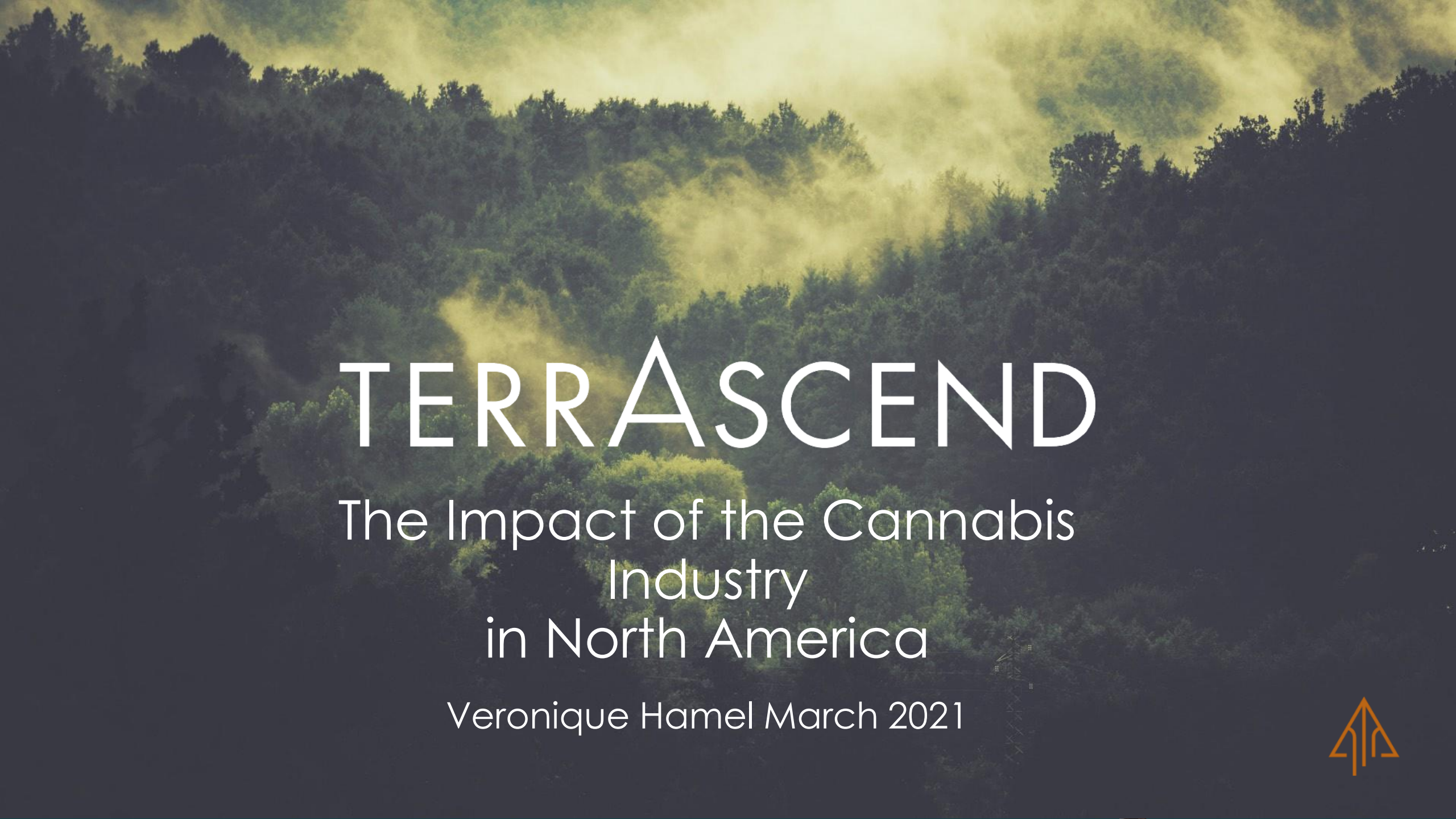

TERRASCEND
The Impact of the Cannabis Industry in North America
Veronique Hamel March 2021

# Key Areas

- Cannabis and Formats
- Timeline of Cannabis in Canada
- Regulations and Legalities
- Industry Growth
- Societal Impacts
- TerrAscend Overview

## What is Cannabis?

- Cannabis is derived from a plant (primarily Sativa/Indica) and is used for its psychoactive and therapeutic effects.
- Mixture of hundred of chemical substances ( 100+ known as cannabinoids).Cannabinoids bind to cell receptors in the brain & body
- It comes in various forms, such as dried flower, hash, extracts like oils, and edibles (e.g. baked goods, butter, candies, beverages).
- Δ9-tetrahydrocannabinol (THC) and cannabidiol (CBD) are the 2 main cannabinoids in cannabis.

**Dried flower**

**Hash**

**Extracts**

**Edible brownie**

RxTx [Internet]. Ottawa (ON): Canadian Pharmacists Association; c2018. CPS online: Cannabis; [cited 2019/03/04]. Available from: www.myrxtx.ca. Subscription required.

## What is Cannabis?

- THC = most researched cannabinoid; responsible for the way your brain and body respond to cannabis. Therapeutic effects are researched.
- CBD= unlike THC does not produce High or intoxication. When the amount of CBD in cannabis  is similar or higher than THC it may block or lower the effects of THC on the mind. Studied for therapeutic effects.
- Terpenes = chemicals stored in the trichomes of the plant and give distinctive smell

**Dried flower**

**Hash**

**Extracts**

**Edible brownie**

RxTx [Internet]. Ottawa (ON): Canadian Pharmacists Association; c2018. CPS online: Cannabis; [cited 2019/03/04]. Available from: www.myrxtx.ca. Subscription required.

# What you smell, what you experience = How you feel

- Terpenes are responsible for the aromas and flavors found in cannabis, as well as in many other plants, foods and herbs.
- Terpenes are believed to play a role in how cannabis makes you feel.

