with longer patient-doctor interactions and no on-site doctors writing

prescriptions at the point of retail. Medical cannabis in Europe is tending more towards the use of extracts, as well as pharmaceutical products; more so than in North America. Several countries such as Ireland, the UK and France are all, just now, setting up their system of medical cannabis regulation, but early signs show that the balance of product formats will probably mirror the examples below.

Germany is, by far, the largest market for medical cannabis in Europe, with over 120,000 patients, compared to 30,000 patients in Italy. The German insurance group, the GKV, publishes data on the balance of medical and pharmaceutical products which are reimbursed each year. As can be seen, the market share of flower products has reduced by 8% over the course of the past two and a half years, but sales of extracts, especially pharmaceuticals, are on the rise. It should be noted that much of the extracts sold to patients are bought by magistral pharmacies as raw flower and are processed in-house to create standardised extracts.



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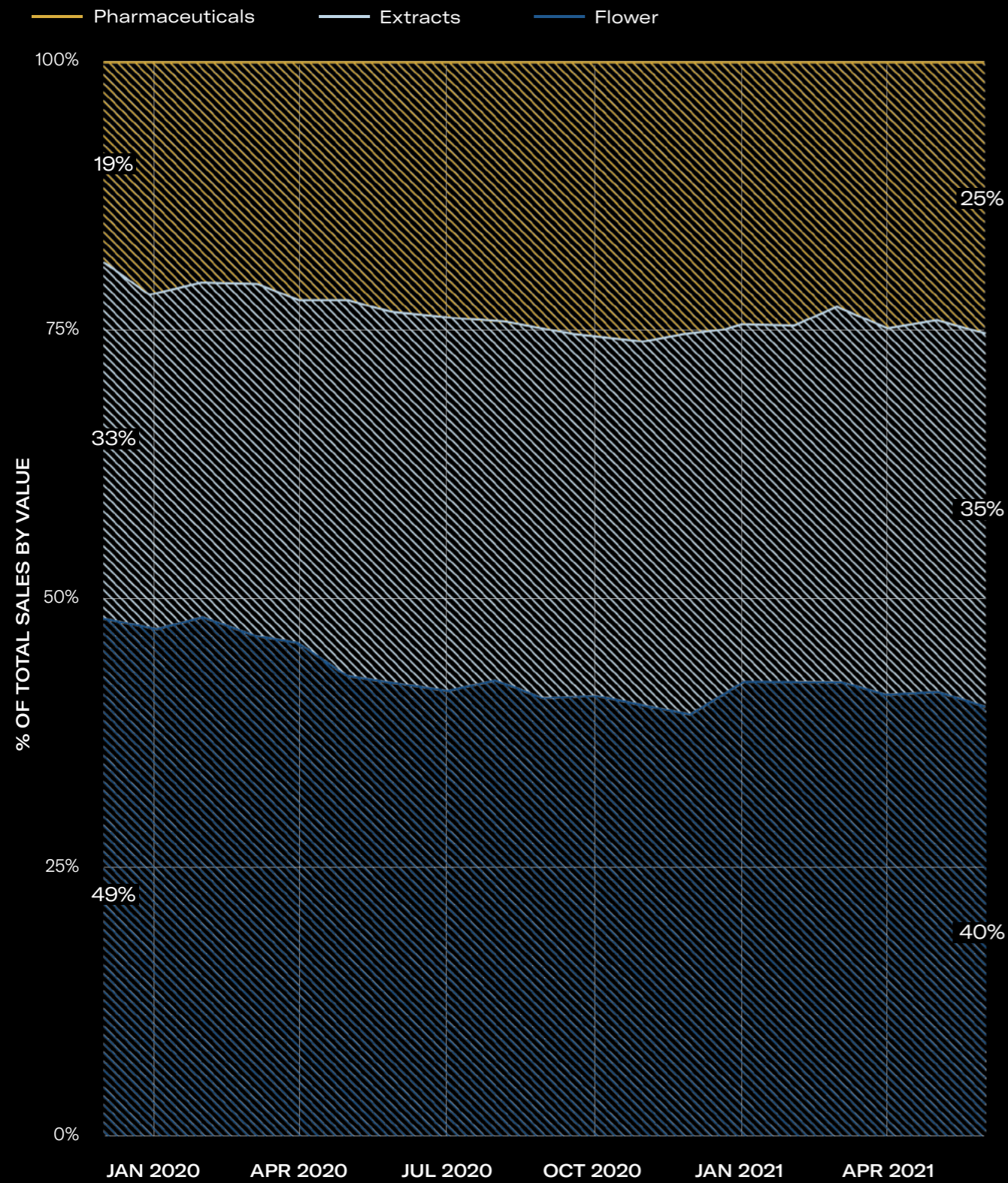
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# Medical cannabis sales in German by format

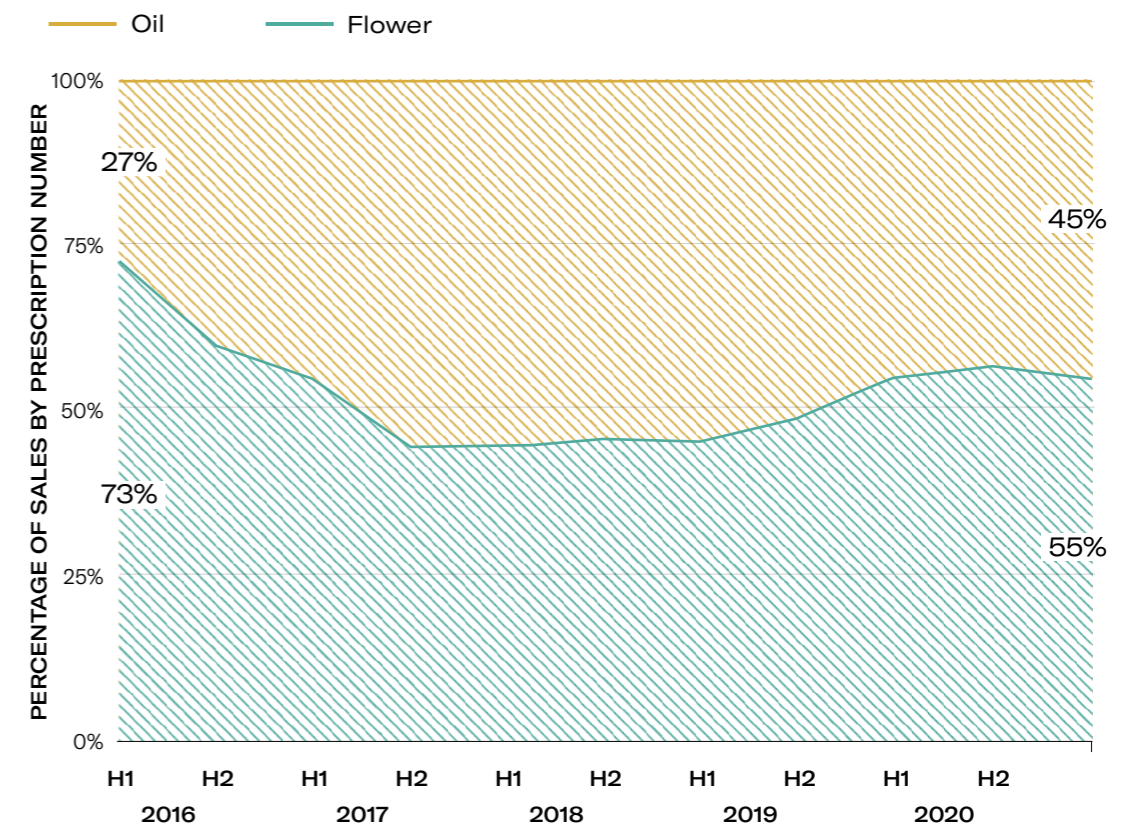


Source: Prohibition Partners/GKV

Prescriptions of medical cannabis have stagnated in the Netherlands since around 2017, probably owing to a combination of the availability of coffeeshop adult-use cannabis, as well as a lack of reimbursement from Dutch insurance groups. The market share of oil products has doubled over the past five years, and now hovers around 50%, almost matching the sales of flower products. The Netherlands is an example of a European country

which maintains strict control of the permitted medical cannabis strains, allowing just five strains of Bedrocan cannabis flowers and extracts to be produced from these. The number of sales of medical cannabis oil as compared to flower has decreased since H2 2017, and now sits at 45%. The value of sales in the Netherlands is heavily dominated by oils, considering these products are more expensive than flower at the pharmacy.

## Sales of medical cannabis in the Netherlands

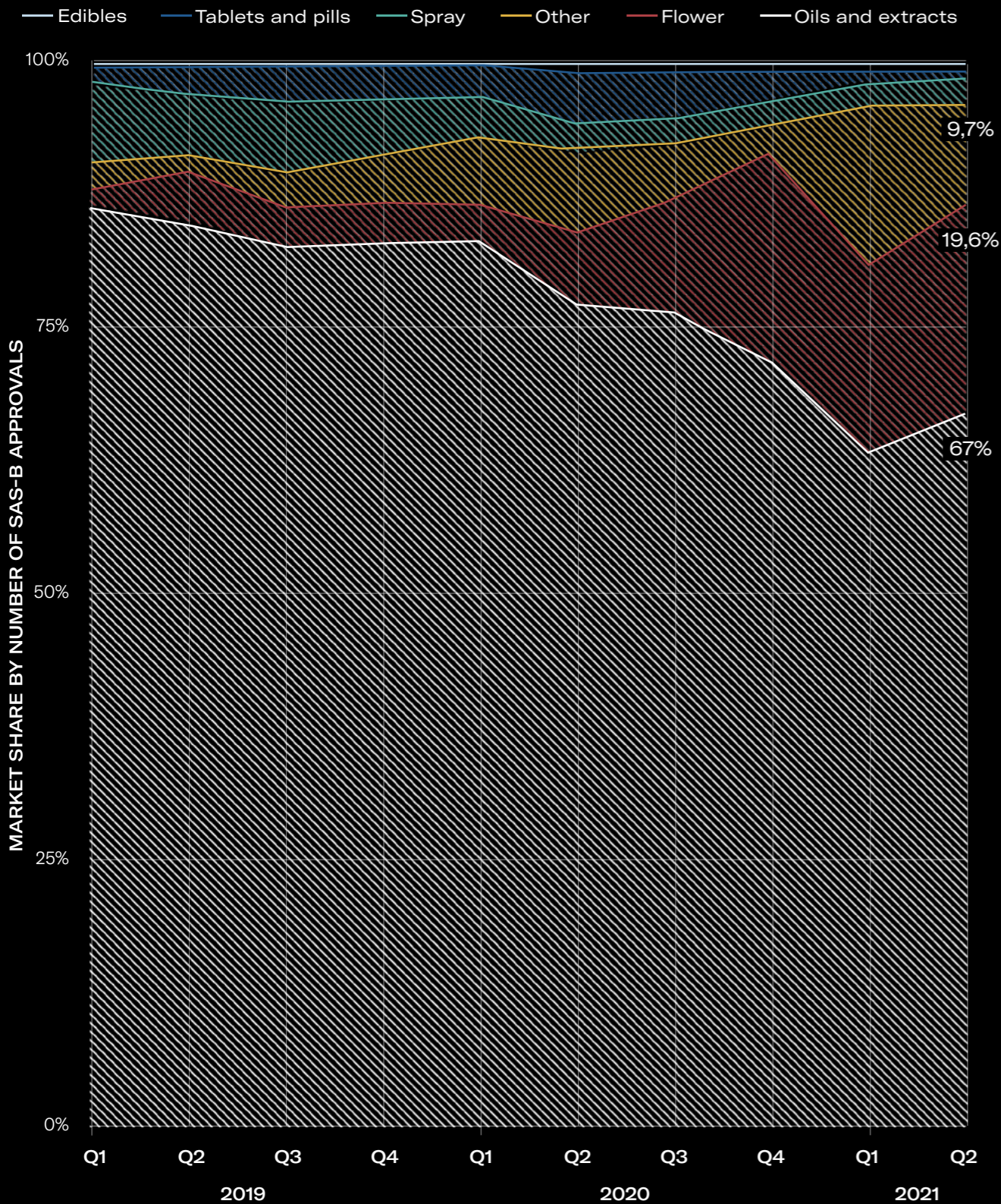


Source: Prohibition Partners, SFK

## Oceania

The main market for medical cannabis in Oceania, by far, is Australia. Thanks to a relatively liberal and efficient regulatory setup, the country has a wide range of approved products including oils, extracts, edibles and inhalable products. Oils and extracts are by far the most often prescribed product in Australia.

