

CANNABIS: A Growing Investment Sector

As a new market blooms across the world, corporations, startup entrepreneurs & investors are taking notice. This report explores why.



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Introduction to the Cannabis Landscape

Countries across the globe have begun the process of liberalizing their marijuana laws which presents a unique opportunity as a high-growth market. A race has begun amongst investors, entrepreneurs, startups and corporation to become leading cannabis cultivators, brands, as well as distributors by global players. This race is expected to propel the cannabis industry from \$7.7B this year to \$57B by 2027, representing a CAGR of 22.16%.¹

The demographics of cannabis users continues to radically shift as consumption becomes somewhat mainstream, resulting in a surge of demand across different age groups and genders, with legalization expected to ignite higher spending across the spectrum. Crucially, recurrence of purchase is expected to increase by 22.3% in frequent users, and a considerable 121% in current non-frequent users, while the increase in spending amongst the latter will be around 68%.²

The opportunity for business ventures of all types and sizes is supported by unprecedented pre-existing demand, combined with the emergence of new verticals, that will serve to lure non-traditional consumers into the space via the penetration of medicinal and recreational markets. The emergence of cannabis will capture market share from long-established industries, including medicine and alcohol, a trend already witnessed in states in which cannabis has been legalized, where both opioid and beer sales are notably down. Studies have found that in states where marijuana is legalized, alcohol consumption has decreased by as much as 15%.³

The evolution of cannabis products continues to attract the extensive segment of the global population who, in fact, don't want to smoke. With overall the smoking rate among adults down from 20.6% in 2009 to 16.8% in 2014, the availability of edibles provides a discrete, smoke-free experience, which is expected to result in explosive growth for the industry as a whole. In California alone, consumers gobbled up more than \$180M worth of marijuana-infused food and drinks last year, 10% of the state's cannabis sales.⁴


Whilst the market has previously been plagued by legislative elements which decelerated industry growth, it is now developing into a competitive and complex space despite its infancy. Both the number of deals, as well as the value of total funding has surged in the space over the last few years. In 2017 total funding doubled from the previous year, which, in turn, was more than double from 2014. This represents the kind of exponential growth that is

¹<https://www.prnewswire.com/news-releases/data-shows-that-the-global-legal-cannabis-market-is-set-to-increase-in-value-676675213.html>

² <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/consulting/ca-cannabis-2018-report-en.PDF>

³ <https://poseidon01.ssrn.com/delivery.php?ID=93307802200212210400612510210800811201508206203803303012009608609606808309701108808503401900306102912012509210101109301906407702105907400106709907200103012412506600405203902100701601811115126118024028082011066000075001004019071105107113116120020084025&EXT=pdf>

⁴ <https://www.forbes.com/sites/mikemontgomery/2017/07/19/edibles-are-the-next-big-thing-for-pot-entrepreneurs/#4717fcfd576b>



expected to characterize the market for the next decade and will be financed by the flood of institutional cash streaming through the sector.

This report takes a deep dive into the cannabis market, a sector that has propelled into prominence due to the wave of legalization that has been swept through the US and Europe. We analyze the market size and growth projections and explore the territories that are the key drivers of the market. We take an in-depth look into the effect that the widespread legalization of cannabis has had on consumer behavior as well as consumption trends and go on to review the key elements fueling the sector's growth, unpacking where the opportunities lie within.

OurCrowd continues to believe that the vast potential for growth in the Cannabis market represents a unique opportunity for attractive returns for our investor base. As the sector continues to develop, we aim to leverage our expertise and expand our portfolio across multiple high growth subsectors within the broader market. These subsectors include those that will cater towards the needs of the rapidly advancing industry ecosystem centered around solutions in logistics, agricultural technology, as well as cultivation methods.

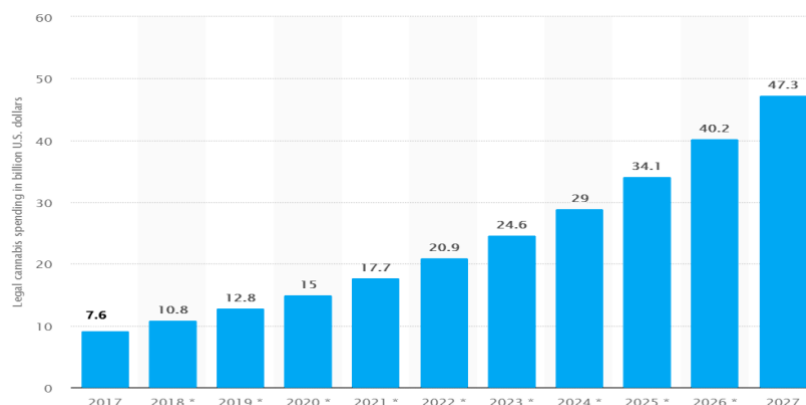
Cannabis: A fast-growing market

The global cannabis industry was worth \$7.7B at the end of 2017⁵, whilst projections reveal that the market will surge to \$31.4B by 2021⁶, and \$57B by 2027.⁷ The implied Compound Annual Growth Rate (CAGR) is hence 22.16%.⁸ To further break down the projections, they indicate that the market will experience its largest growth rate from the period beginning 2017 and ending 2021, in which the CAGR will be 42%⁹, which will subsequently slow to 11% up until 2027.¹⁰

The robust growth the market will see up until 2021 and thereafter, is underpinned by the increasing legalization and decriminalization of cannabis across both North America and Europe, with the rising demand of cannabis for recreational, as well as medical use, acting as a powerful driving force.

From a geographical perspective, although the largest group of cannabis buyers will remain in the North American region for the next decade, at \$47.3B in 2027, the largest growth spread will be enjoyed in rest-of-world (RoW) markets. It is expected that markets outside of North America will surge from \$52M in 2017, to a projected \$2.5B in 2027¹¹, representing a considerable CAGR of 47%.¹²

The \$47.3B North American spend is supported by the bold new landscape created by Canada's nationwide legalization of recreational cannabis. Legal sales in Canada in 2019 alone are expected to total \$4.34B¹³, and are projected to be \$5.6B by 2021¹⁴, demonstrating a CAGR of 14%. The graph below is an indication of the continent growth potential, using a 10-year averaged-out CAGR.¹⁵



⁵ <https://www.prnewswire.com/news-releases/data-shows-that-the-global-legal-cannabis-market-is-set-to-increase-in-value-676675213.html>

⁶ <https://www.forbes.com/sites/monazhang/2017/11/07/global-marijuana-market-31-billion-investors-cautious/#7b999d217297>

⁷ <https://www.cnn.com/2018/07/23/pr-newswire-the-global-cannabis-market-is-set-to-explode.html>

⁸ $(57/7.7)^{(1/10)} - 1$

⁹ $(31.4/7.7)^{(1/4)} - 1$

¹⁰ $(57/31.4)^{(1/6)} - 1$


¹¹ <https://www.forbes.com/sites/thomaspellechia/2018/03/01/double-digit-billions-puts-north-america-in-the-worldwide-cannabis-market-lead/#7aa50af96510>

¹² $(2,500,000,000/52,000,000)^{(1/10)} - 1$

¹³ <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/consulting/ca-cannabis-2018-report-en.PDF>

¹⁴ <https://www.growopportunity.ca/news/brightfield-group-releases-comprehensive-report-on-emerging-international-cannabis-market-32198>

¹⁵ Based on: <https://www.statista.com/statistics/820123/global-legal-cannabis-market/> Note: some figures were altered from the original after calculating a 10-year averaged out CAGR.



Additionally, the 47% CAGR experienced by the RoW region will be derived from the palpable emergence of strong cannabis markets especially from a variety of European states. While there is presently barely a European cannabis market to consider, the progression recently seen in Germany is exceptionally promising and could be reasonably studied as a leading indicator in the context of the broader region.

In terms of the RoW, the South American cannabis market is expected to grow from \$125M this year to \$776M by 2027, indicating a CAGR of 20%, whilst the Australian market is projected to experience a CAGR of 53% due to impressive expansion from \$52M to \$1.2N by 2027¹⁶, - all of which will contribute to the considerable RoW gain.