Limonene

a-Pinene

Myrcene

Linalool

b-Caryophyllene

Humulene

Terpineol

Terpinolene

Russo, E.B. (2011). Taming THC: Potential Cannabis Synergy and Phytocannabinoid-Terpenoid Entourage Effects. British Journal of Pharmacology, 163, 1344-1364.

# Cannabis use

- Cannabis is known to have multiple use with stress and pain management leading the way
- Medical use: pain management, Anticonvulsant, antinausea & antiemetic effects. Muscle anti-spasticity etc may help avoid prescription drugs.
- Adult recreational: relaxation, wellness, stress management, fun, focus, performance, pain, energy.

**Dried flower**

**Hash**

**Extracts**

**Edible brownie**

RxTx [Internet]. Ottawa (ON): Canadian Pharmacists Association; c2018. CPS online: Cannabis; [cited 2019/03/04]. Available from: www.myrxtx.ca. Subscription required.

# Cannabis formats and consumption methods: cannabinoids bio availability 10% & insoluble in water so difficult to dose & include in delivery systems

| | Inhalation (dried flower, vapes) | Ingestion (oil, capsules, edibles) | Sublingual (sprays, lozenges) | Topical (lotion, patches, ointments) | Rectal (suppositories) |
|---|---|---|---|---|---|
| **Onset** | Fast onset, within a few minutes | Within 1-2 hours | 15-20 minutes | Varies | 15-20 minutes |
| **Duration** | 1-2 hours | 4-6 hours | 3-4 hours | Varies | 3-4 hours |

Huestis, M.A. (2007). Human Cannabinoid Pharmacokinetics. Chem Biodivers, 4(8), 1770-1804.
Spiess Y, Henn V, Elsohly M, et al. The effect of orally and rectally administered delta 9-tetrahydrocannabinol on spasticity: a pilot study with 2 patients. PubMed. 1996;34(10):446-52. October, 1996. March 5, 2019.

# Retail milestones two years after legal cannabis in Canada

**October 2018**
The Cannabis Act took effect on October 17th and 100+ government and private stores open

**April 2019**
First retail stores open in Ontario, and the first private store opens in Yukon

**January 2020**
Ontario abandons lottery system and begins new open market

**June 2020**
Monthly cannabis retail sales hit $200 million

**2021**
Rapid grow with new retail locations continuing to open

**June 2018**
Bill C-45 (The Cannabis Act) passed in Senate

**January 2019**
First 25 ON cannabis retail licenses granted through lottery system

**October 2019**
Cannabis 2.0 products (edibles, extracts, topicals) become legal after one year of legalization

**April 2020**
Cannabis retail deemed essential during Covid-19

**July 2020**
Canada opens 1000th store, less than 2 years after legalization

https://www.covasoftware.com/blog/infographic-canada-cannabis-legalization-milestones

# Cannabis regulations constantly evolving in Canada

**2001**
Canada legalized medical cannabis via the Marihuana for Medical Access Regulations (MMAR)

**2016**
Access to Cannabis for Medical Purposes Regulations (ACMPR)

**2019**
Federal government announced new regulations for Cannabis 2.0 products

**1923**
Prohibition began in Canada

**2013**
MMAR is revised to Marihuana for Medical Purposes Regulations (MMPR)

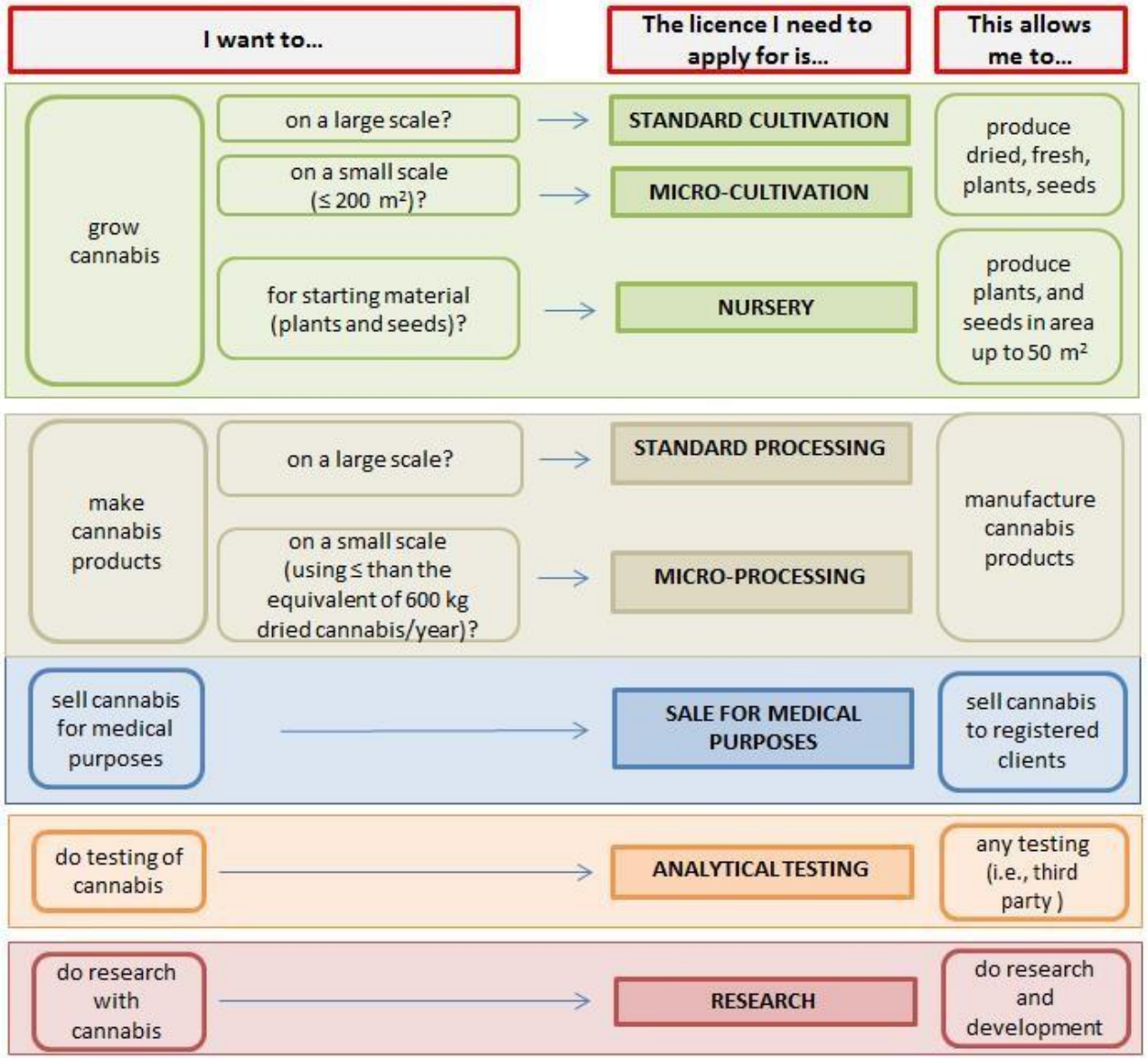
**2018**
The Cannabis Act took effect on October 17th, legalizing adult-use cannabis across Canada.