# Medical cannabis sales in Australia



SAS-B approvals are by far the most common way to obtain medical cannabis in Australia  
 Source: Prohibition Partners, TGA Australia

## Asia

In Asia, the only country with notable sales of medical cannabis is Thailand. The Thai Food and Drug Administration (FDA) curates a list of approved recipes for prescription to patients. The vast majority of approved recipes are for oils, with some approved capsules. Thailand also allows for the prescription of traditional formulas, which include dry herb formats. Cannabis is used in traditional formulas across several Asian countries such as India and Sri Lanka but is poorly documented and is produced mostly by small scale producers. The only other medical cannabis currently being prescribed in Asia is in the form of limited pharmaceutical products being used e.g. in South Korea and Japan, mostly as part of clinical trials and under rare patient specific exemptions.

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## CANNABIS MARKETS IN A POST-COVID WORLD

### Delays in legalisation and development of regulatory schemes

The COVID-19 lockdown of the past two years has caused delays in almost every legalisation movement around the globe as well as causing disruption to many existing cannabis supply chains. In addition, the development of various regulatory schemes has been delayed as governments focused resources on responding to the virus. However, many developments are now proceeding as governments around the world are lifting restrictions and reallocating pandemic-related resources. For example; in Switzerland, the upper house of Parliament was due to approve trial adult-use regulations in March 2020 but this was postponed until September that year due to COVID and now the first trials are expected to be implemented during 2022. The French trial of medical cannabis was approved in October 2019 and only begun in March 2021 due to successive pandemic-related delays but they are now delivering promising early results. Demonstrating that the issues being faced were common on many continents, Q1 2020 saw delays in the decriminalisation of cannabis in South Africa, as well as the rollout of the medical cannabis scheme in New Zealand. In the US, state and federal legalisation efforts were delayed; for example in September 2020 where the Democrats postponed a vote on the Marijuana Opportunity Reinvestment and Expungement (MORE) Act which would federally decriminalise cannabis until a COVID relief package was passed. Since then of course, the MORE Act has made progress in the new legislative term, and has been joined by other bills such as Sen. Chuck Schumer's comprehensive CAO act.

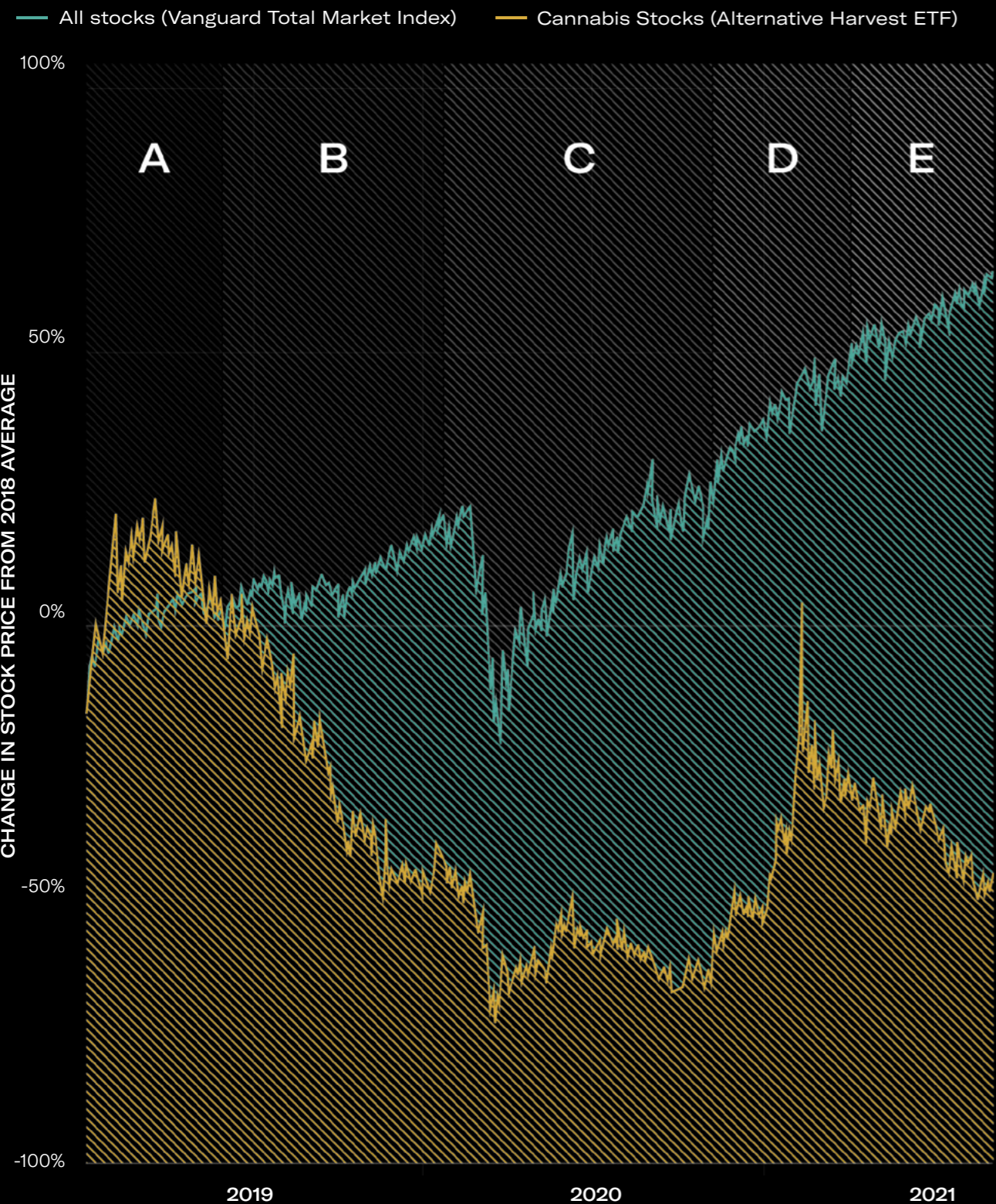
The globalisation of the cannabis supply chain has also been slowed, as regulatory agencies were reluctant to send inspectors to production and manufacturing sites abroad during lockdown, meaning many companies could not get the necessary certifications to

export to new regions. There are now signs that this bottleneck has been overcome, as in H1 of 2021, Germany received imports from 17 nations including novel sources such as Lesotho, New Zealand and Jamaica.

### Financial impact

Cannabis represents one of the most exciting and potentially lucrative growing markets in the world, but it has also experienced growing pains over recent years. Since the beginning of broadscale legalisation of medical and adult-use cannabis over the past two decades, more and more of the roughly 150 million cannabis users have been shifting to purchasing their products legally. This process has massive implications for justice and public health, and also financially. The prospect of the conversion of over \$100 billion in black market cannabis sales into legal channels has prompted huge excitement both from the business community and governmental bodies whose tax base could stand to benefit. However, the rise of the new cannabis industry has not been as smooth as some had hoped for as a result of a variety of factors. The industry has struggled with factors such as overly aggressive expansion plans and a resilient black market which has contributed to a loss of investor confidence; all of which were exacerbated by the effects of the COVID-19 lockdown. Below, we consider the trends in stock market value of cannabis firms compared to the general stock market. Cannabis stock prices are proxied by the Alternative Harvest Fund which holds over US\$1.61 billion in a wide range of cannabis stocks from various segments. Vanguard Total Stock Index is used as a comparison, as it holds stocks intended to represent the entire market.

# Cannabis stocks vs the general market



Source: Prohibition Partners

**A** Stock markets recovered from dips late in 2018 which were caused by high federal loan rates, a cooling global economy and the Trump-era trade war with China. Markets recover early in 2019 due to reduced Federal loan rates and an initial trade deal between the US and China.

**B** The H2 of 2019 saw a six month bust-cycle for cannabis stocks. Investors withdrew funding for many large startup companies including cannabis firms but also Lyft, WeWork and Slack who had high revenues but were struggling to sketch out a path to profitability. Fundamentals become increasingly important for cannabis businesses, global expansion plans begin to slow. This has caused a massive shift of priority for large cannabis firms from global to local operations.

**C** The COVID-19 pandemic caused the steepest decline in general stock market prices in history with cannabis stocks also heavily affected. As discussed on page 38, cannabis legalisation is delayed in several regions and the development of regulatory schemes are stalled. The economic recovery which began in March 2020 was supported by massive government stimulus packages as well as the rapid development of vaccines. Cannabis stocks made a partial recovery.

**D** In December 2020, the UN reschedules cannabis to acknowledge its medical potential. Cannabis stocks received a massive boost during the democratic victories in the US and the legalisation of recreational cannabis in several states. The securing of both the Senate and the House prompted hopes that Federal legislation could be achieved over the coming years. In February 2021, the phenomenon of group action by retail investors organising on Reddit temporarily pushed some cannabis stock prices to 2019 levels.

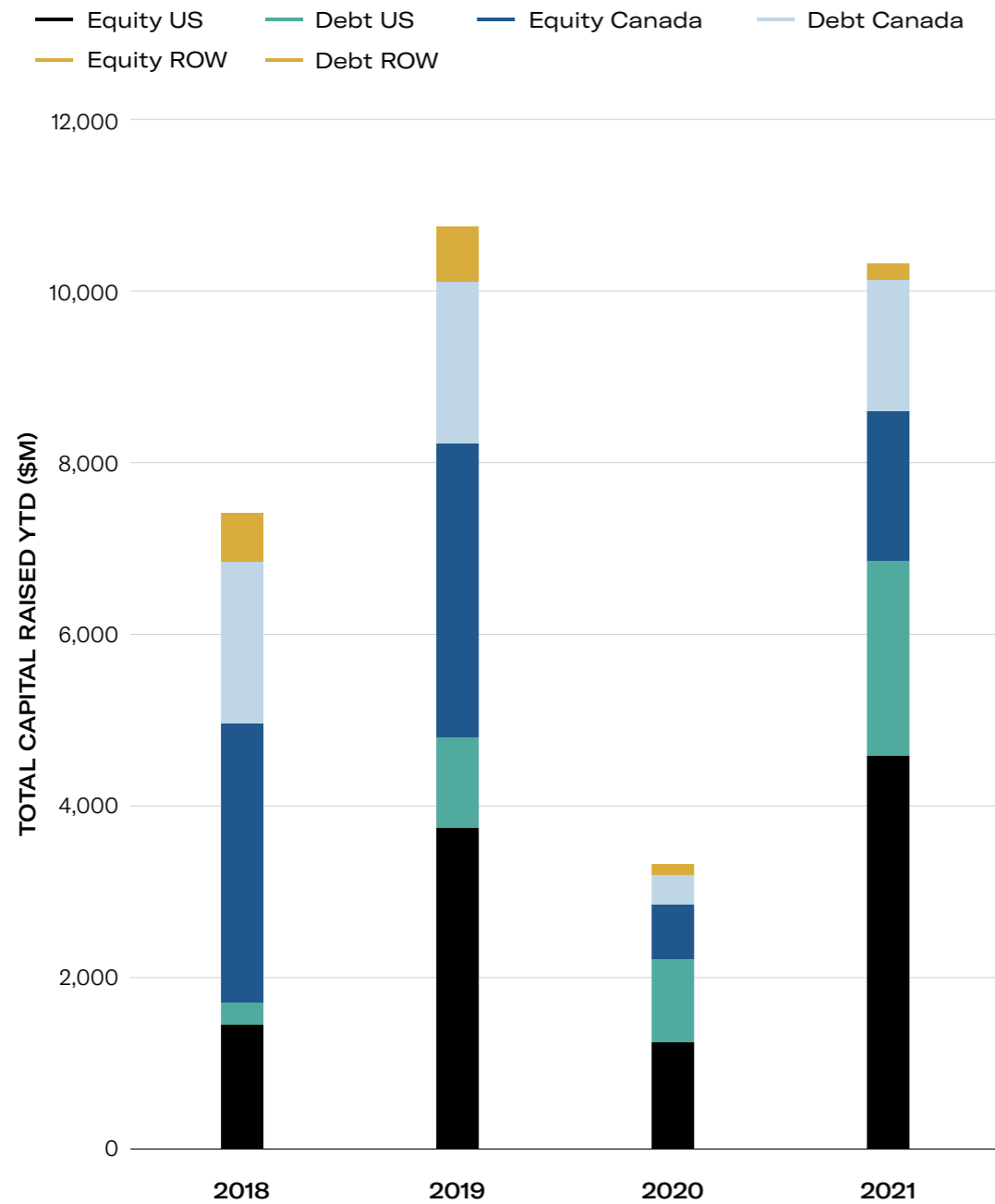
**E** Stock prices are down from the surge seen early in 2021. Interest from retail investor groups wane and, in the US, democratic action on cannabis reform is developing slowly. While it is clear that the cannabis market has not reached anywhere near its full potential value, investors are currently shying away from pouring resources into firms until it becomes clearer who the winners might be.