Similarly, there is good reason for enthusiasm when considering the European market, in the context of the success enjoyed by their US counterparts. If we are to accept the projections stated below with regards to the potential of the US market by 2027, then extrapolating that data provides insight into the potential of Europe, a home to more than 740M people, in comparison to North America's 360M. The companies that secure significant market share in the European space will likely become the largest cannabis players in the world.¹⁷

Crucially, given that the worldwide adult recreational cannabis market remains hampered by the United Nations and its 1961 Convention on Narcotic Drugs, the United States is expected to dominate sales in recreational usage, whilst the European government-subsidized health care systems will propel the medical cannabis industry forward and position the continent as the largest medical marijuana market in the world.¹⁸

In the context of the two key segments of the cannabis industry, of the \$57B market foreseen in 2027, it is expected that \$38.3B will account for recreational use, whilst medical sales are estimated to comprise \$19.1B¹⁹, resulting in a 67%-33% split.

The US: Extreme growth – medicinal and recreational use

The US medical marijuana retail sales projections for 2018 indicates that the value of the national medical market is in the region of \$2.9B to \$3.8B²⁰, with forecasts indicating growth to at least \$4.8B (with a maximum of \$6.8B) by 2021 – implying a conservative CAGR of 18.28%.

The growth will be sustained by the wide-ranging and far-reaching medical applications of cannabis, which include assisting with muscle spasms for conditions like sclerosis, nausea from cancer chemotherapy, poor appetite, and weight loss cause by illnesses such as HIV, seizure disorders, and Crohn's disease.²¹

¹⁶ <https://www.globenewswire.com/news-release/2018/02/26/1387588/0/en/NEW-REPORT-Worldwide-spending-on-legal-cannabis-will-reach-57-billion-by-2027.html>

¹⁷ <https://www.forbes.com/sites/kriskrane/2018/05/16/big-opportunities-in-europes-cannabis-market-come-with-big-risks/#612c2de16d9c>

¹⁸ <https://www.forbes.com/sites/thomaspellechia/2018/03/01/double-digit-billions-puts-north-america-in-the-worldwide-cannabis-market-lead/#7aa50af96510>

¹⁹ <https://www.globenewswire.com/news-release/2018/02/26/1387588/0/en/NEW-REPORT-Worldwide-spending-on-legal-cannabis-will-reach-57-billion-by-2027.html>

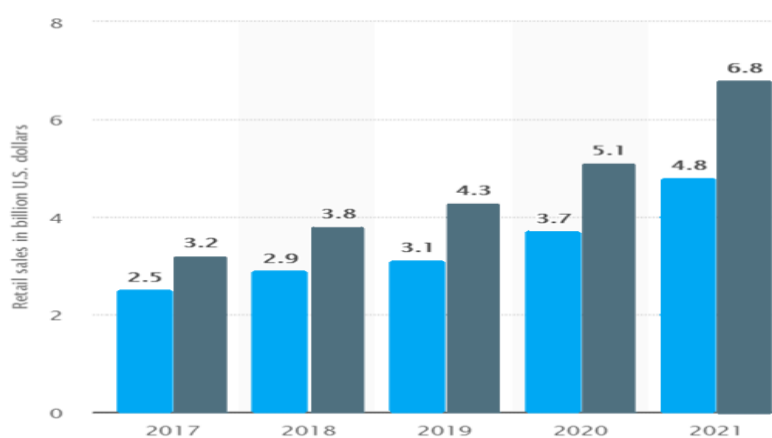
²⁰ <https://www.statista.com/statistics/596631/us-medical-marijuana-retail-sales-estimates/>

²¹ <https://www.webmd.com/pain-management/features/medical-marijuana-uses>

Within the context of medical spend vs recreational spend, research groups New Frontier and Baker have found that US medical patients spend 3x more on cannabis than recreational users. In 2016, US medical consumers on average shopped once every 10 days and spent \$136 per transaction. In contrast, recreational consumers shopped once every 14 days and spent \$49 per transaction.²²

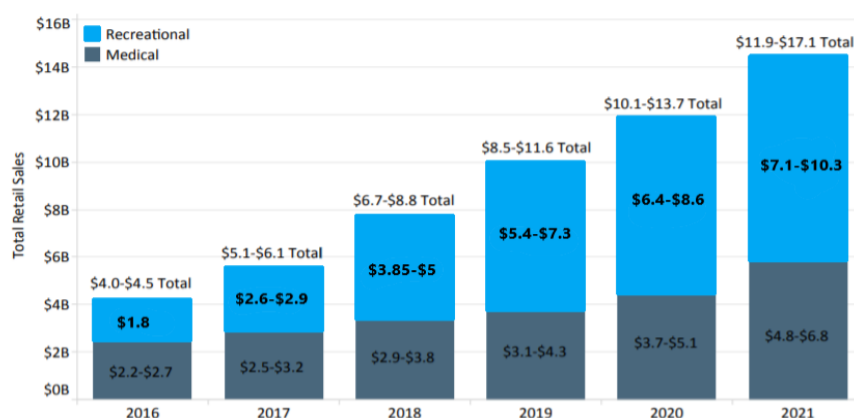
To contrast the manner-in-which medical cannabis sales will match up against recreational use, the graph below is inciteful as it demonstrates the way in which in the US recreational cannabis will be both the larger, as well as higher growth market.²³

Range of US medical marijuana retail sales projections:



Crucial to these projections is the fact that 95% of the US population lives in a state where there is some form of legal cannabis, whether it be for adult use, medical use, or CBD only. The market potential is massive and remains largely untapped.²⁴

U.S. Cannabis Retail Sales Estimates: 2016-2021 (in \$B):



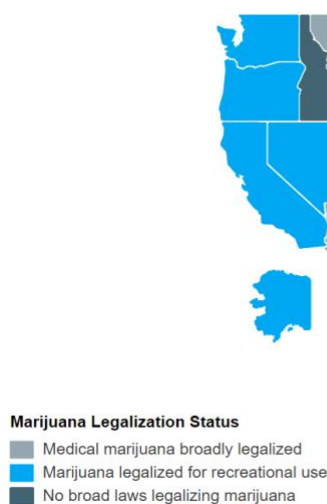
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²² <https://www.thecannabist.co/2017/04/26/marijuana-shopping-trends-2017-report/78480/>

²³ <https://mjbizdaily.com/wp-content/uploads/2017/05/Factbook2017ExecutiveSummary.pdf>

²⁴ <https://news.medicalmarijuanainc.com/95-u-s-population-lives-states-marijuana-legal-finds-report/>

The current state of legalization in the US:²⁵



Canada: Confident in the industry

The total cannabis market in Canada, including illegal, as well as legal products, for both recreational and medical use purposes, is expected to generate up to \$7.17B in total sales in 2019. Of that, \$4.34B will be legal, thus contributing more than half of the total.²⁶ Canada continues to be among the few countries where investors have already shown confidence in the future of the industry, betting billions in public equity investments.

Breakdown of the Canadian market:²⁷




Currently, it is estimated that the cannabis sector will generate \$1.3B for 2018, with the recreational market pulling in \$700M and the medical market \$600M²⁸, representing a 54%-46% split. Notably, this ratio is expected to drastically reduce by 2022, despite a more robust legal market. Forecasts believe

²⁵<http://wakefulnessmagicpill.com/weed-legalization-map/marijuana-legalization-map-elegant-weed-legalization-map>

²⁶<https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/consulting/ca-cannabis-2018-report-en.PDF>

²⁷<https://ottawacitizen.com/news/local-news/canadian-companies-dominate-global-marijuana-trade-says-report>

²⁸<https://www.forbes.com/sites/irisdorbjan/2018/07/17/as-legalization-looms-canadas-pot-industry-reels-in-the-cash/#4fc6e6485bc8>



that in 2022 recreational and medical markets will total more than \$5.4B, with a 90%-10% divide respectively, reinforcing the idea that North America will be a continent thriving on recreational use.

The Canadian Cannabis Survey indicates, similar to the US, that those who purchase the drug for medical use spend more than those who spend for recreational purposes, by around 61%.²⁹

Europe: Will Germany set the pace for the largest medical market in the world?