**2021**
Industry continues to grow rapidly with new retail locations opening

https://www.covasoftware.com/blog/infographic-canada-cannabis-legalization-milestones
https://www.thegrowthop.com/cannabis-culture/how-did-canada-get-here-a-timeline-of-cannabis-and-hemp-from-prohibition-to-legalization
https://lift.co/magazine/canadas-path-from-prohibition-a-cannabis-timeline

# Cannabis Licensing in Canada

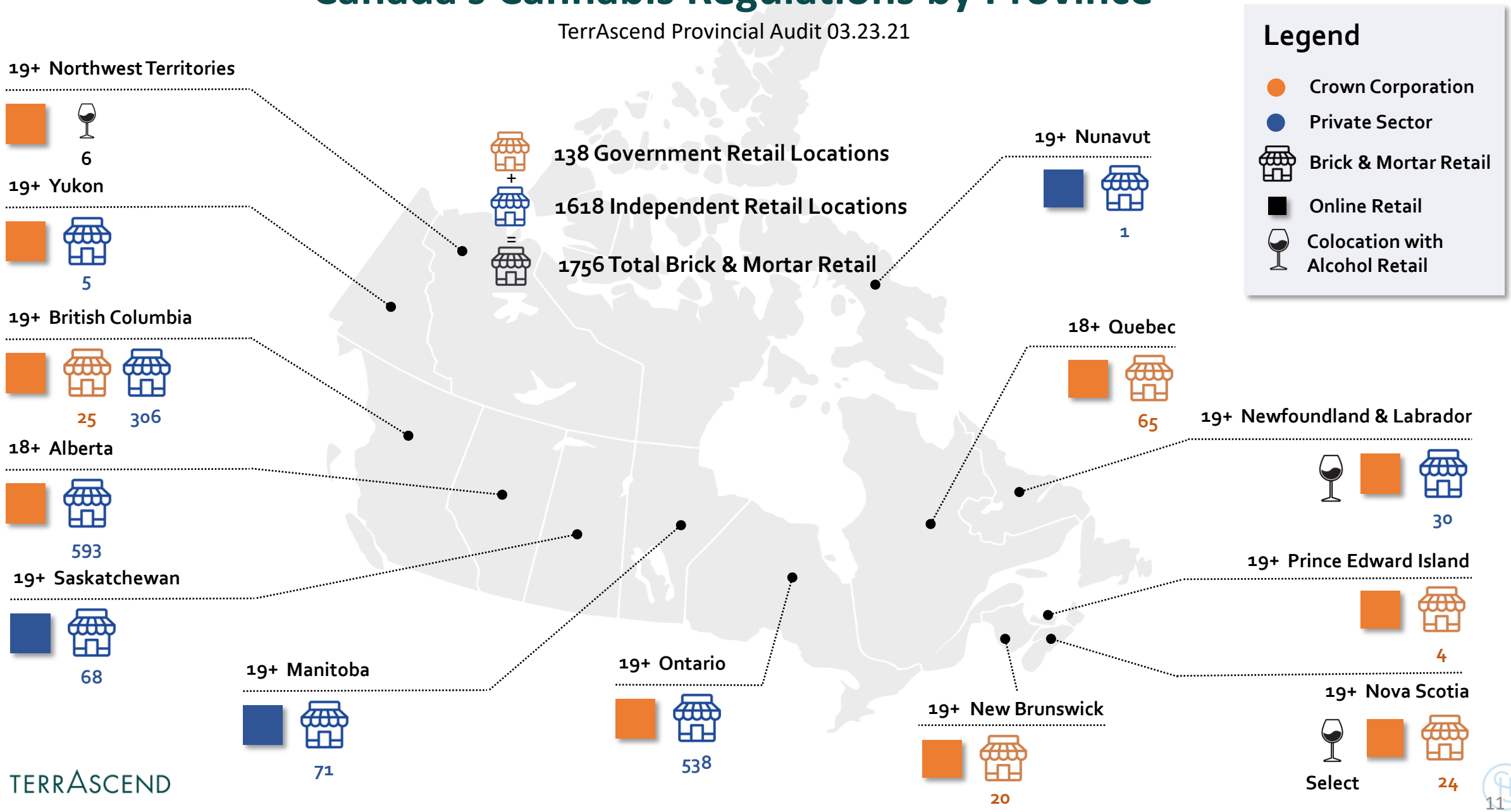
- The Cannabis Act provides the framework for legal cannabis and how it's regulated.
- Various cannabis classes and subclasses of licenses.
  - Cultivation, processing, analytical testing, sale, research, retail etc.
- Licence holders held to strict requirements.




https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/industry-licensees-applicants/licensing-summary/guide.html#a5.2