While there has been a decline in cannabis share prices, capital raises have experienced a massive rebound in 2021, almost reaching the heights previously seen in 2019. The majority of capital raised is now going to US cannabis firms, with Canadian capital raises now shrinking compared to their 2019 levels. Cru-

cially, the amount of capital being raised in the form of debt is increasing much faster than is equity. This is probably due to the declining share price of cannabis firms, the related uncertainty around the date of federal US legislation as well as increasingly attractive terms being offered on debt financing.

### US capital raises YTD up 42.6% from 2019

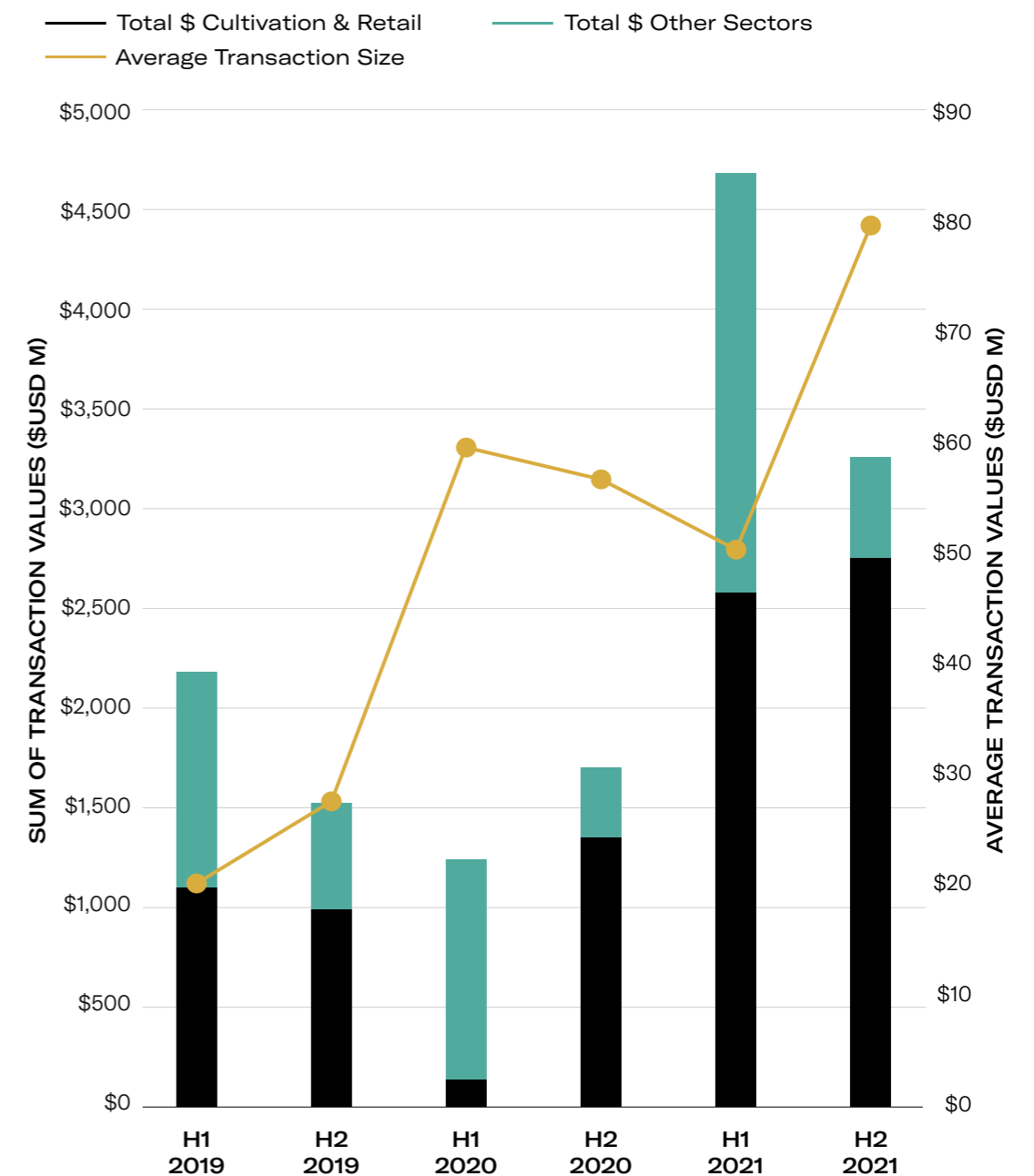


Source: Viridian Capital

The year, 2021, has also been a record one for Mergers and Acquisitions in the cannabis industry, especially with US companies making use of healthy cash positions to establish themselves in the US and international markets. The average transaction size is increasing, reflecting the increasing number of

acquisitions and mergers of large firms such as the mega acquisition of Harvest Health and Recreation by Trulieve in October 2021 for US\$2.2 billion.

### Record US M&A volume



Source: Viridian Capital

An increasing amount of M&A activity and capital raises can be seen in the cannabis sectors other than cultivation and retail. The massive influx of capital and M&A activity highlights the increasing importance of ancillary services such as technology, professional services, extraction, distribution, packaging and construction. For example, in December 2020, Weedmaps which offers cannabis technology services and an online marketplace signed a deal to go public for US\$579 million and at the time of writing has a market capitalisation of over US\$1.6 billion. The online cannabis marketplace Dutchie raised US\$350 million in October 2021 to bring their valuation to US\$3.75 billion. It is a sign of a maturing industry that ancillary services like these are experiencing such rapid growth.

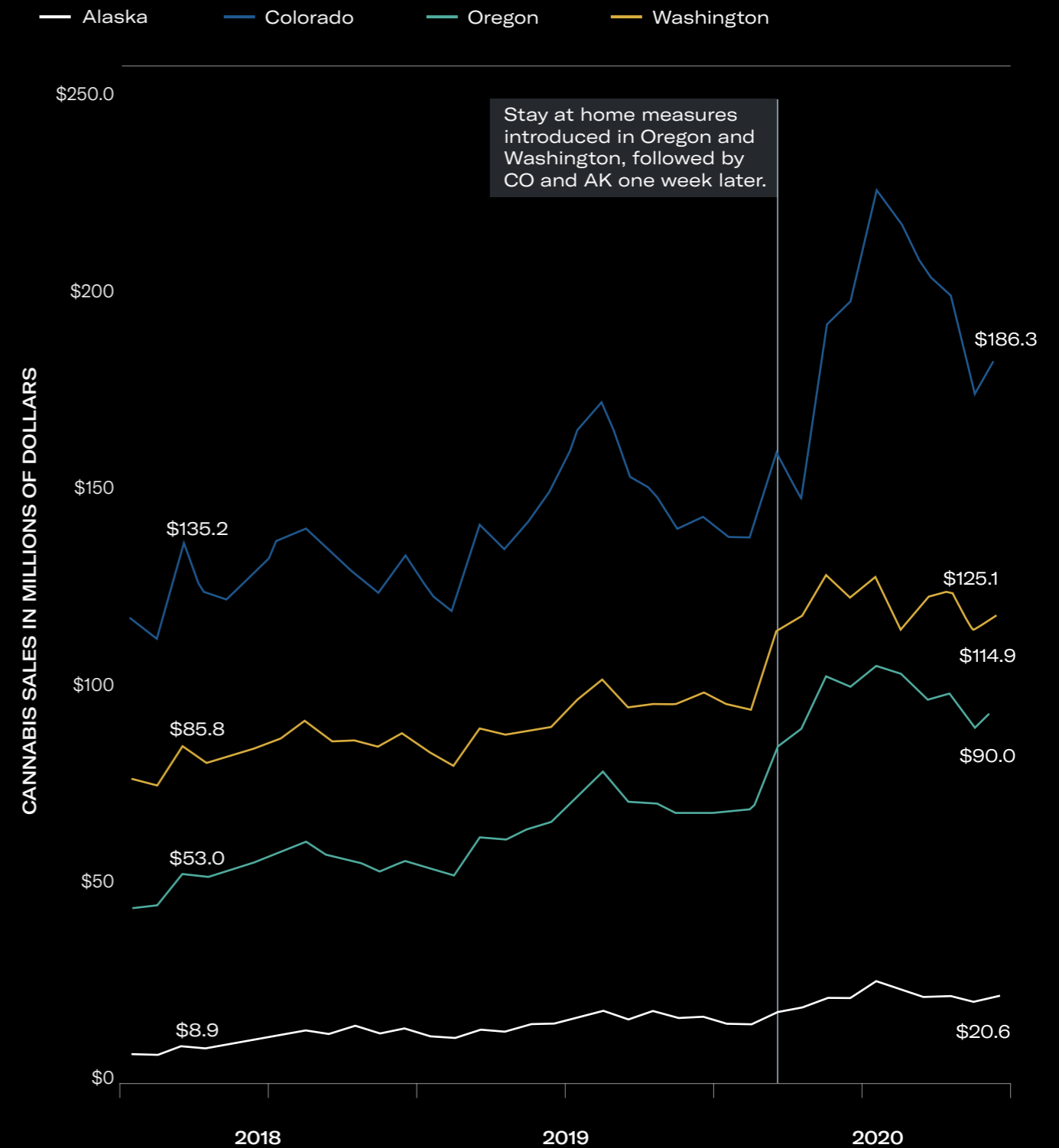
### Impacts of COVID on increasing consumption

Cannabis, both medical and adult-use was consumed in record quantities over the past two years, exceeding what would be expected from linear projections based on increasing legalisation and normalisation globally. Combined medical and adult-use sales data from Oregon, Alaska, Colorado and Washington all showed large spikes in sales occurring in the wake of 'stay at home orders' in each state. Data from Headset has shown that the increase in demand for adult-use cannabis caused a spike in prices for smokable forms of cannabis in several states, by as much as 15% across California, Oregon, Washington and Nevada. Similar results from regions such as Colombia and Australia<sup>5</sup> indicate that the trend of increased cannabis use during the pandemic was a global phenomenon. It is likely that these effects were temporary, as sales e.g. in Colorado have since returned to their pre-pandemic trajectories. However, the effects of normalisation of cannabis consumption, both in terms of medical and adult-use will probably benefit the industry moving forward.

<sup>5</sup> Doherty L, Sullivan T & Voce A 2021. Impact of the COVID-19 pandemic on cannabis demand and supply in Australia. Statistical Bulletin no. 33. Canberra: Australian Institute of Criminology. <https://doi.org/10.52922/sb78252>

The massive influx of capital and M&A activity highlights the increasing importance of ancillary services such as technology, professional services, extraction, distribution, packaging and construction.