In the context of Europe, the market is poised to unleash its growth potential over the next decade. In the last six months, the European cannabis industry has grown more than in the previous five years, with over six new countries announcing legislation and patient numbers growing on a monthly basis.³⁰ The wide-ranging consensus that Europe will become the largest medical cannabis market in the world, with medical usage trumping that of a recreational nature³¹, is backed by a \$1.2T government subsidized healthcare system.

Recreational cannabis is predominantly illegal across Europe, however, there are several grey areas where several regions and cities operate on the fringes of the law. Cities like Barcelona, Amsterdam and Copenhagen are well known for private member clubs, coffee shops and open-air markets, but none of these presently offer a tenable solution for legislation of recreational cannabis³².

While there are clear and realistic projections for both the US and the RoW markets, sizing the European cannabis market is particularly challenging given that the projections being made by a vast number of research firms are based on full legalization in all verticals across all countries, hence often suggesting that the European market will be worth more than what credible firms project the global market to be worth.

As mentioned above, the global cannabis market is expected to reach \$57B in 2027. Given that roughly \$47B of that will be comprised of North American markets and an additional \$2.5B anticipated for RoW markets, that conservatively leaves \$7.5B – \$10B left for Europe's slice (depending on the exact definition of "rest of world" used by data sources.) In 2016, a report by a joint EU watchdog indicated that Europeans spend around \$10.4B a year on cannabis. This supports the theory detailed above³³, that given that legalization won't happen all at once, it will take time for the legal market to reach the size of the illegal one, if it does at all.

Alternatively, it could be said that a \$7.5B - \$10B valuation of the European market is exceptionally conservative. The studies which base assumptions on a fully legal and regulated market across the entire continent, such as Prohibition Partner (which describes itself as a market intelligence and strategic consultancy firm), state that the value of the European cannabis market will be \$133B by 2028.

According to their report: "While the current recreational cannabis market is worth over €30 billion, by 2028, the medical cannabis market will be valued at €55B+and the recreational cannabis market

²⁹ <https://mjbizdaily.com/government-survey-canadian-recreational-users-spending-ca75-month-marijuana/>

³⁰ <https://static1.squarespace.com/static/58877105725e25f7d30b8f08/t/5b46230af950b713d5fe0946/1531323210451/The+European+Cannabis+Report%E2%84%A2+3rd+Edition.pdf>

³¹ <https://ca.finance.yahoo.com/news/potential-europe-cannabis-market-motivate-130013958.html?guccounter=1>

³² <https://static1.squarespace.com/static/58877105725e25f7d30b8f08/t/5b46230af950b713d5fe0946/1531323210451/The+European+Cannabis+Report%E2%84%A2+3rd+Edition.pdf>

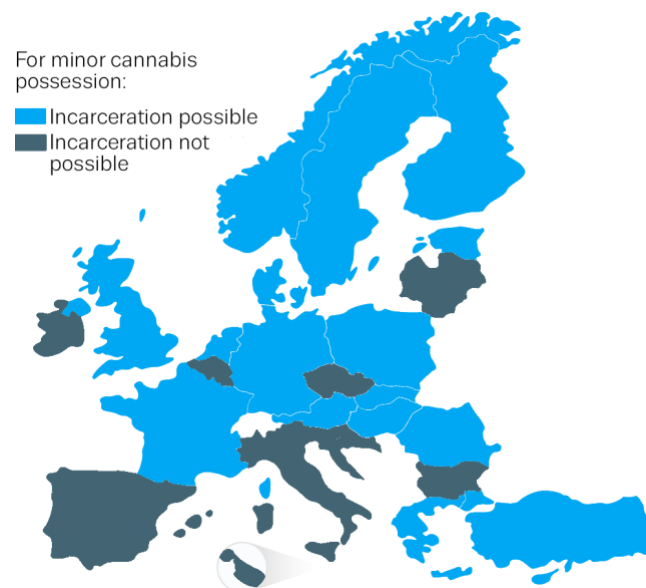
³³ <http://www.marijuanatimes.org/europe-spends-over-10-billion-on-cannabis-each-year/>

will be worth €60B+, across both primary and secondary services to the cannabis industry, assuming that all European countries have legalized medical cannabis and recreational cannabis by 2023.”³⁴ It should be noted that a large number of articles which discuss the European market base their valuations on the findings of Prohibition Partners.

The German market stands to be one of the largest in the world and certainly a European market leader, with an estimated total number of potential medical cannabis patients in Germany of 175,000 and a potential total market value of \$628M.³⁵ Germany is Europe’s biggest consumer of both prescription medications and medical devices dispensed by prescription. It is, as a result, Europe’s most valuable drug market.³⁶

Other currently relevant European markets include the Czech Republic, which legalized cannabis in 2013, and has an estimated total number of potential cannabis patients of 26,000, a total market value of \$55M, whilst **Croatia** has a total number of potential medical cannabis patients of 7000, and a total market value of \$14.8M.³⁷

As for whether the whole of Europe will legalize cannabis by 2023, this map from the European Monitoring Centre for Drugs and Drug Addiction seems to show that large progress needs to be made.³⁸



With a rise in political conservatives on the continent, it's unlikely that marijuana laws will be further liberalized in countries like Poland or Hungary, although both have legalized medical marijuana for


³⁴ <https://www.prnewswire.com/news-releases/prohibition-partners-european-legal-cannabis-market-expected-to-exceed-115-billion-by-2028-300680103.html>

³⁵ <https://www.targo-consulting.co.il/images/market-research/pdf/Cannabis-Industry-Market-Research-PDF.pdf>

³⁶ https://www.cannabisindustryjournal.com/feature_article/the-importance-of-medical-cannabis-trials-in-europe/

³⁷ <https://www.targo-consulting.co.il/images/market-research/pdf/Cannabis-Industry-Market-Research-PDF.pdf>

³⁸ http://www.emcdda.europa.eu/publications/topic-overviews/cannabis-policy/html_en



certain conditions. Germany's place in this list is particularly important, as it has the most influence in the Union and usually sets the pace that other countries follow.

Prohibition Partners estimates the number of countries adopting medical marijuana is following a trend similar to Moore's Law, with the number of countries that legalize medical cannabis doubling every two years. It's possible that once the majority of the bloc passes the necessary legislation, the EU could provide a framework for regulating the marijuana market.³⁹

Considering the above, the value of the European market over the next decade is highly dependent on the rate at which the continent legalizes cannabis, and whether they legalize both medical applications as well as recreational ones. It is possible that in its current form, the market will conservatively be worth \$10B over the next decade, with the potential for much larger figures if the circumstances discussed above rapidly play out.

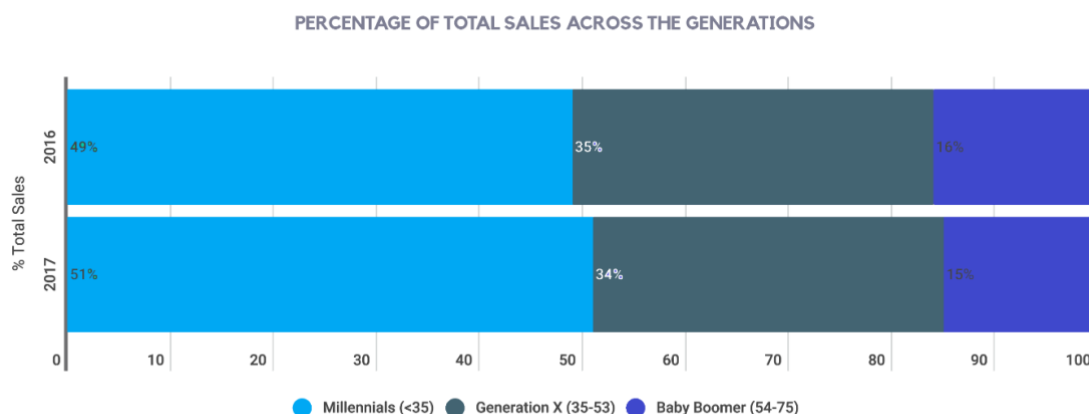
³⁹ <https://finance.yahoo.com/news/medical-marijuana-dominate-european-market-173020425.html>

Demographics

While the door to cannabis has always been somewhat ajar, those who slipped through the opening became characterized by society as the stoner stereotype. With that door fully open, the perception of cannabis use is now being turned on its head, as the demographics of users begins to radically shift, both due to the emergence of innovative ways of consumption, as well as positive health benefits.