# Canada's Cannabis Regulations by Province

TerrAscend Provincial Audit 03.23.21

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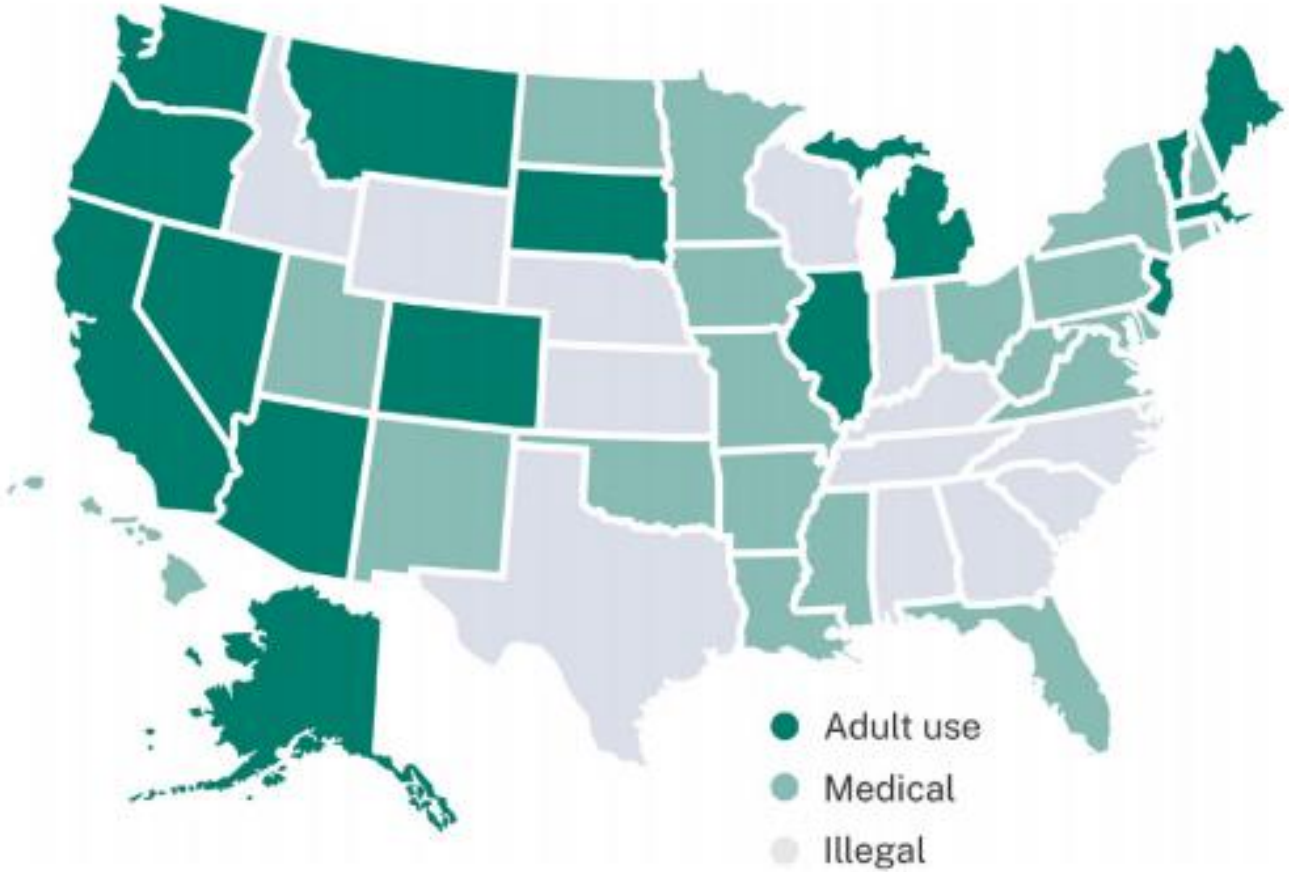
# Ontario Municipalities prohibiting or allowing cannabis retail

- Ontario communities have the power to decide whether they would allow cannabis retail.
- Some of the largest municipalities around Toronto have opted out, including, Mississauga, Markham, Vaughan, Richmond Hill, Oakville, and Whitby.
- “Wait-and-see” approach.

https://www.agco.ca/cannabis/list-ontario-municipalities-prohibiting-or-allowing-cannabis-retail-stores?title_field_value=&field_opt_in_out_value_i18n=2