## US cannabis sales spike during lockdown



Source: Prohibition Partners, Government agencies.

## US MSOs OVERTAKING CANADIAN GIANTS

### Review of financial performance of major firms

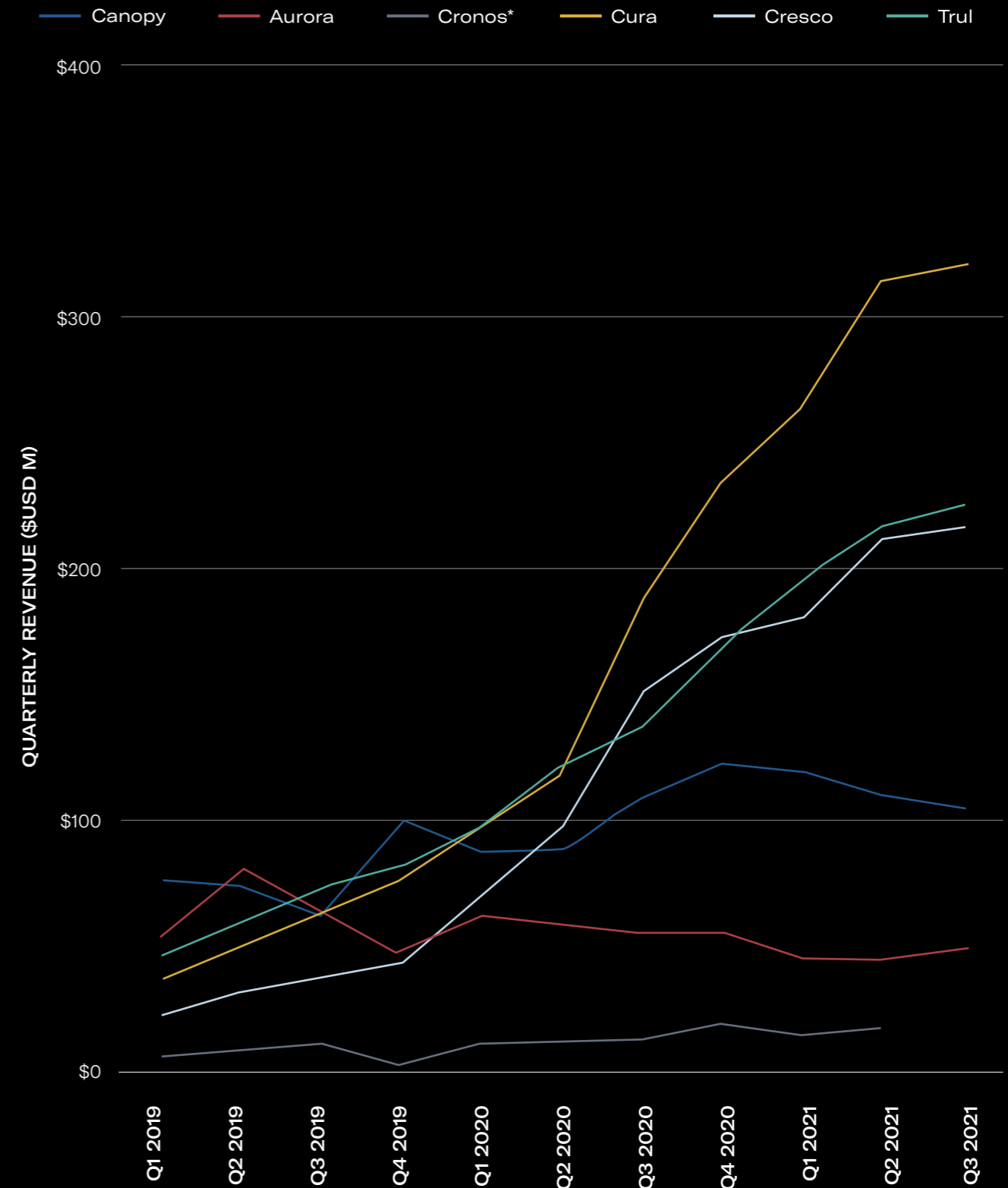
The large cannabis firms in North America have employed a range of business strategies varying along a spectrum of targeted to expansionist models. There is an approximate divide between the very large Canadian firms such as Canopy Growth, Aurora, Cronos and Tilray and the US Multi-State-Operators (MSOs) such as Curaleaf, Cresco Labs and Trulieve wherein the former are employing more expansionist strategies than their US counterparts. Large Canadian firms have commonly invested in resource-intensive expansions into markets outside of North America, mainly Europe and Latin America, with hopes that the increasing value of these market positions will justify the billions of dollars in acquisition costs. US MSOs, on the other hand, have been much slower to expand outside of their native country, instead choosing to focus on the domestic market. It should be noted that the domestic market in the US is many times larger than in Canada. For a sense of scale, over 100 million adults in the US live in states which have legal access to both adult-use and medical cannabis, while Canadian operators are currently targeting just 30 million adults in Canada, and this is before we consider the further majority of US adults who now have access to medical cannabis. Here, we examine some of the differences in fundamentals between large US and Canadian operators.

### Revenue

The revenue of the large cannabis firms in the US and Canada tell a story of two very different markets. In the US, the progress of legislation, whether it be adult-use, medical or both, put together with the domestic hemp and CBD markets is leading to a larger and larger addressable market. This has meant that large MSOs are targeting a market multiple times larger than the Canadian market. Revenue from international operations, e.g. in Germany, are yet to make a real dent in the sums of money used in making and uphold-

ing acquisitions around the globe. In addition, there are early signs that the revenue of the largest Canadian firms is now stagnating or declining, even in the face of rapidly growing national sales. This means that the largest Canadian firms are now losing market share to smaller operators in their own countries.

## Revenue of large cannabis firms



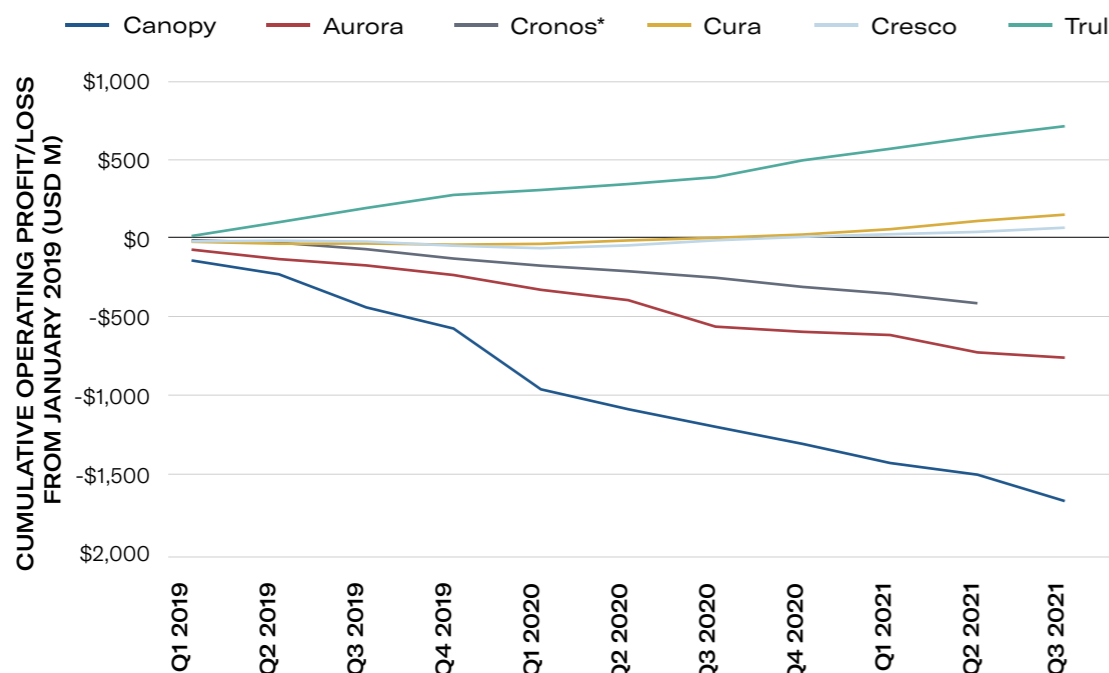
\*Financial Results delayed as of December 2021

Prohibition Partners, Company financial results, Morningstar

The US and Canadian firms analysed here are split into two distinct groups when it comes to cumulative operating profits and losses. As can be seen, Cresco Labs and Curaleaf have made very modest operating profits since 2019, while Trulieve have brought in over half a billion dollars in profit since the beginning of 2019. The Canadian operators, on the other

hand, have been operating at major losses over the last three years. Canopy Growth has taken on the largest loss by far, at over US\$1.5 billion since 2019. Despite bringing in nine-figure annual revenues, Canadian cannabis firms are still largely operating at a considerable loss.

### Cumulative operating profit/loss since 2019

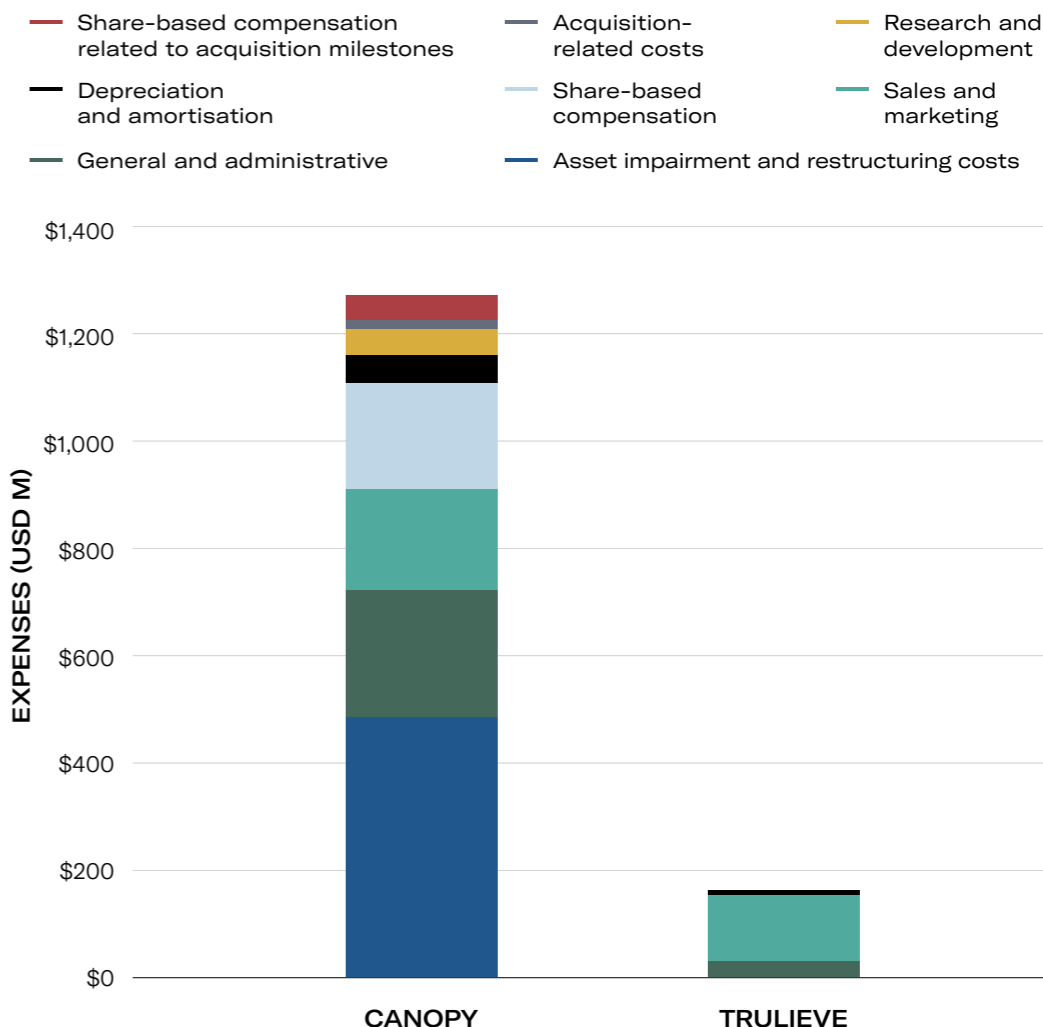


\*Financial Results delayed as of December 2021  
Source: Prohibition Partners, Company financial results, Morningstar

There is no one single factor which sets the US and Canadian firms apart in terms of operating profits and losses but a large portion of those losses incurred by Canadian groups have been due to costs associated with expansionist strategies. The financials of Canopy Growth are used as an example in the graph on page 48, and are somewhat representative of the cost structures of other large Canadian groups. As can be seen in the chart below, the operating costs of Canopy Growth dwarfed those of Trulieve, despite having comparable revenues for the fiscal year 2020. Canopy's costs of asset restructuring and impairments were larger than their

entire revenue for the fiscal year 2020, and several times the size of Trulieve's entire operating costs for the year. The asset impairment and restructuring costs for Canopy and other Canadian operators consisted of losses associated largely with 'property, plant and equipment and intangible asset impairment charges, asset abandonment costs, inventory write downs, contractual and other settlement costs, and employee-related costs and other restructuring costs'. This change of strategy, and language, was common amongst Canadian players in 2020 who now needed to streamline their companies and prove a path towards profitability.