The next budding market: boomers vs. millennials

In the US, the cannabis market appears to be dominated by millennials, with their share increasing year-on-year from 2016 to 2017, with around 51% of users being millennials and the other 49% being older.⁴⁰ Notably, whilst millennials are the largest consumer base, boomers are said to be turning to cannabis fast for the use of pain relief as they develop age-related health problems.⁴¹ Crucially, not only are older generations growing faster by numbers in terms of % of total consumers, they also, on average, purchase more expensive items.⁴²



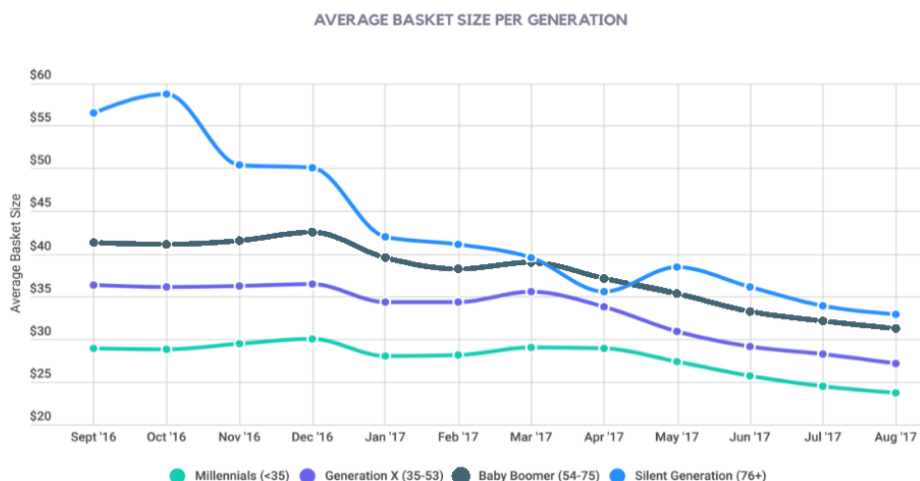
As of August 2017, the average basket sizes of baby boomers and the Silent Generation (as described above) was between \$35 and \$40, whilst Generation X had an average basket of \$27, only slightly higher than millennials. All in all, 47.7% of cannabis users are spending between \$500 and \$2.5K annually.⁴³ Whilst younger customers spend less per visit, with a lower average item price (\$13.87), as well as a lower average basket size (\$25) than their senior counterparts, they visit cannabis stores more often, every 16 days or so.

⁴⁰ <https://www.headset.io/blog/whos-buying-all-that-pot-a-look-at-the-demographics-of-cannabis-consumers-2017>

⁴¹ <https://business.financialpost.com/commodities/agriculture/canadians-spent-c5-7-billion-on-cannabis-in-2017-statistics-canada>

⁴² <https://docsend.com/view/kq8gkkn>

⁴³ <https://www.cheatsheet.com/money-career/average-cannabis-consumer-spend.html/>



The percentage of baby boomers using marijuana among adults 50 years and older saw an increase of 71% in between 2006 and 2013. Notably, by 2016 the percentage of consumers over the age of 65 had increased by 25%. Corresponding to this, only 5% of older adults see cannabis as a health risk.⁴⁴

So too are these trends prevalent in Canada, albeit on a more radical front. According to Statistics Canada, baby boomers are the primary consumers of marijuana in the country.⁴⁵ Adjusting the baby boomer category to include ages of 45 and up, as some surveys have done, indicates that they are currently making up 23% of the overall share of consumers, up from 4% in 1975.

This report indicates that fewer minors were consuming cannabis, with less than 6% of consumers in the 15 – 17-year-old age group which is quite surprising. In sharp contrast, 2/3rds of consumers were 25 years old or older. The study essentially found that cannabis use amongst youth has either remained stable or has declined, whereas use amongst older individuals has sharply increased.⁴⁶

With regards to the number of Canadians using cannabis, according to data from the National Cannabis Survey, approximately 4.2M people, or 14% of Canadians aged 15 and over, have used cannabis products in the last three months. Of them, about 56% indicated that their use occurred on a daily or weekly basis.⁴⁷ The average cannabis user spent around \$920 on marijuana in 2017, mostly for recreational purposes⁴⁸. Notably, this is within the range of the majority of US users, albeit on the low side.

⁴⁴ <https://mjfreeway.com/blog/the-new-cannabis-consumer>

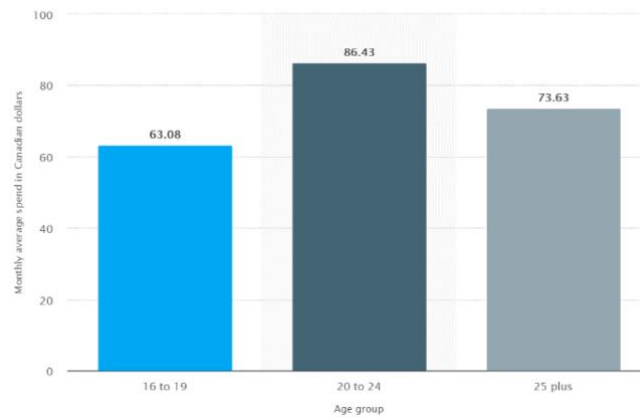
⁴⁵ <https://biv.com/article/2018/02/baby-boomers-are-biggest-cannabis-consumers-statscan>

⁴⁶ <https://www.cbc.ca/news/politics/marijuana-cannabis-minors-1.4454477>

⁴⁷ <https://www.straight.com/cannabis/1066656/national-survey-reveals-new-data-canadian-cannabis-consumers>

⁴⁸ <https://www.reuters.com/article/us-canada-marijuana-statistics/canadians-spent-c5-7-billion-on-cannabis-in-2017-statistics-canada-idUSKBN1FE282>

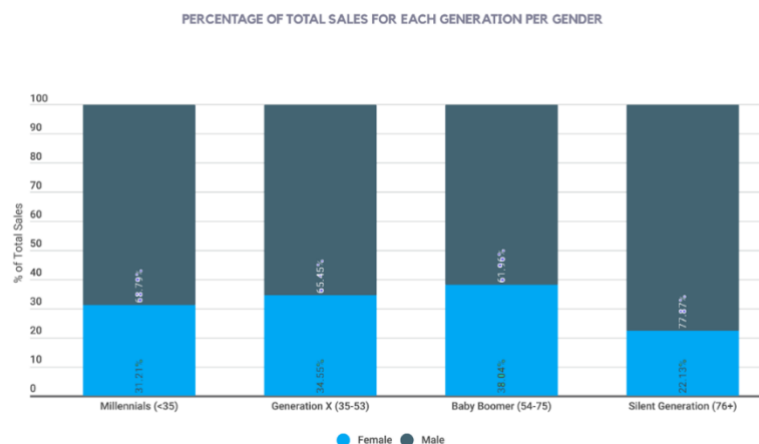
In contrast to the US, millennials appear to be spending slightly more than older groups in Canada. The breakdown of average monthly spending per broad age group can be seen below:⁴⁹



Men vs. women and marijuana

In the US, data shows that men continue to dominate cannabis purchases across the spectrum.⁵⁰ Interestingly, despite male dominance in this regard, popular cannabis delivery service Eaze has noted a 20% increase in monthly spending by female customers, coupled with a notable increase in overall female customers since 2015 (from 25% to 35%⁵¹), making them one of the fastest growing consumer groups in the industry. According to Eaze, a CBD vaping pen and a cannabis bath soak had the highest purchase ratio of female buyers, while a higher ratio of men gravitated to the potent, headier waxes and concentrates.⁵²

Additionally, data shows that woman make up a larger part of the older generations than the younger ones, while men consume the vast majority in both the millennial and Generation X category:



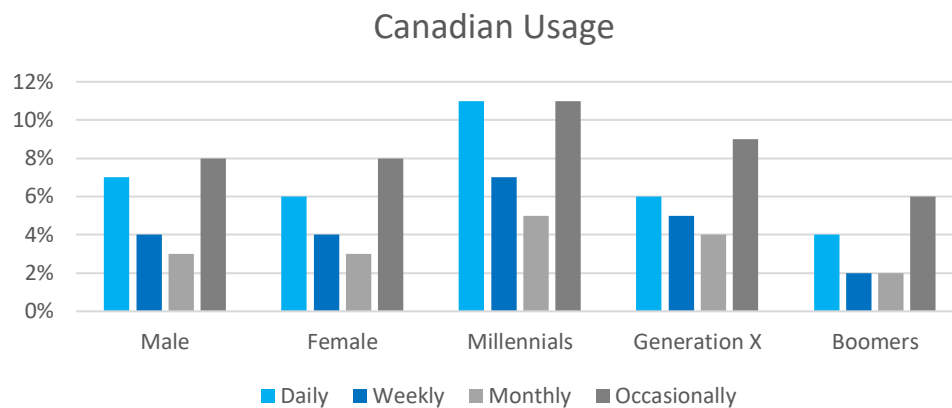
⁴⁹ <https://www.statista.com/statistics/814118/average-monthly-spend-on-recreational-cannabis-in-a-month-canada-by-age/>

⁵⁰ <https://docsend.com/view/kq8gkkn>

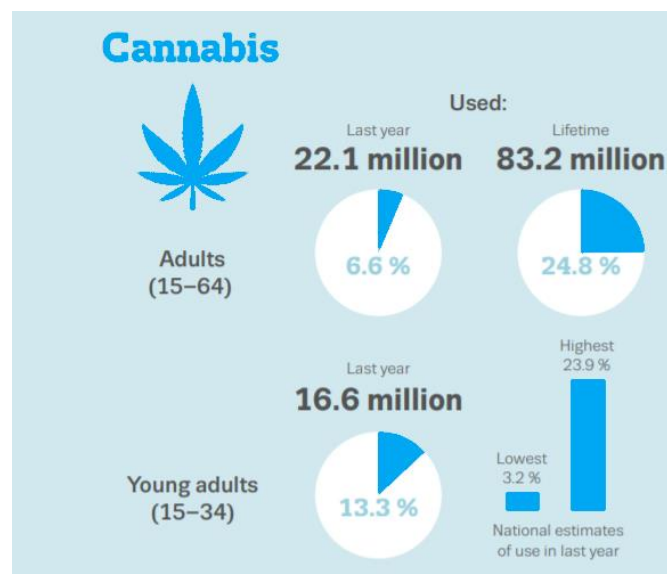
⁵¹ <https://www.eaze.com/blog/posts/eaze-insights-2017-cannabis-data-report>

⁵² <https://www.investors.com/news/marijuana-sales-trends-women-millennials-babyboomers-genx-sleeping-pills-tobacco/>

Interestingly, on the Canadian front, research demonstrates near parity between men and women regarding consumption patterns.⁵³



In Europe, cannabis continues to be the most popular drug, with 23.5M adults across the continent having used it in the last year. As was the case with the US, there appears to be a marked increase in the use of cannabis by those over the age of 40 years old.⁵⁴



Interestingly, Europe exhibits a similar gender pattern to that of the US. The prevalence of cannabis usage in males is considerably higher than in their female peers. In the 17 countries where information is available and sample sizes are sufficient, males would account for more than three-quarters of daily cannabis users in the age group 15 - 34 years.⁵⁵

⁵³ <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/consulting/ca-cannabis-2018-report-en.PDF>

⁵⁴ <https://tandfonline.com/doi/full/10.1080/09687637.2018.1478948>

⁵⁵ http://www.emcdda.europa.eu/system/files/publications/753/emcdda-daily-cannabis-use-2012_400271.pdf

Legalization: Impact on frequency of usage

A study by Deloitte sheds light on the purchasing behavior of frequent, as well as less frequent users, both before and after legalization. While the recurrence of purchase is expected to increase by up to 22.3% with average total spend remaining around \$100 amongst frequent users, the largest growth will be seen in the category of less frequent users, who will purchase more than double than their current quantities and spend around \$10 more per purchase.⁵⁶

	Monthly figures	Pre-legalization (current)	Post-legalization (current and likely)	Difference
Frequent users	Average purchase frequency	2.5	3.1	+22.30%
	Average total spend	\$99.05	\$98.88	-0.02%
	Three-month figures	Pre-legalization (current)	Post-legalization (current and likely)	Difference
Less frequent users	Average purchase frequency	0.6	1.3	+121.00%
	Average total spend	\$16.61	\$27.87	+67.80%

⁵⁶ <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/consulting/ca-cannabis-2018-report-en.PDF>

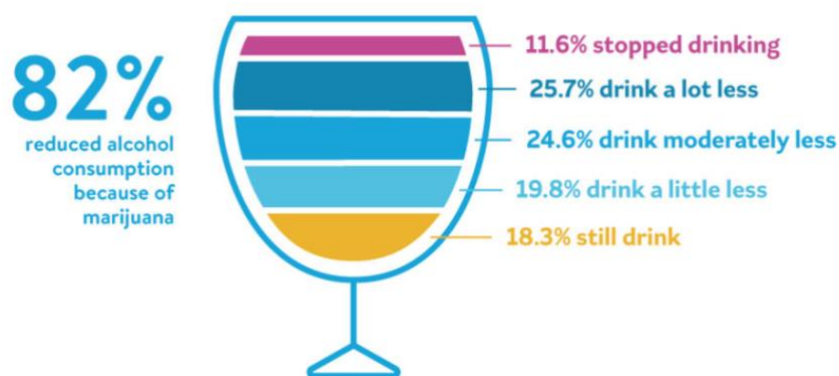
Consumption Trends

Legalization has resulted in the emergence of new verticals within the cannabis industry that, in turn, are shifting consumer's behavior towards non-traditional products as well as methods of consumption. Industries across the spectrum are recognizing the aggressive potential for growth within the cannabis sector and are rushing to market with a wide variety of products in an attempt to capture a segment of their own.

Market Share: marijuana vs. beer

In the context of consumer trends, marijuana is rapidly penetrating the mass market, and taking market share from alcohol in the process. A joint study by three universities revealed that overall alcohol consumption is directly related to the rise of medical marijuana laws. The study found that beer sales dropped by 15% in states where marijuana had been legalized. It further concluded that the two substances are direct substitutes for each other⁵⁷, hence giving an indication of the broader potential of cannabis as legalization continues.

It's further estimated that nationwide legalization would result in the beer industry losing more than \$2B in sales.⁵⁸ A survey by Eaze, also on the California market, revealed the extent that consumers are replacing alcohol with cannabis consumption:⁵⁹



Research has found that the shifting landscape is digging into the profits of the major brewers and craft brewers alike. MillerCoors saw a 4.4% decline in sales of Coors Light over the past two years in Colorado, Washington, and Oregon, where marijuana is legal for recreation use. Anheuser Busch In Bev saw a similar drop in sales of Bud Light in these three states, while sales for the company's flagship beers, Coors and Budweiser, experienced a 2.4% drop.⁶⁰

The Canadian Imperial Bank of Commerce calculated that in the next two years, the legal market for adult-use cannabis will be greater than the amount of spirits sold in the country and will begin to

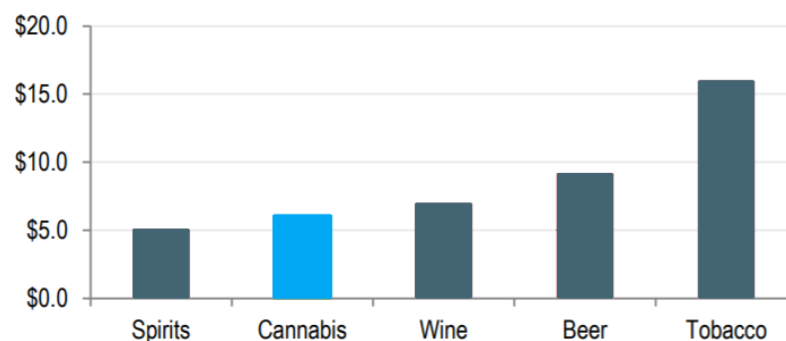
⁵⁷<https://poseidon01.ssrn.com/delivery.php?ID=933078022002122104006125102108008112015082062038033030120096086096068083097011088085034019003061029120125092101011093019064077021059074001067099072001030124125066004052039021007016018111115126118024028082011066000075001004019071105107113116120020084025&EXT=pdf>