# Cannabis State by State

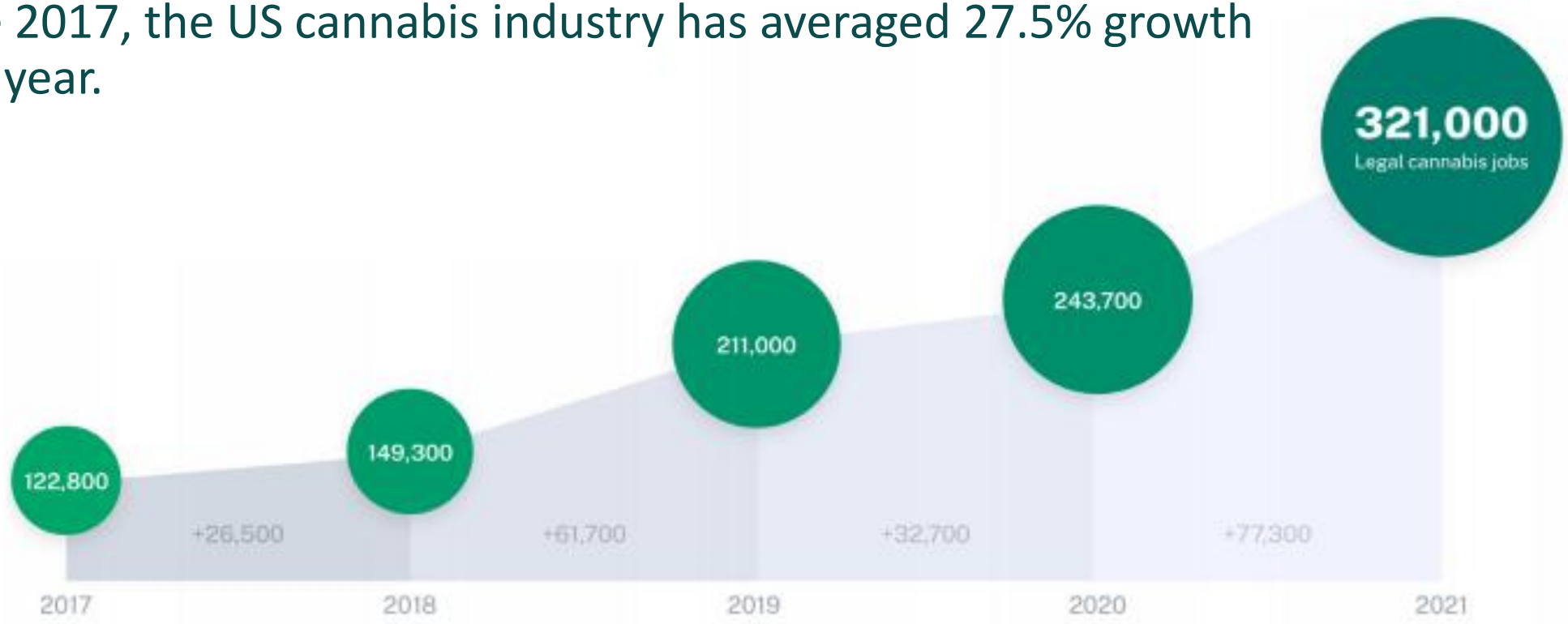



- Cannabis as a “Schedule I” controlled substance.
- A total of 36 states, District of Columbia, Guam, Puerto Rico and U.S. Virgin Islands have approved comprehensive, publicly available medical or adult-use cannabis programs.
- 2018 Farm Bill removed hemp derived CBD from the controlled substance list.

Image: Leafly 2021
https://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx
https://www.fda.gov/news-events/public-health-focus/fda-regulation-cannabis-and-cannabis-derived-products-including-cannabidiol-cbd

# Cannabis industry among the fasting-growing in North America

- Legal cannabis now supports 321,000 full-time American jobs.
- Since 2017, the US cannabis industry has averaged 27.5% growth each year.



## Cannabis employment continues to rise in Canada

- In 2019 StatsCan reported 9,200 people working in the Canadian cannabis sector.
  - Up from 2,630 in 2018 and 1,438 in 2017
  - Jobs include retail, cultivation, processing, packaging, marketing, sales, quality assurance, R&D, security, engineering, shipping and more!
- Economic development in rural areas since legalization
- Intersection with other industries
  - Printing, shipping, packaging, industrial equipment, engineering, testing labs, real estate, construction, etc.

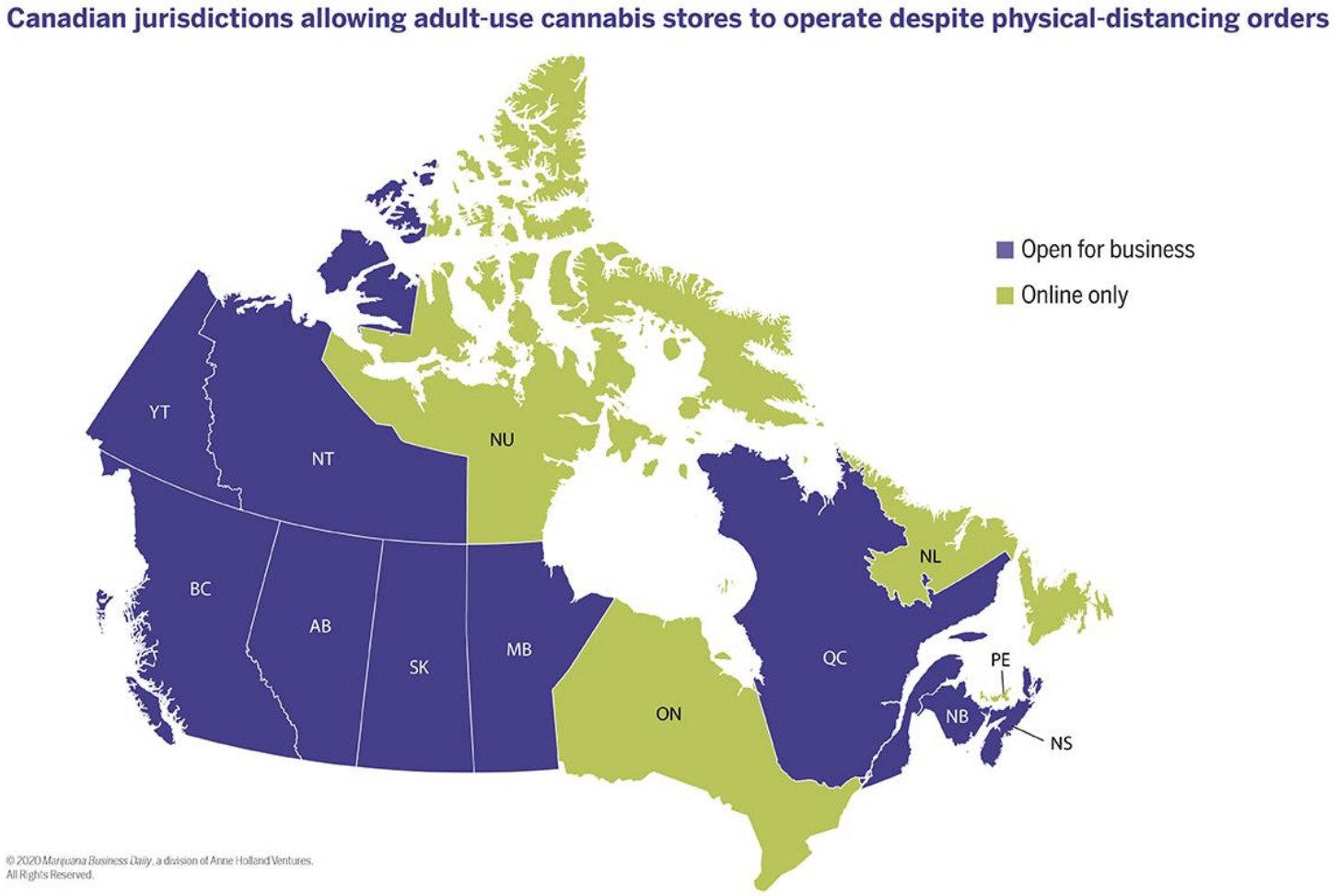
https://www.bnnbloomberg.ca/canadian-pot-jobs-revenue-have-soared-since-legalization-statscan-1.1305436
https://www.cbc.ca/news/canada/new-brunswick/new-brunswick-cannabis-economy-1.4867939