### Operating expenses for fiscal year 2020



Source: Prohibition Partners, Company financial results, Morningstar

As of 2021, the Canadian cannabis companies, such as Aurora and Canopy Growth, are still in a process of realignment whereby the companies are shifting from aggressive expansionist strategies towards the more conservative, targeted approach of the US MSOs. The practical result has been the closure of operations across the globe, with Canadian companies pulling out of operations in Latin America, in Africa and in Europe over the past two years. While becoming more conservative in their global expansion plans, major Canadian firms are also poised to enter the US market, but will wait until federal legislation becomes a reality, which may take several years. For

example, Canopy Growth have inked a deal to acquire MSO Acreage Holdings upon federal legislation, and Cronos have options to purchase 10% of PharmaCann when certain legalisation thresholds are reached.

While Canadian firms are in a process of contracting from the global stage and refocusing on the domestic market, US operators can be expected to eventually move from a targeted domestic approach to an expansionist approach. The beginnings of this were seen in March 2021, with Curaleaf's acquisition of the fully integrated European company EMMAC Life Sciences for US\$286 million.

# Regional Overviews

## NORTH AMERICA

For a full discussion of the market in North America, see Prohibition Partners' **North American Cannabis Report**.

### Federal legislation

Potentially the biggest development in the cannabis industry globally is the prospect of federal descheduling of cannabis in the US. The controlled status of cannabis in the US has hampered the development of the industry in the country, e.g. by leaving industry workers and customers unprotected under federal law, preventing the mobilisation of cannabis across state borders, and causing businesses to operate on an all-cash basis due to the lack of protection for banks servicing cannabis businesses. The federal descheduling of cannabis would have a massive knock-on effect in ending the prohibition of cannabis in other countries, as the US 'stamp of approval' would very likely encourage governments elsewhere to adopt more progressive legislation. It is worth remembering that, as of 2021, the majority of Americans live in a state with at least medical cannabis access, and the majority of citizens have supported federal legalisation of adult-use and medical cannabis. However federal scheduling means that the plant remains illegal at the national level; billions are spent on enforcing unpopular laws and arresting over 800,000 people each year. United States regulators and politicians are currently playing catch-up with the opinions of experts and the general public in providing a system of regulation which protects patients and users while leveraging the economic potential of a fully realised cannabis industry.

At the time of writing there are at least 15 bills which have been filed in the US congress, dealing variously with aspects of the medical, hemp and adult-use cannabis industries at the federal level. Advocates of cannabis reform celebrated the Democratic victories in both the Senate and House in January 2021 with hopes that this would spur federal reform. Many expect that some form of federal descheduling could pass within the next two years. Barriers remain, such as the disconnect between Democrat and Republican goals within legalisation, and the fact that President Biden remains a supporter only of decriminalisation and not full federal legislation. On page 59 we consider three of the most widely discussed bills, which would stand a chance of passing in the near future and which would have a large impact on the US and global industries.

	SAFE Banking Act	MORE Act	CAO Act
<b>Main Sponsor/s</b>	Rep. Ed Perlmutter	Chair of House Judiciary Committee Rep. Jerry Nadler	Majority Senate Leader Rep. Chuck Schumer, Senate Finance Committee Chair Ron Wyden
<b>Main Aims</b>	The Secure and Fair Enforcement (SAFE) Banking Act is a Bill aimed at protecting banks who work with state-legal cannabis businesses.	The MORE Act aims to federally legalise and tax cannabis sales, and provide for extensive social equity and restorative justice spending.	The aims are similar to the MORE Act, but have considerably higher taxation rates, at a maximum of 25% compared to MORE's 8%.
<b>Approvals to date</b>	Has passed through the House five times, most recently in September 2021 as part of a wider Defence Budget Bill.	The Bill passed through the democrat-led House in December 2020.	Bill was first published in July 2021 and has yet to be floored.
<b>Prospects for passing</b>	The equivalent Senate defence Bill does not include banking protection for cannabis, so a dual-chamber committee would need to approve the measures after the Senate passes their version of the Defence Bill. The SAFE Banking Act also faces opposition from proponents of immediate federal rescheduling.	The Bill has support from notorious figures such as Vice President Kamala Harris, and notably Amazon's lobbying team. Co-sponsor Rep. Matt Gaetz and other Republicans presented opposition to the tax and social equity spending measures within the Bill aimed at mending harms caused by the 'War on Drugs'.	The Bill was under a period of public consultation until 1 September 2021 and so the final version is yet to be published. The Bill will need 60 votes, meaning all democrats and ten Republican Senate votes are needed. It is unclear whether this will be achieved and what compromises will need to be made for this to happen.

## EUROPE

For a full discussion of developments in Europe see Prohibition Partner's **European Cannabis Report**.

### Progress of medical legalisation

As there are no states with fully legal adult-use cannabis sales in Europe, the industry is entirely based on medical cannabis, CBD and hemp sales. Medical cannabis legalisation is making gradual progress across the continent. About half of all countries in Europe have legalised cannabis to some extent and these countries vary from very limited special access schemes e.g. in Finland, to liberal medical schemes exemplified by Germany which itself contains the vast majority of legal medical cannabis sales in Europe. During 2021, several countries took steps towards the liberalisation of medical cannabis:

- France began their medical cannabis trials in March 2021 whereby 3,000 patients were granted access for the purposes of testing the safety and validity of medical cannabis access in the country;
- Denmark made their medical cannabis cultivation rules permanent and extended their pilot programme in May 2021;
- Ireland began its new medical cannabis access programme in July 2021 which allows for prescription without ministerial approval.

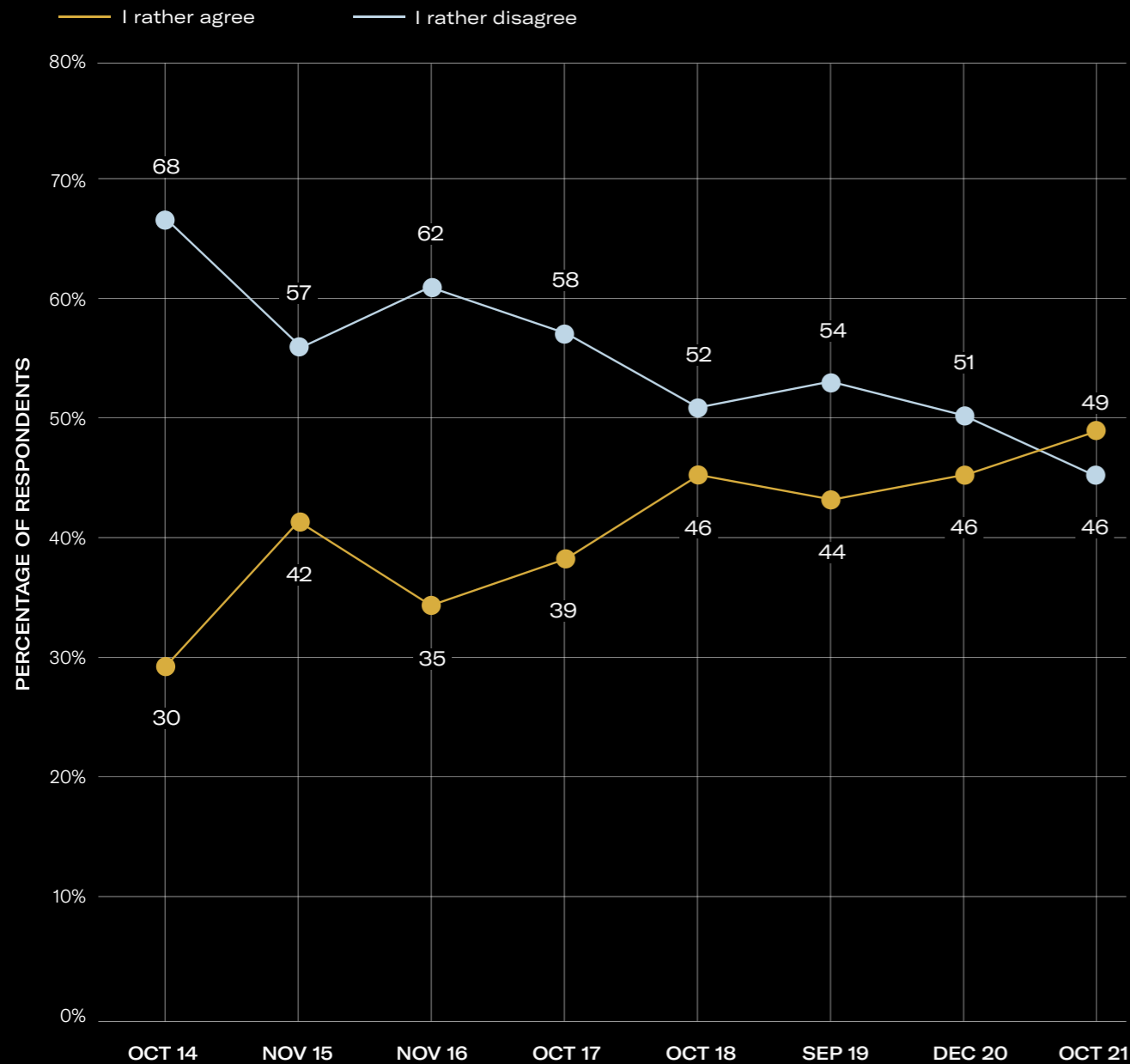
As can be seen above, several European countries are opting to legalise medical cannabis by way of limited pilot programmes, as opposed to the full legalisation which occurred in many states in North America, as well as other European countries such as Germany and Italy.

### Testing the waters with adult-use cannabis

Some European countries are beginning to test the waters with legalisation of adult-use cannabis. The two most advanced of these are the Netherlands and Switzerland (see

section: 'The many faces of adult-use legalisation outside North America'. In addition to this, one of the most exciting developments in Europe is the possibility that Germany will legalise cannabis, at least for adult-use trials, during the next legislative period which would be a hugely important milestone for cannabis in the region. The incoming "traffic light coalition" of the Greens, the Social Democratic Party and the Free Democratic Party have announced an intention to regulate the supply and sale of adult-use cannabis in the country. However the legislative path forward is not entirely clear and support may be needed from the traditionally conservative government house of the Bundesrat. Whether a trial period or full legalisation will be introduced has not yet been announced. It is notable that according to public surveys run by the Deutscher Hanfverband, 2021 marked the first time that more people in Germany would rather change the regulations surrounding adult-use cannabis in the country than maintain them. This will increase the onus on the incoming government to follow through on their coalition agreement pledges.

'Cannabis should be available legally and regulated for adults, for example, through specialist shops as in Canada or the USA.'