⁵⁸ <https://www.convenience.org/Media/Daily/ND0306171>

⁵⁹ <https://www.thehindland.com/women/eaze-data-shows-more-women-are-smoking-pot-2602>

⁶⁰ <https://smallbiztrends.com/2016/12/legalized-marijuana-impacts-alcohol-sales.html>

approach wine in scale. To contextualize, Statistics Canada noted that spending on cannabis in 2017 (legal + illegal) was more than \$5.7B, which compares to \$5.1B in spirits, \$7B on wine, \$9.2B on beer, and \$16B on tobacco purchases.⁶¹

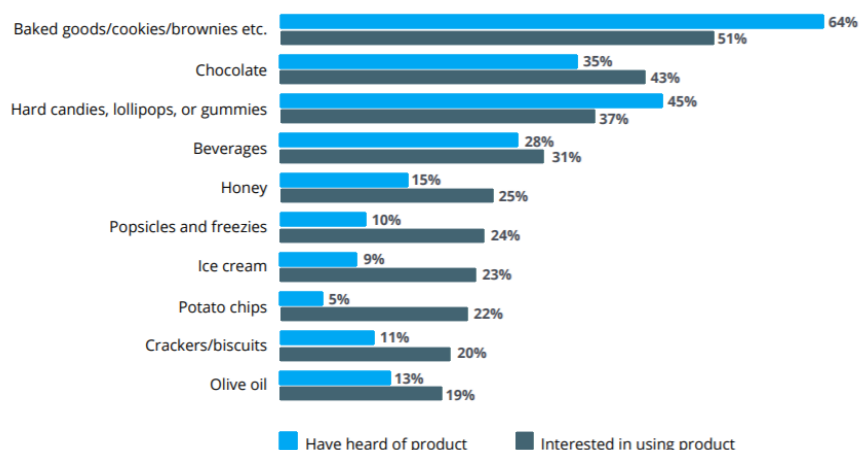


The opportunity for edibles

The opportunities in the luxury segment of the cannabis market are vast and have the potential to extend to the creation of unique experiences for the high-end consumer, such as weed tasting instead of wine tasting, or even restaurants focusing on infused edibles.⁶²

According to Forbes, the reason for the explosive growth in cannabis consumption is that as the pot market expands, it's starting to reach people who don't want to smoke. Overall the smoking rate among adults is down from 20.6% in 2009 to 16.8% in 2014. The availability of edibles provides a discrete, smoke-free experience. And since they can command higher prices, edibles often account for 25 to 60% of a dispensary's profits.⁶³ In California alone, consumers gobbled up more than \$180M worth of marijuana-infused food and drinks last year, 10% of the state's cannabis sales.

Deloitte mapped out several cannabis food products with demonstrated consumer interest:⁶⁴



⁶¹ <https://www.cbc.ca/news/business/cibc-cannabis-1.4653567>

⁶² <https://www.covasoftware.com/blog/2017/2/21/cannabis-market-primed-for-emergence-of-high-end-products-brands>

⁶³ <https://www.forbes.com/sites/mikemontgomery/2017/07/19/edibles-are-the-next-big-thing-for-pot-entrepreneurs/#4717fcd576b>

⁶⁴ <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/consulting/ca-cannabis-2018-report-en.PDF>

The growth of the vaporizer and other products

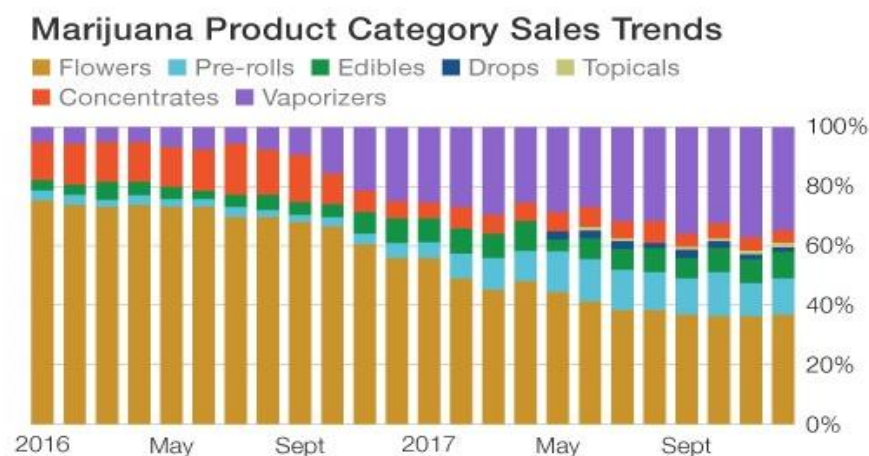
Another product taking the sector by storm is the vaporizer. Data from 2016 indicates that the sale of flowers decreased from 75% of total sales to 54%. In that same time, vaporizer cartridges grew from 6% in 2015 to 24% in 2016, representing a 400% annual increase.⁶⁵ A look at the sales figures from California for 2018 reveals that the tide is still favoring both edibles as well as vaporizers/concentrates.

In February 2019, the flower's market share dipped to 41%, while concentrates rose to 30%, and edibles to 18%. Meanwhile, vapes continued to flex their popularity by upping their share of the overall cannabis marketplace to 24% and their share of concentrates to 79%. Notably, both concentrates and edibles gained in market share from January to February 2019.⁶⁶

Interestingly, the consumption trends detailed above can be further broken down into age groups to assist in understanding what exactly is driving the relevant sector growth. Baby boomers are the biggest buyers of topicals, lotions and bath products – all products which alleviate pain and provide joint relief. Anything that offers the medical benefits of cannabis without the high is something the older generation seems to want to purchase.

Generation Xers are the biggest consumers of edibles, as well as cannabis-infused drops and tinctures, i.e. anything that doesn't involve inhaling/smoking. Finally, millennials seem to be all about vaping.⁶⁷

The graph below breaks down demand for different sectors well:



Recreational legalization and the impact on medical sales

There is an argument to be made with regards to the way legalization of cannabis for recreational use will impact medical sales of the drug. Currently, the process in California, for example, demands that a patient gets a "letter of recommendation" from their doctor as it is illegal to prescribe a substance that is banned by the Federal Government, regardless of state law. With that recommendation, a patient would then have to apply for a state-issued card that enables certain carrying and purchase privileges. With legalization of recreational use, consumers will be able to purchase cannabis without

⁶⁵ <https://www.businessinsider.com/vaping-marijuana-industry-2017-7>

⁶⁶ <https://www.cannabisbusinessexecutive.com/2018/04/california-sales-ignite-february-vapes-edibles-keep-burning/>

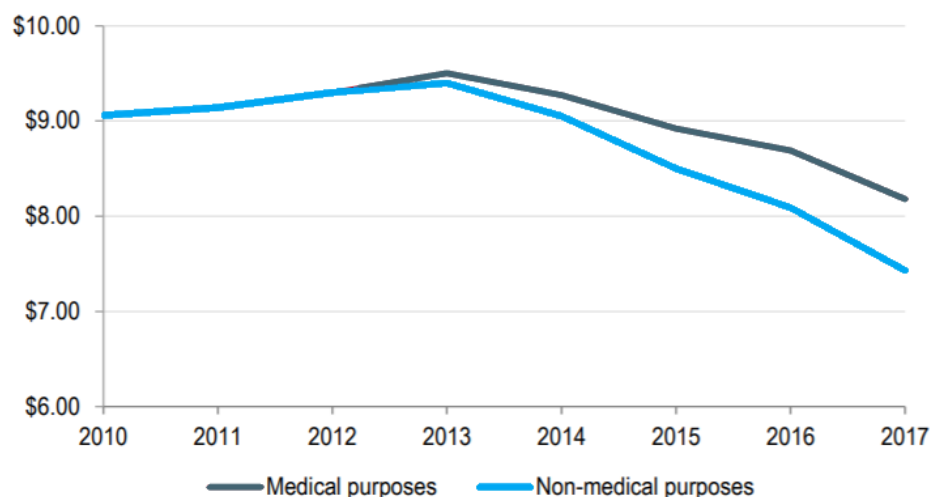
⁶⁷ <https://energyandresourcesdigest.com/marijuana-market-trends-investors-buds-edibles-topicals-vaporizers/>

the hassle of seeing a doctor and applying for a state-issued card, but on the flip-side, will encounter taxes that medical users typically don't, making the incentives murky.