# Cannabis deemed “essential” amid the Covid-19 pandemic

- States with legal cannabis markets deemed cannabis businesses as essential, putting cannabis in the same category as pharmacies, hospitals, and other legitimate medicine sources.

2021 Marijuana Business Daily
https://mjbizdaily.com/how-essential-transformed-the-us-marijuana-industry-amid-the-covid-19-pandemic/

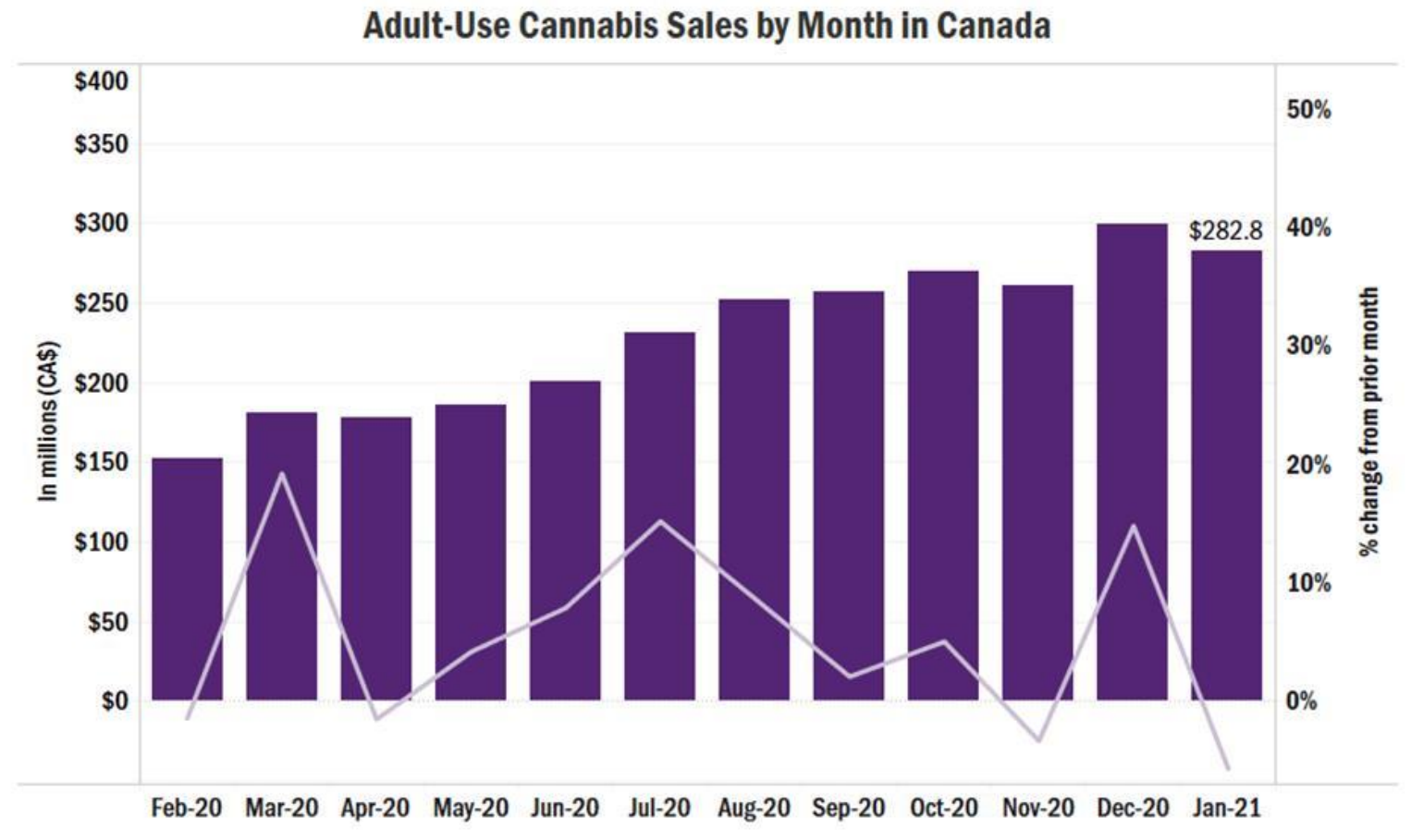
# Canadian cannabis businesses open during COVID-19 pandemic




- Each provincial government has taken their own approach to business closures during the pandemic, with the vast majority allowing recreational cannabis stores to stay open.
- Licensed Producers allowed to continue to manufacture.

2020 Marijuana Business Daily
https://mjbizdaily.com/map-of-marijuana-businesses-in-canada-open-during-coronavirus/

# Sales continue to grow in Canada despite Covid




- Canadians bought $2.6B of cannabis in 2020 – up 120% from 2019.
- Stores continue to open across Canada - total of 1756 Brick & Mortar retail as of March 2021.