Source: Deutscher Hanfverband/ Prohibition Partners

**CBD booming, EU court rulings etc.**

Europe is at the heart of the global explosion of interest in hemp and CBD. As detailed in the section on market sizing, Prohibition Partners estimates that Europe is the leading CBD market in the world, owing to high interest and sales in populous and affluent countries like the UK and Germany. The major development in CBD liberalisation in Europe has been the Kanavape case, which was referred to the European Court of Justice (ECJ) after French Courts attempted to prosecute the leaders of Kanavape for importing CBD products produced legally in the Czech Republic. In November 2020, the ECJ ruled in favour of the defendants Kanavape, on the grounds that the ECJ interprets that CBD is not considered a narcotic under the UN Single Convention on Narcotic Drugs and therefore, the principles of free movement apply for CBD products produced legally in one state and distributed in another. This has encouraged industry stakeholders that the regulations will protect this nascent, billion euro industry. The major remaining hurdle to the development of the industry is the novel food status of CBD under European Commission regulations which means that any CBD produced, intended for ingestion, needs to be approved by the European Food Safety Authority. As of October 2021, just five novel food applications for synthetic CBD have been recognised by the European Commission, meaning all other CBD product applications (at least 70 products) have not met the minimum requirements for the European Commission to pass these along for final approval by the European Food Safety Authority (EFSA). It is likely that some applications will pass in the next year or two, and that approved products will be licensed out from the applicants to other companies as raw CBD materials.

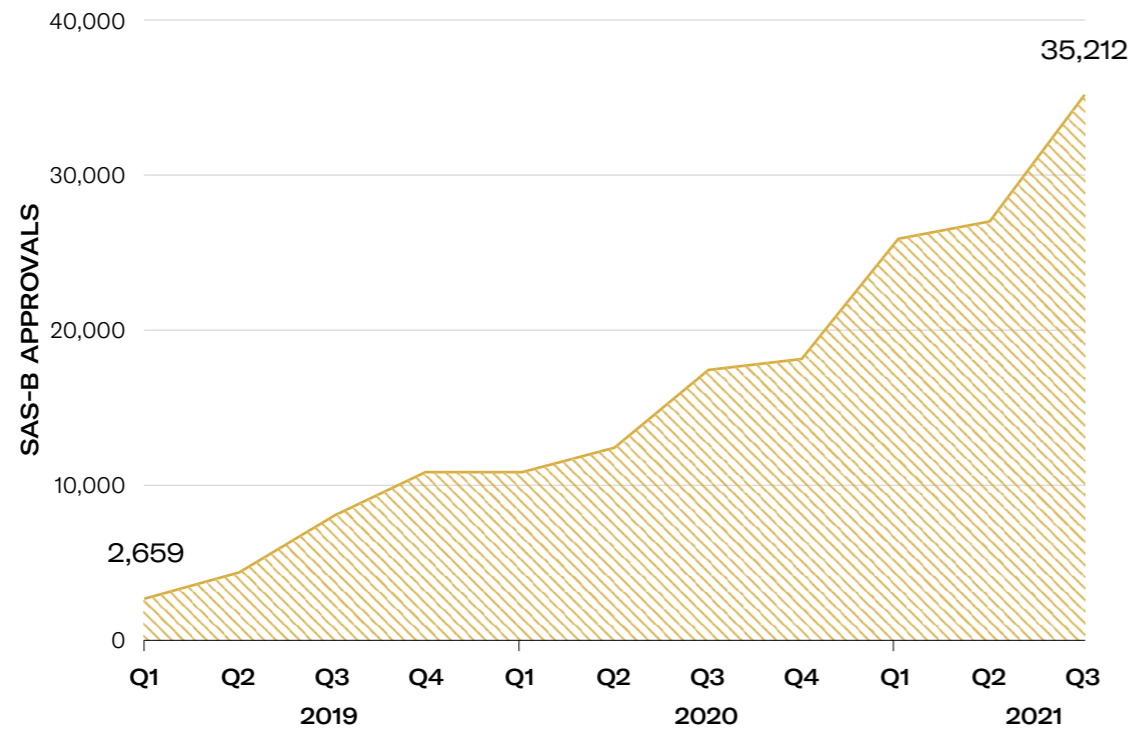
## OCEANIA

### Medical cannabis progressing in Australia

Australia is the most interesting market for cannabis in Oceania, having relatively progressive regulations, as well as constituting about 60% of the population of the continent, and 85% of regional GDP. Medical cannabis

has been legal in Australia for many years, but has seen an explosion in prescriptions and commercial activity since 2018. This was enabled by laws passed in 2016 which allowed for the prescription of medical cannabis as unregistered medicines by any licensed general practitioner.

### Medical cannabis approvals in Australia



Source: Therapeutic Goods Australia, Prohibition Partners

The number of patients obtaining legal medical cannabis in Australia is growing rapidly, with the current number approaching 100,000; the market rivals the largest outside of North America, namely Israel and Germany. The Australian Government operates a liberal policy on medical cannabis regulations, though rules vary throughout the country's provinces. Over 150 medical cannabis products are available in the country, with most formats represented e.g. oils, flowers, edibles etc.. Australia acts as both an importer and

exporter of medical cannabis, with Australian produce available on the shelves across Germany. The national Government updated the country's regulations in June 2021 to reduce the regulatory burden associated with operating in the cannabis sector, consolidating the licensing structure which should allow for an increase in the domestic production and manufacturing of cannabis medicines. This should result in a considerable increase in the supply available for domestic patients as well as for foreign export.





### Adult-use cannabis struggling to gain traction

Pioneering efforts to legalise adult-use cannabis have been made in Oceania in recent years, but they have been impeded by the challenges of anti-cannabis lobbying. In January 2020, the Australian Capital Territory, which contains the Australian capital of Canberra, decriminalised the personal growth and use of small quantities of cannabis, becoming the first territory in the country to do so. However, the new laws faced opposition from the national Government, with the Australian Attorney-General Christian Porter, declaring the laws invalid or ‘to no effect’ under Australian Commonwealth laws. Despite this friction, the Australian Capital Territory (ACT) maintains decriminalisation of personal use of cannabis. Other Australian territories may soon follow, for example in Victoria, a State Parliamentary Enquiry recommended in August 2021, that the government should ‘investigate the impacts of legalising cannabis for adult personal use in Victoria’. This finding was watered down from a much stronger pro-reform recommendation after facing opposition from the commissions’ Labour party members.

In New Zealand, October 2020, the Cannabis Legalisation and Control Bill which would have legalised adult-use cannabis in the country, was voted down in a referendum, by a slim majority of 50.7% ‘no’ vs 48.4% ‘yes’. The referendum was only the second time a country had voted on the legalisation of adult-use cannabis, as Canada and Uruguay legalised via their legislature rather than by referendum (Switzerland voted against legalisation in 2008). Advocates will take a lesson from these events, and approach with caution the idea of pushing for referenda rather than reform via legislatures. It is worth noting that when Canada legalised adult-use cannabis, there was only 35-40% support for the measures, but this doubled through to 2020, reaching 75%<sup>6</sup>. The results of the referendum mean that it is unlikely that we will see full adult-use legalisation in the very near future in Oceania outside of the US territory of Guam who, as of October 2021, are finalising regulations following full legalisation in 2019.

<sup>6</sup> Decorte, T., Lenton, S. and Wilkins, C. eds., 2020. *Legalizing cannabis: experiences, lessons and scenarios*. Routledge.

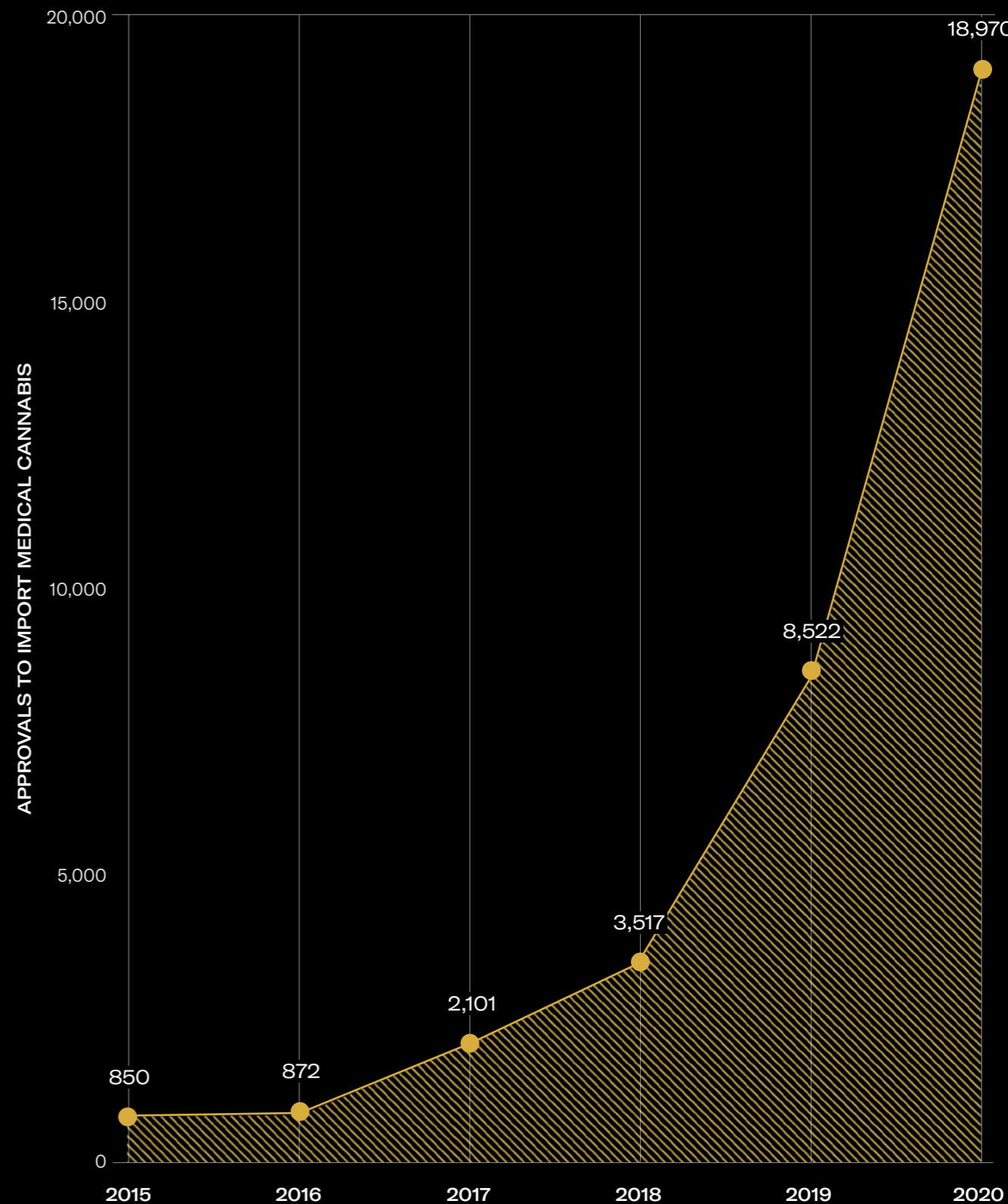
### LATIN AMERICA & THE CARIBBEAN

For a full discussion of the market in LatAm and the Caribbean see Prohibition Partners’ **Latin America and Caribbean Report**.

Latin America and the Caribbean are currently undergoing a process of widespread legalisation of medical and adult-use cannabis. Latin America has taken a unique path to legalisation of cannabis, with many states such as Colombia and Mexico first legalising the prescription of low-THC medications before allowing for high-THC access. Decriminalisation of adult-use cannabis is also widespread across Latin America, including in the largest states of Brazil, Argentina and Mexico, with full adult-use legislation pending in Mexico and sales occurring in Uruguay since 2017. Patient access is improving gradually across the region, with incremental reform allowing for more and more legal access.