Additionally, as supply begins to increase on the recreational front, pushing prices down, the incentive pulling consumers towards recreational cannabis will be even stronger. This sentiment was echoed by several cannabis publications, which stated that one of the big impacts they've seen is that the medical marijuana industry starts to decline in states after they legalize recreational usage.⁶⁸

In Colorado, for example, medical marijuana sales continue to slide following recreational legalization. For the first half of 2018, revenue fell 21% year-over-year to \$165.8M. Recreational sales rose 14% to \$573M. Total combined sales rose by 4% to reach \$739M, versus \$710M in the first half of 2017. In June alone, medical marijuana sales dropped by 30% year-on-year to \$25.3M.

Intriguingly, an interesting price trend has emerged in Canada, wherein recreational prices are as much as 10% cheaper than that of medical marijuana.⁶⁹ The trend serves to support the notion that as time goes on, users may be more drawn towards recreational purchases:



Opioids: Cannabis is tapping into the pain killer market

Part of the allure of cannabis is that it is a safer option than opiates, given that it's impossible to overdose on and far less addictive⁷⁰, so tapping into the pain killer market will be exceptionally lucrative in this regard. The size of the opioid market in the US alone is valued at north of \$11B.⁷¹ Crucially, American states that permitted legal access to marijuana through medical cannabis laws or legalized its adult recreational use saw falls in opioid use.

In states with medical cannabis dispensaries, the researchers observed a 14.4% reduction in use of prescription opioids, and nearly a 7% reduction in opiate prescriptions filled in states with home-cultivation-only medical cannabis laws.⁷² "States with active dispensaries saw 3.742M fewer daily


⁶⁸ https://www.masslive.com/politics/index.ssf/2018/05/will_recreational_marijuana_st.html

⁶⁹ https://www.investorvillage.com/uploads/82915/files/CIBC_Cannabis.pdf

⁷⁰ <https://www.health.harvard.edu/blog/medical-marijuana-2018011513085>

⁷¹ <http://www.pharmexec.com/us-opioid-market-reach-177-billion-2021-says-report>

⁷² <https://www.sciencedaily.com/releases/2018/04/180402202236.htm>



doses filled; states with home cultivation only [laws] saw 1.792M fewer filled daily doses," one of the studies, which focused on medical cannabis laws, found.⁷³

Interestingly, the Eaze survey referenced earlier found that in California, 57% of customers surveyed said they use or had used sleeping pills, while 95% of those people said they used marijuana products to lower their use of sleeping pills, and 45% of those people said they had completely replaced sleeping pills with cannabis.⁷⁴

⁷³ <https://www.forbes.com/sites/tomangell/2018/04/02/legal-marijuana-states-have-lower-opioid-use-new-studies-show/#3ff0e9095696>

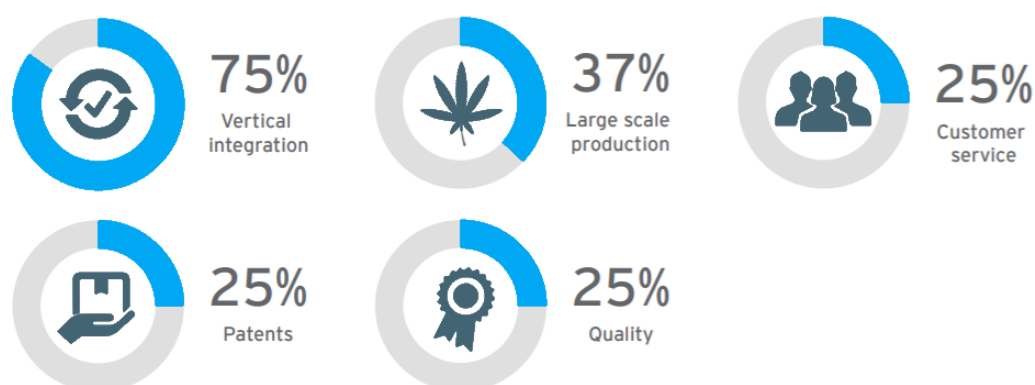
⁷⁴ <https://www.investors.com/news/marijuana-sales-trends-women-millennials-babyboomers-genx-sleeping-pills-tobacco/>

Industry Landscape

The global cannabis sector is charged with opportunities for both licensed producers as well as affiliated companies. Players within the sector face the daunting and potentially lucrative task of navigating an operating landscape that will undoubtedly be riddled with uncertainty. The ability to scale production to meet anticipated demand as the wave of decriminalization sweeps across the globe remains one of the key challenges facing an industry somewhat constrained by regulations that have previously left investors wary.

Managing company strategy for competitive advantage

According to EY, executives within the industry are alluding to the importance of effectively managing their company's strategy to differentiate offerings, achieve economies of scale and create a competitive advantage to mitigate the downward price pressures of commoditizing cannabis flower. Crucially, they also understand the importance of maintaining a stable supply chain to meet demand in both recreational and medical markets, and to capitalize on international opportunities. A survey of the focus of executives within the industry revealed the following:⁷⁵




With regards to the allocation of capital, many respondents from the same survey indicated that the majority of their capital is being allocated towards building industrial growth facilities to ramp up capacity, whilst uncertainty in the regulatory environment is impeding their ability to make long term strategic investments. 50% of the executives interviewed by EY indicated that they would be investing most heavily in clinical trials, while 37% responded that they would be spending on IT, including automation and eCommerce.

Growth in Jobs: Investing in HR

Notably, 25% answered that they would be investing in HR, realizing that the composition of talent in areas of the recreational business such as retail and corporate compliance will be crucial. A new report from New Frontier Data projects that by 2020 the legal cannabis market will create more than a quarter of a million jobs in the US alone, which would be more than the expected jobs from

⁷⁵ [https://www.ey.com/Publication/vwLUAssets/EY-Canadian-licensed-producers-report-en/\\$FILE/EY-Canadian-licensed-producers-report-en.pdf](https://www.ey.com/Publication/vwLUAssets/EY-Canadian-licensed-producers-report-en/$FILE/EY-Canadian-licensed-producers-report-en.pdf)



manufacturing. Currently the industry employs around 100K – 250K people, and nearly 90K are in plant-touching companies.⁷⁶

People who can scale businesses and ramp up supply chain operations, without letting costs run out of control, will be needed to develop logistics networks, build and negotiate supplier contracts and drive efficiency in warehouse distribution. Personnel who can navigate the regulatory environment around packaging and labelling will be crucial, whilst people with specific skills for different niches of fresh products with specific shipment needs, will be needed for cold chain distribution.⁷⁷

Brands are cashing in

The growth of both the industry, as well as the jobs within, will be driven by the broad range of retail identities, amongst other things, that will emerge as the market begins to mature. Budget, mainstream, premium and luxury will all find sound footing in the legal cannabis market.⁷⁸ Designer aesthetics and branding offer unique opportunities for designers to leverage their creativity beyond a cannabis leaf design onto a t-shirt. For example, one company, Tetra, has seen great success in marketing their new luxury rolling papers along with lighters and ashtrays.