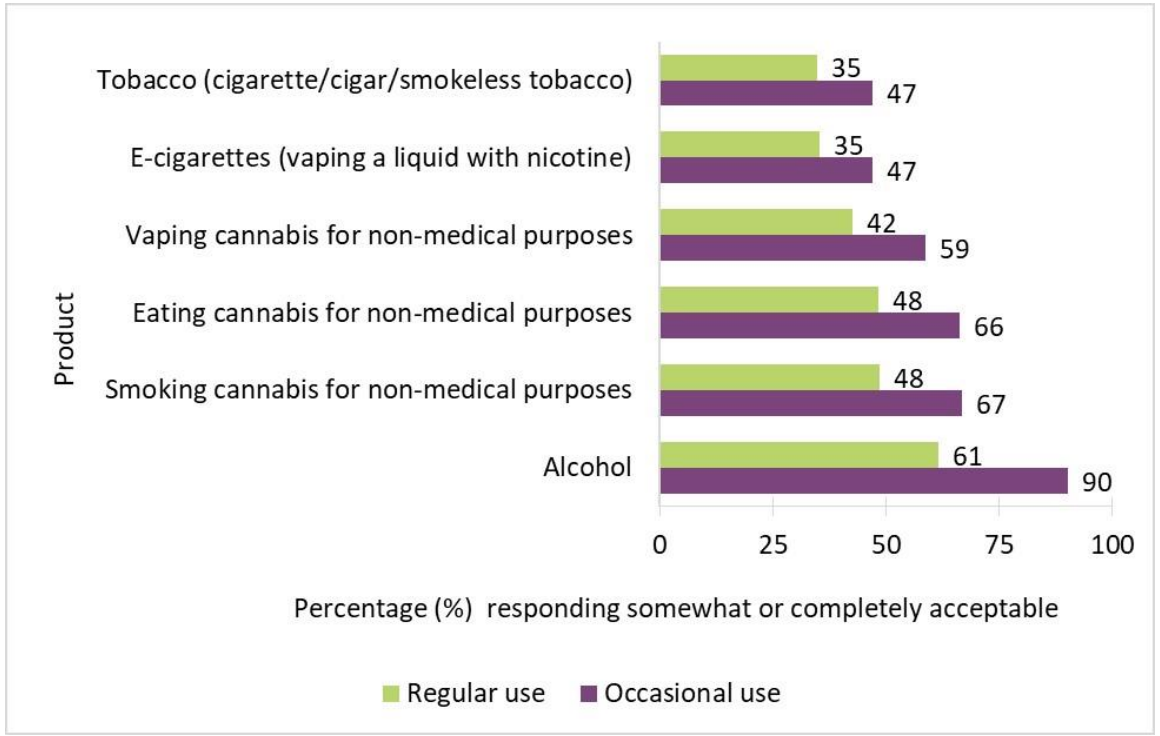
2021 Statistics Canada
https://mjbizdaily.com/ontario-alberta-lead-canadian-cannabis-sales-lower-in-january/?cn-reloaded=1
https://www.bnnbloomberg.ca/cannabis-canada-weekly-canadians-doubled-pot-purchases-to-2-6b-in-lockdown-filled-2020-1.1566114

## Cannabis excise duty contributes to economic growth

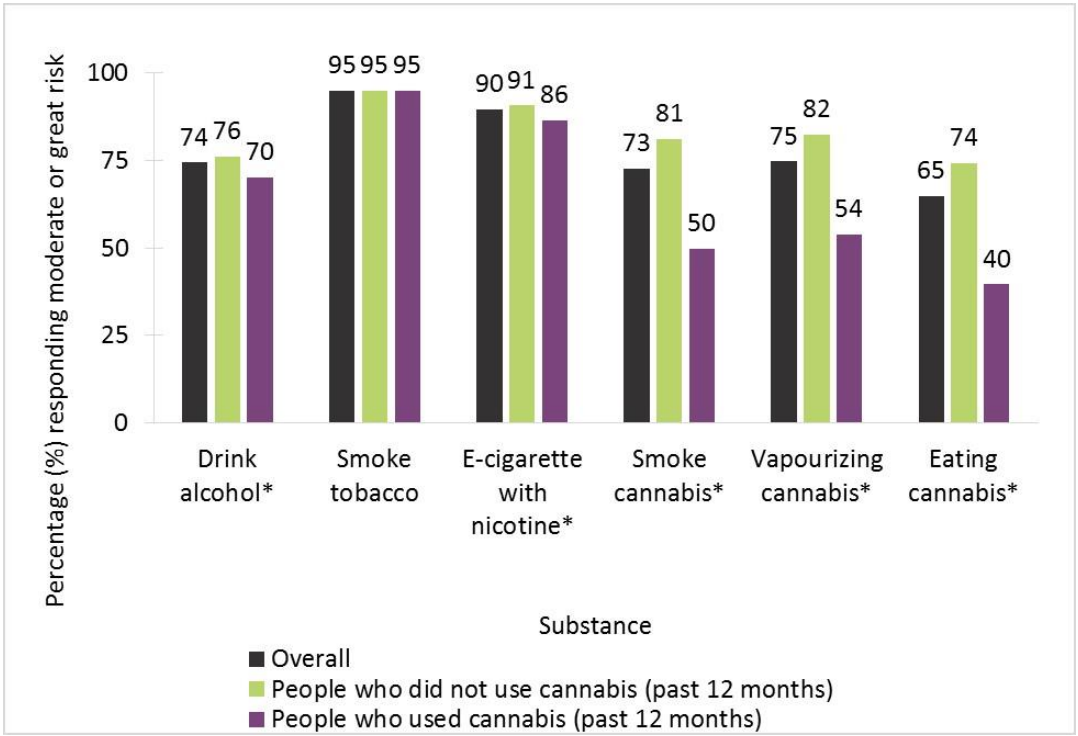
- Legal cannabis contributes to the economy also through sales and excise tax
  - F2020 total Excise duty paid was $4.2M, and Budget 2021 projects $7.7M Excise duty remittance to the CRA
- Rates vary by province
  - Primary Markets at the higher end of spectrum *(for dried flower - AB 26%, BC 20%, ON 21%)*, while the Secondary Markets have lower rates *(NB 12%, NS 16%, PE 15%, MB 4%)*
  - *AB, SK and ON also charge "Additional Cannabis duty" @ 16.8%, 6.5% and 3.9% respectively*
- Rates vary by category (API gm/ THC dependent); Cannabis 1.0 (Dried flower, Pre-rolls) average around 20%, and Cannabis 2.0 (Edibles, Concentrates) average ~ 5%-10%