While certainly not the only country with an important medical cannabis market in Latin America, Brazil is of particular interest, being the market with the largest patient population in Latin America and an example of a country which is currently updating their medical cannabis regulations frequently. Medical cannabis has been legal in Brazil since the introduction of new laws in 2015. Tight restrictions on the permitted medical indications for prescriptions, the costs of importing medicines as well as the necessity of special approval for each patient, severely hindered the market, and meant that, in practice, mostly only CBD medicines were prescribed. In 2019, the government implemented rules to allow for prescription of CBD products without the need for individual authorisation, and for high THC products for intractable or terminal medical conditions and the rules around prescriptions and imports were again streamlined early in 2020, allowing for the approvals to more than double for the second consecutive year.

## Medical cannabis approvals in Brazil



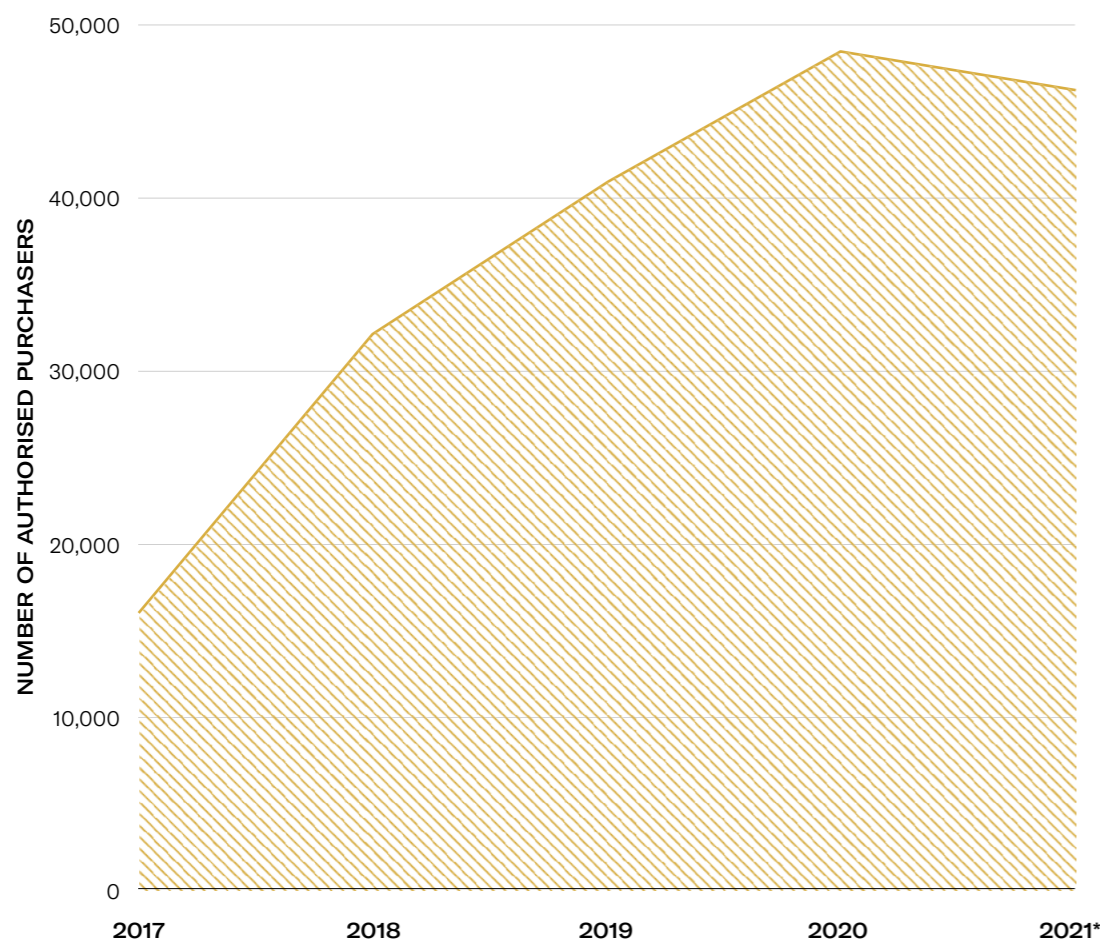
Source: Prohibition Partners, ANVISA

### Adult-use cannabis in Latin America and the Caribbean

LatAm and the Caribbean is home to the oldest adult-use cannabis market in the world in Uruguay, which is now being joined by Mexico. Uruguay is one of the most progressive countries in the world for the regulation of cannabis, having become the first to fully legalise adult-use cannabis in 2013, with the industry

becoming really operational in 2017. This has also helped to make Uruguay the most lucrative market in LatAm and the Caribbean, with about 45,000 people signed up to purchase adult-use cannabis, which is currently dispensed from 22 pharmacies across the country. Recently, the number of registered purchasers has fallen, though it is unclear whether this is related to the COVID-19 lockdowns.

### Uruguay adult-use cannabis



\*2021 up to the end of November 2021.

Prohibition Partners, IRCCA

As described in the section; **'The many faces of Adult-Use Legalisation'**, Mexico will soon have a functioning legal adult-use cannabis market. Developments in Mexico are

being watched closely, as this will be the single largest adult-use cannabis market anywhere in the world, in terms of addressable market.

### AFRICA

Medical cannabis in Africa is making slow progress, with just a handful of countries legalising medical cannabis and most of these having exports as the main objective, rather than the treatment of domestic patients. These countries include; Lesotho, Morocco, Rwanda, South Africa, Zambia and Zimbabwe. As regulations have focused on the production of cannabis for export, there is no substantial patient population, at the time of writing, in any of these countries. Tight restriction in several countries has meant that the arrival of large quantities of quality assured medical cannabis produced in Africa has been taking longer than anticipated by many in the industry. Where licenses have been granted, legal barriers have kept more than a handful of companies from realising exports to the major import markets of Germany and Israel. Amongst the few regions where this has occurred are; Lesotho, South Africa and Uganda. Uganda has exported large quantities of medical cannabis to both Israel and Germany as of late 2021, with the leading company for exports, Industrial Hemp Uganda, being responsible for most, if not all, of these transactions. In South Africa, Felbridge has exported hundreds of kilograms to Switzerland. In Lesotho, MG Health is pioneering the export of medical cannabis to Europe by pairing with local distributor Drapalin Pharmaceuticals and establishing an European Union Good Manufacturing Practice (EU-GMP) compliant pathway for Lesotho-made cannabis to be obtained by patients in Germany.

## ASIA

The only legal medical cannabis markets of current financial importance are Thailand and Israel (see interview with Oren Lebovitch for more information on Israel). In late 2021, the Health Minister of Malaysia announced that licensed cannabis products could be imported and used for medical purposes in the country, but it is unclear when and how this could affect the development of an industry there. Thailand legalised medical cannabis in February 2020, becoming the first country in East Asia to do so. As of November 2020, just under 15,000 medical cannabis patients had been prescribed medical cannabis in the country. The Thai government has high hopes that future development of the medical cannabis market will provide an economic boost to the national GDP. This being the case, the Thai government has taken an exceptionally proactive approach to the regulation and distribution of medical cannabis in the country, producing and dispensing medical cannabis from public institutions and providing large numbers of licenses to doctors, clinics, producers, manufacturers and

distributors involved in medical cannabis. The market is currently very protectionist, allowing only Thai produced products, and ensuring majority Thai ownership of companies involved in medical cannabis. Medical cannabis is currently available via four routes in Thailand:" The Health Minister of Malaysia announced in late 2021 that licensed cannabis products may be imported and used for medical purposes, but it is unclear when and how this will prompt the development of a market in the country.

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**Standardised medical cannabis oil** Standardised 'western' style medical cannabis is available on prescription from doctors, dentists and pharmacists. It can be prescribed for six conditions including neuropathic pain, chemotherapy-induced nausea and vomiting, intractable epilepsy, spasticity from multiple sclerosis, AIDS-related cachexia, and palliative care conditions. It is produced exclusively by the Government Pharmaceutical Organisation and Chaophraya Abhaibhubejhr Hospital. These products can only come in three formats; high THC, low THC and balanced CBD:THC products.

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**Traditional Thai medicine formulations** Medical cannabis can be prescribed in 16 different traditional Thai formulations approved by the Department of Thai Traditional and Alternative Medicine. These can be prescribed by traditional healers for a variety of conditions including; insomnia, stroke, muscle spasm, poor appetite and chronic pain.

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**Folk medicine formulations** The regulations regarding folk healers and their use of medical cannabis have not been laid out clearly to date. Despite this, many patients still illegally obtain medical cannabis infused products from these healers.

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**Home cultivation** Since March 2021, Thai citizens can grow six cannabis plants in their homes for use and for selling to public health institutions to supplement domestic incomes.

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## Medical cannabis may be led by traditional medicine in South and East Asia.

In several countries, medical cannabis is already used in various formats as a traditional medicine. In Thailand, 419 of the 758 clinics registered to provide cannabis were traditional clinics rather than general medical practices. In India, the Central Drugs Standard Control Organisation clarified in 2019, that medical cannabis can be legally produced and distributed as traditional bhang formulations by Ayurvedic healers. Also in Sri Lanka, Ayurvedic healers can provide medical cannabis formulations to their patients under The Ayurveda Act of 1961. Several countries are currently considering joining Thailand in regulating the domestic use and distribution of medical cannabis. In February 2021, the Sri Lankan President was quoted in local media as saying 'a policy-level decision has to be taken as far as relaxing the laws pertaining to cannabis in Sri Lanka is concerned'. Similarly in Malaysia in October 2021, the Home Minister indicated the country would examine the potential for legalising medical cannabis.

## Pharmaceutical cannabis making inroads

While old taboos around cannabis remain strong in most countries in Asia, several high-income countries are adopting the use of pharmaceutical cannabis. For example, in South Korea, the prescription of pharmaceutical cannabis products was made legal in March 2019. Since then, hundreds of patients have obtained such products, with Epidiolex® being the most commonly prescribed. In July 2021, the Korean Institute of Science reported that they had harvested the country's first legal crop of hemp which they are using to develop their own CBD-based medications for epilepsy. This is being backed by large pharmaceutical groups such as Kolmar Korea. As another example, in May 2021, it was announced that Japan would be opening up the use of pharmaceutical cannabinoids as part of the Cannabis Control Law, expected to be published in 2022. This follows the approval of the use of pharmaceuticals like Epidiolex® for clinical trials in Japan in recent years. Even in Singapore which maintains a death penalty for cannabis possession,

a limited number of patients have been granted exceptional approval for the use of Epidiolex® against epilepsy, and the National Research Foundation is reported to be investigating the production of novel synthetic cannabinoids. It is likely that pharmaceutical use of cannabinoids will develop faster in these high-income regions of South-East Asia than any medical or adult-use products.

Legalisation will happen. It will be regionally different. Many countries will be involved. The real winners may be yet to emerge. The models of adult-use are not set in stone. The final forms of medical cannabis are not set in stone.

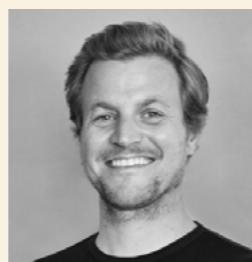
# Conclusion

As of late 2021, the full legalisation of cannabis seems an inevitability for most countries across the Americas and Europe, with a handful of countries in Africa and Asia-Pacific sure to follow suit. It is now the job of regulators to catch up with the advice of health professionals, economists, patients and public opinion that cannabis and CBD needs to be legalised and regulated for the benefit of all. In many cases, industry has had to take the lead in the construction of harmonised regulation and they will undoubtedly play a role in the formulation of international rules governing a safe and effective supply chain.

The cannabis markets are growing at a pace not rivalled by any other Consumer Packaged Goods (CPG) industry, as the multi-billion dollar black market for cannabis and CBD gradually converts to legal regulated sales. As more and more countries liberalise cannabis, we are seeing the beginnings of a global industry, with production coming online in the cheaper and more climatically suited regions on and below the equator. While large Canadian groups previously were solely at the helm of the cannabis industry, the US MSOs are now the biggest and most profitable groups, and whether the Canadian giants will catch up, may largely depend on the pace of legalisation in the international markets. It is all very much still to play for in the cannabis industry, and the real winners of the market may be yet to emerge, the formats which will be most popular are not yet set in stone, the regions which dominate production and those which are consuming the most

are yet to be set in stone. As such, Prohibition Partners continues to monitor the development of the markets and provide cutting-edge intelligence to all stakeholders, to optimally inform strategy when engaging with the industry at this most exciting time.

# Expert Interviews



**Philip Schetter**  
CEO and Managing Director  
Cantourage

### What exactly does Cantourage do?

Cantourage is a Berlin-based cannabis company that has already established itself as one of the leading European companies in the medical cannabis space. An important feature of our business is our fast-track access platform that we launched in June 2021. This enables producers from across the world to get their product into the growing and profitable European market more quickly and cheaply, without having to take on the complex and lengthy regulatory processes themselves. Cantourage takes care of all the necessary manufacturing steps to transform cannabis into a pharmaceutical product, including all the quality management processes, warehousing and logistics. We also consult our partners in Sales & Marketing – i.e., on how to best position and market their products in the different EU medical markets.

The platform has already enabled us to introduce the first Jamaican, Uruguayan and South African products into Germany. Cantourage can also distribute products throughout the EU and UK, with more cultivators from all over the world coming on board the platform all the time.

This platform is key to offering a variety of products in all relevant market segments: dried flowers, extracts, Dronabinol and pharmaceutical-grade Cannabidiol.

### Medical cannabis exports have been dominated by older players in Canada and the Netherlands to date, do you see the balance of production shifting to other regions and, if so, on what timescale?

Yes, we do. There has been a market oligopoly in Europe that has stifled real competition and prevented much innovation in the past few years, but this is changing. Our platform is opening Europe up to growers, wholesalers and pharma companies in a way that allows them to focus on what they do best and not have to try to compete with the established players. This is our way of disrupting the dominant players. In the less than six months since we launched our platform, we have introduced cannabis products to Europe from growers in the Caribbean, South America and Africa – as well as new players from Europe.

### Do you see much of a decline in the wholesale prices of cannabis as more producers come online?

Absolutely. One of Cantourage's key aims is to positively impact the growing European medical cannabis market by changing the industry. Through our partnerships with cultivators and pharma companies we're adding more choice and offering a broader range of innovative and patient-friendly medical cannabis solutions. Since we implemented this approach we've seen prices drop significantly in Germany and we fully believe that more players and more choice will continue to positively impact prices. A market oligopoly has been in place in Europe and the impact of

increased choice and competition is breaking that up and pushing down prices, which is good for patients.

### To what extent do you think European markets will be open to imports of medical cannabis or adult-use cannabis in the future, as opposed to using domestic produce, as is the case in the Swiss and Dutch adult-use cannabis trials?

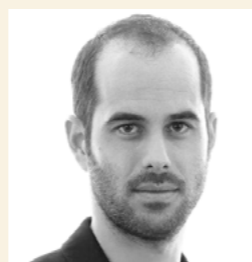
We are finding the European markets very open to medical cannabis from new regions. We've been importing high-quality and innovative strains into the EU since June 2021 which are totally new to the region and they have been exceptionally popular. In fact, we experienced such high demand for the Jamaican Lumir product that we launched in August that we introduced another Jamaican dried flower product - HummingBud – to the market just four weeks later. Since then we have also introduced two new products from different parts of Africa and have various new import plans on the horizon.

As regards recreational use of cannabis, Cantourage strongly believes that this will be legalised in many European countries in the coming years, albeit through a highly regulated framework comparable to that of the medicinal market segment. We assume that, in this scenario, there would be a similarly high demand for international product imports from all over the world to what we've seen for medical cannabis.

### What are you most looking forward to in terms of international developments in the cannabis world?

As a company that set out to disrupt the European market and to open the region to more varieties of high-quality strains from all over the world, we're very excited about the prospect of being able to introduce an almost limitless selection of innovation cannabis products into the EU and UK. This will mean better choice and better prices for patients throughout the region. We're also looking forward to more education about cannabis and better understanding of the sector. At the moment it isn't sufficiently understood and the market potential is still untapped. We're excited about Europe continuing to go in the right direction, with Cantourage hopefully being able to accelerate that.

## Expert Interviews



**Oren Lebovitch**

*Editor of The Israeli Cannabis Magazine*

### How do you feel about medical cannabis patient access in Israel at the moment?

Access to medical cannabis has improved significantly in the three years since the reform was implemented in Israel in April 2019. As part of the reform, Israel switched from a 'socialist' model in which patients pay a fixed and pretty low monthly amount, 370-470 NIS regardless of the monthly amount of cannabis that the doctor prescribes for them under license. In October 2012 there were about 8,000 patients here and in October 2018, just before the implementation of the reform that adopted the 'free market' model, the number was about 30,000 - that is, a rather slow increase of a little over 3,000 patients a year. Since October 2018 in just three years in the new model, the number currently stands at more than 105,000, at a rate that reached about 3,000 patients a month last year. The increasing accessibility to medical cannabis is a result of the certification of more than 100 doctors to issue licenses and prescriptions themselves, without the need for individual approval of the medical cannabis unit as was the case in the old model and also of course public openness to cannabis use in general. Whereas in the past there were eight companies with two to five strains available from each, when the patient had to get the cannabis from only one company, now there are more than 30 Israeli farms and quite a few farms abroad - mainly in Canada, but also in Portugal and Uruguay, which together supply about 200 different varieties of flowers, not including oil products.

### Israel recently changed their laws around imports of medical cannabis, has this impacted the market or patient accessibility in any way?

During the first half of 2021, the import of medical cannabis from abroad was almost completely stopped, due to the tightening of procedures set by the Ministry of Health after more than 15 tons were imported to Israel in about a year (first year of importation, 2020), some of which were not always at a high level. This fact, along with growing protests from Israeli growers who even approached the High Court in this matter, led the Medical Cannabis Unit in the Ministry of Health to establish two new procedures: first, only facilities with EU-GMP standards are allowed to import from, and second, all goods from abroad must undergo laboratory tests to confirm that there are not hundreds of types of pesticides (in fact all European and American pharmacopoeia). The importers ran all over the world in search of such laboratories and at the same time Israeli laboratories worked to obtain these kits, and only after a few months the solution was found and imports returned to normal. As a result, the local growers filed another petition with the High Court. Did the non-import period affect patients? Certainly. The range of products was significantly reduced, the quality was partly not up to the standard of better quality goods coming from abroad, the local growers found it difficult to reach the high THC amounts (up to 24% as allowed in Israel) and this provoked outrage among patients.

### You reported last year that Israel became the largest importer of medical cannabis in the world, do you have an idea how these figures have developed?

Definitely, in the whole of 2020 more than 15 tons were imported to Israel and in 2021 from January to June at least another 5 tons arrived. In the second half of 2021, for which we are still waiting for official data, I can determine from a check I performed, that it is expected to be about 10 tons more, maybe even more, meaning a number that will reach about 15-20 tons also in 2021 and this despite the stop that was at the beginning of the year, that is, the amount in 2021 will be at least the same as in 2020 and even higher. That means that in any case, the import-rate will increase compared to 2020. Up to about 75% of the importation is from Canada and the rest mainly from Portugal and Uruguay.

### Do you see imports holding much of the market share in Israel moving forward, considering the domestic production?

The products from import receive a relatively high price tag in the market, from the highest level, up to about NIS 300 for a 10 gram package, while the general average market price is about NIS 240. The products that arrive from abroad these days and will arrive in the coming weeks until the end of the year and next year, are already expected to be of a higher quality, 'craft cannabis' or 'top shelf' if you will, which is estimated to reach up to 350 NIS per 10 grams and more. Some

estimate that in 2022 the price of some of the luxury products will reach up to NIS 400 and above. This fact arouses immense anger among the patients who recently even announced a boycott of products over 300 NIS in an attempt to stop this type of pricing. On the other hand, the importers claim that this is an unjustified boycott because, along with the increase in prices in the upper category, there is a decrease in prices in lower quality categories and the prices are spread over a very broad spectrum, starting from about NIS 100 per 10 grams, through NIS 200 and beyond. According to a check I performed recently, I saw that there are varieties/strains that come to us from Canada for example, and are sold here for almost double the price in which they are sold in Canada. Not all, but definitely some of them. Currently, the rate of consumption of medical cannabis in Israel is about 30-35 tons in 2021, which represents sales worth close to 900 million NIS. It can be estimated that about 50% of consumption in Israel is from local goods and about 50% from abroad, perhaps with a small advantage abroad, of course depending on the time of year and the kind and quality of strains. Recently, there has also been an improvement in the quality of local cultivation and some Israeli varieties do not fall short of those coming from abroad.

### How are the developments towards the legalisation of adult-use cannabis developing in Israel?

In terms of legalisation in Israel, it is getting stuck due to an ongoing political crisis that has been going on for more than two years now. In November 2020, an inter-ministerial committee submitted a very comprehensive official report, perhaps the most comprehensive ever conducted on the subject, surely in Israel, when, among others, representatives of all government ministries examined the various models of regulations of recreational markets from Canada, the United States and Uruguay. The recommendation in the summary of the report submitted to the Israeli government at the time was unequivocal: legalisation as a whole - yes, decriminalisation by itself without regulation - no. That is, the Canadian model. This progress was due, among other things, to a petition to the High Court that we submitted on the subject, demanding that the Supreme Court rule that penalising the use of cannabis with criminal records is contrary to the Basic Law of Human Dignity and Liberty and violates individual freedom, as decided in high courts in about 10 countries around the world in the last decades. Sadly, the judges ruled that the government should be given time to do it itself without interruption and indeed the government three days later already submitted a government bill on the subject. The bill was approved on preliminary reading and stood before approval on first reading (followed by second and third readings for final approval) but the government fell sooner than expected. In the recent elections most of the parties, especially the centre-left which is considered more liberal, promised to continue to promote the issue but in practice the composition of the government formed depends on one party representing Arab society and subject to Islamic law. In fact, the liberal bloc that governs the State of Israel these days cannot at this stage implement a move to legalise cannabis because of these Islamic laws, crazy as it sounds. While in the previous government a preliminary legalisation bill was approved, in the current government even a decriminalisation-only bill that was put to a vote fell due to opposition from that Arab party. At the moment it seems that this is not happening, but who knows what will happen.

### Are there any other interesting developments in the Israeli cannabis market you would like to mention?

In terms of the legal situation in the field of recreational use of cannabis in Israel today, in the previous government if you asked me I would estimate that it could happen within two years, in fact, the government held an official press conference at the end of 2020 and promised to do so 'within a year'. Even in the last election, some members of the current new government promised to do so 'within a year', but given the circumstances, it is unlikely to happen in 2022 either. Maybe in 2023, maybe in 2024, while some argue that not even in 2025. It is very difficult to know although it should be noted that in any case in April 2022 the current model of the law, that was set in April 2019 and expires after three years, is a kind of model of semi-decriminalisation. While until then any use of cannabis starting from the second time would have led to a criminal record, in this current temporary model it has been determined that only from the third or fourth time will this happen, but also under very harsh conditions. In principle, from about 2,000 police files opened a month on self-use of cannabis in the years before the amendment, we decreased to about 1,000, but on the other hand the remaining 1,000 files turned into about 2,000 rather high fines of 1,000 or 2,000 NIS and even more. In practice, cannabis laws in Israel today that are not in the medical field are without a doubt one of the strictest in the western world, and this is despite the fact that the percentage of use in Israel is considered one of the highest in the world. A survey conducted by the Government Anti-Drug Authority in 2016 found that the figure stands at about 27% of adult Israelis who indicated at least one cannabis use in the past year. No similar survey has been conducted since. In the near future, what is expected to be approved is the permitting of marketing of CBD products in Israel, which, unlike most western countries, is still considered an illegal drug. There may also be some changes in the field of regulation in the medical market where the numbers are set to continue to climb.

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