# Perceptions around cannabis are changing

## Social acceptability of using various products, among all Canadians, 2020




## Perceived risk of various behaviours on a regular basis, 2020




2020 Canadian Cannabis Survey
https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/canadian-cannabis-survey-2020-summary.html

# cannabis use impact

- According to the 2019 National Cannabis Survey, the likelihood of reporting driving after cannabis use has not significantly changed for Canadians since legalization.
  - Driving after cannabis use, particularly among young Canadians, may result from the perception that drugs don't adversely affect their driving.

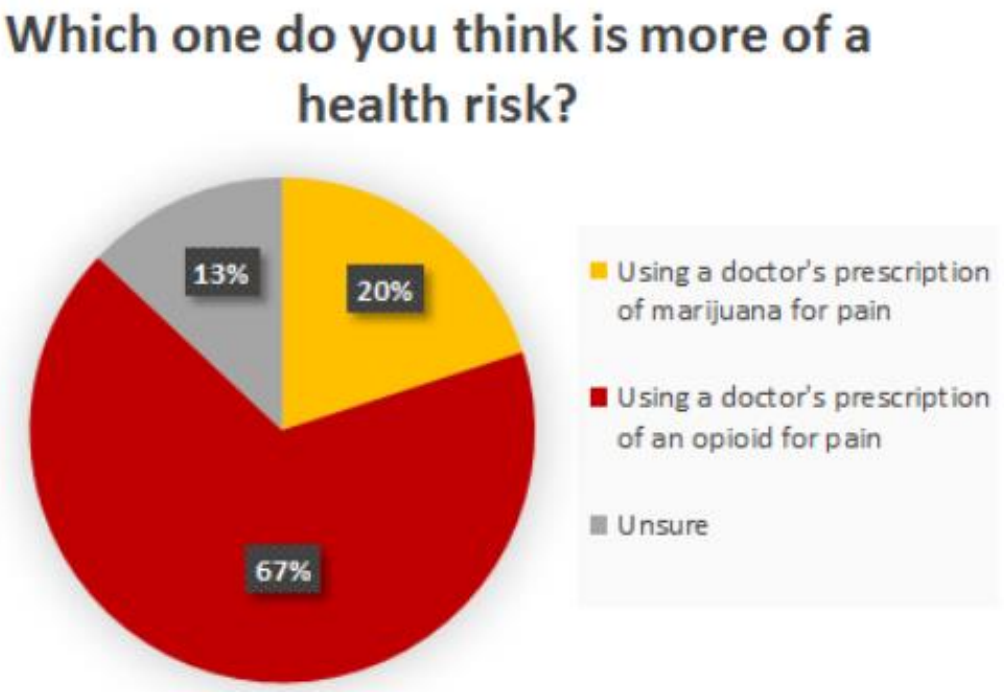
- Recent research on opioid use in US states & BC with medical and /or recreational cannabis laws suggest that legal access to cannabis can lead to a decrease in opioid prescriptions as well as reductions in opioid-related harms including opioid overdose deaths.

- While Statistics Canada show no reduction of productivity post cannabis legalization, a recent study by the university of Cincinnati shows that the work capacity of those aged 40 to 62 grows . Why ? After recreational cannabis is legalized, cannabis use increases ( not misuse) and prescription for pain medication decreases. Source Geoff Golvin – Feb 16th 2021.

Statistics Canada 2019
https://www150.statcan.gc.ca/n1/pub/82-003-x/2020002/article/00002-eng.htm
https://torontosun.com/news/provincial/too-early-to-determine-whether-pot-impaired-driving-on-the-increase
https://www.ccsa.ca/sites/default/files/2019-10/CCSA-Cannabis-Use-Driving-Report-2019-en_1.pdf
https://drugpolicy.ca/wp-content/uploads/2017/02/CDPC_Cannabis-and-Driving_Evidence-Review_FINALV2_March27-2017.pdf

## Emerging evidence for cannabis as a possible substitute for opioids
## 19 355 opioid death toxicity in Canada between Jan 016 and Sept 2021 ( Health Canada)

- Cannabis is perceived as less harmful than opioids for pain management.
- States with legal medical cannabis were associated with lower opioid use and overdose.
- The perceived safety in combination with legal cannabis for pain management could lead to an overall decline in opioid use.
- More research on the way.




https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6667507/pdf/11606_2018_Article_4782.pdf
https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm
Associated Press Poll 2017

# TerrAscend continues to strengthen its North American operations

## Canadian Operations with National Distribution

2020 Q4 Adjusted EBITDA increased 46% quarter-over-quarter to $26 million and Adjusted EBITDA margin increased to 40% from 35% in Q3

Mississauga, ON
- Production
- Distribution
- Retail

**Jason Wild**
Executive Chairman

HAVEN ST. PREMIUM CANNABIS

LEGEND

## Growing U.S. Footprint with Selective Vertical Integration

| CA | NV | PA | NJ | Nationwide |
|---|---|---|---|---|
| Cultivation | Cultivation | Cultivation | Cultivation | Distribution |
| Production | Production | Production | Production | |
| Distribution | Distribution | Distribution | Distribution | |
| Retail | Retail | Retail | Retail | |

*Nationwide distribution network for CBD products and brands*

STATEFLOWER

KIND TREE CANNABIS

THE APOTHECARIUM DISPENSARY

VALHALLA

ILERA HEALTHCARE

Funky Farms CBD EXTRACTS

Original HEMP

Thank you