The emergence of different market segments within the cannabis sector corresponds with the industry's evolving business model. In the early industry, there was a strong, committed sense of activism and a few trailblazer businesses operating with little infrastructure and generating minimal profits. Now, however, we are seeing the emergence of two broad categories, namely boutique, niche retailers and multi-location, multi-state and vertically integrated enterprise operations. Naturally, boutique businesses will command a loyal customer base, who will pay more for the perceived quality of uniqueness of the product offered, while enterprise businesses will scale to compete heavily on price and build brands with mass appeal.⁷⁹

As with most markets, brands will be crucial in surviving the inevitable downward pressure on prices that will occur as supply increases. Companies that are insulated by volatile price swings will be the ones who have developed a brand that resonates well with consumers. It has been found that large producers who have several different brands in their portfolios do well in the market. Additionally, successful brands tend to have a large variety of products on offer, as to meet every different need their customer base might have.⁸⁰

By November of 2017, the brand share of the cannabis market in Colorado alone had doubled to 38% from 19% in 2014. Meanwhile, in Colorado, Washington, Oregon, and California the top 5 edibles brands in each state own more than 40% of the market, and in Colorado and Washington the top five concentrates brands capture more than 70% of the market.⁸¹

⁷⁶ <https://www.forbes.com/sites/debraborchardt/2017/02/22/marijuana-industry-projected-to-create-more-jobs-than-manufacturing-by-2020/#368a7f353fa9>

⁷⁷ <http://www.argentus.com/spotlight-on-cannabis-supply-chain-challenges-in-canada/>

⁷⁸ <https://bdsanalytics.com/bds-analytics-top-10-cannabis-market-trends-2018/>

⁷⁹ <https://www.cannabisbusinessexecutive.com/2016/12/2017-cannabis-industry-trends-businesses-need-know/>

⁸⁰ <https://www.ganjapreneur.com/how-to-survive-in-the-increasingly-competitive-cannabis-industry-according-to-data/>

⁸¹ <https://bdsanalytics.com/bds-analytics-top-10-cannabis-market-trends-2018/>

Banks won't handle marijuana money: problems of working with cash

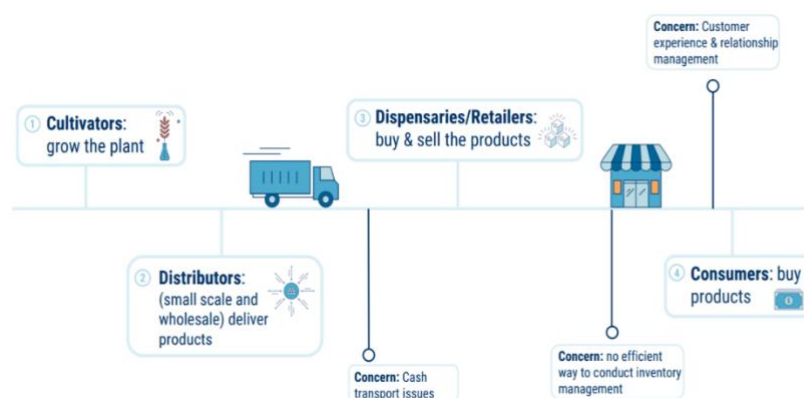
While the development potential of the industry is certainly far-reaching, it remains handicapped by the way in which banks and credit unions don't quite know what to do about cannabis businesses. Nearly two-thirds of America's states have legalized pot sales for certain uses, but the federal government still classifies marijuana as a "Schedule 1" drug, on a par with heroin. Banks that handle marijuana money can be charged with money laundering. Pot businesses, therefore, are stuck working with cash. This results in a number of dilemmas relating to tax and salary payments creates a massive security risk given the amount of cash on site that will be held in cannabis businesses.⁸²

The complex web of federal regulations that deter banks from working with legal dispensaries starts with the federal government requiring banks and financial firms to file "suspicious activity reports" that help federal investigators detect and uncover criminal enterprises. The added cost of adhering to these extra rules is often transferred onto the cannabis business itself, with most businesses having to pay a financial premium just to open a bank account.⁸³

Challenges surrounding market profitability includes the need to leverage existing technology to achieve cost savings and operational efficiencies that will be critical for survival when companies begin to rapidly grow in the wake of legalization. Basic business functions such as payroll, paying vendors and auditing are extremely challenging in the current legal climate.⁸⁴

Canada dominates the global trade route

In terms of the global trade route of cannabis, two key exporters dominate international trade: Canada and the Netherlands. The legal international cannabis trade is currently limited to medical distribution, clinical research and compassionate access, meaning that cannabis for recreational use cannot, as of yet, legally cross-national borders. Given that Canada is the first G7 nation with a national medical cannabis system, they have rapidly emerged as the worldwide leader in medical exports. Germany, whose parliament legalized medical marijuana in January 2017, is Canada's largest export destination.⁸⁵



⁸² <https://www.economist.com/the-economist-explains/2018/01/22/why-marijuana-retailers-cant-use-banks>

⁸³ <https://www.brookings.edu/research/banking-regulations-create-mess-for-marijuana-industry-banks-and-law-enforcement/>

⁸⁴ https://www.cbinsights.com/reports/CB-Insights_Cannabis-Revolution-Briefing.pdf?utm_campaign=cannabis-trends_2018-04&utm_medium=email&hsenc=p2ANgtz-9dVP8CgtrW_GfND5F1_AKI5dILO6UeHYvGZCh4vSpCqz-md7nZkH6cD2dsZKnr74ljwqLNTL1sdR6l8DBLqWXSJ1ff4w&hsmi=62664740&utm_content=62664740&utm_source=hs_automation&hsCtaTracking=10afaa31-5427-49f4-8b02-0d0496523017%7C9b3e9bc9-d841-4fc9-bce6-da5ca2b35187

⁸⁵ <https://www.leafly.com/news/industry/legal-international-cannabis-trade-already-exists-mapped>

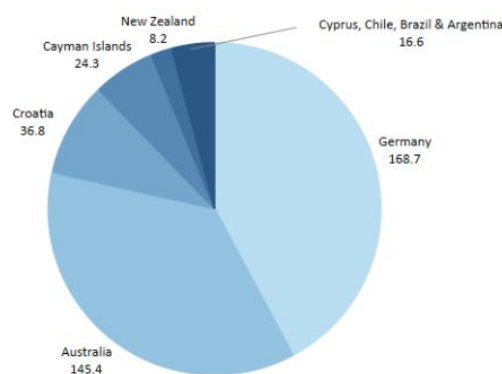
Canada's cannabis market presents particularly lucrative opportunities in the context of the country positioning itself as a key player in the global cannabis arena. As many countries around the world begin to seek a safe and reliable source of cannabis, they are increasingly turning to Canada, who have emerged as the safest bet.⁸⁶ In 2017, Canada exported 522 kilograms (more than 1,150 pounds) to Germany, the Czech Republic, Israel, and Australia, an increase of more than tenfold from 2016.⁸⁷

Global cannabis trade:⁸⁸



Oil exports will likely prove more lucrative because of their versatile nature and widespread applications. The oils are easier and less expensive to transport, given that they're generally allowed in most countries with some form of medical cannabis program, even those that limits medical cannabis in other forms. Indeed, these oils are often the first form of cannabis that countries legalize.

Current status of oil exports from Canada in kilograms:⁸⁹



Missing from this global market is the United States. Federal and state laws still forbid any state from accepting medical cannabis imports.

⁸⁶ <https://www.cbc.ca/news/business/medical-marijuana-canadian-export-1.4470407>

⁸⁷ <https://www.thestranger.com/weed/2018/06/27/28310782/the-canadian-cannabis-forecast>

⁸⁸ <https://www.google.co.il/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&ved=2ahUKEwio2bH02IrdAhUPN0wKHAEgC0kQjxx6BAgBEAl&url=https%3A%2F%2Fwww.leafly.com%2Fnews%2Findustry%2Flegal-international-cannabis-trade-already-exists-mapped&psig=AOvVaw371kujFrhxh386j5pXhLz4&ust=1535372094558637>

⁸⁹ <https://mjbizdaily.com/canadas-cannabis-oil-exports-rise-300-boosted-by-german-demand/>



Disruptive Tech

While the cannabis industry continues its rapid expansion from infancy to maturity, not only will the future of cannabis agriculture gravitate toward technology-based systems, but so too will the entire market. Cannabis firms are expected to get onboard with innovations that enable efficient systems to cut costs in what is poised to be a highly competitive sector.⁹⁰

Given that the industry is still in its early stages, there is plenty of room for new players with good ideas to establish first-mover advantage. One such focus has been forming a viable intersection between cannabis and e-commerce, not just as a marketplace, but to digitize the entire experience for companies, as well as the customers.

Namaste Technologies, for example, is attempting to build a digital ecosystem for medical cannabis patients around the world wherein they simplify the experience of patients by enabling digital consultations with a doctor or nurse practitioner by phone or computer. The patient would then be able to shop for a variety of products online after their consultation.⁹¹

The collaboration between cryptocurrencies and cannabis is another hot topic in the space, especially due to the refusal of several financial institutions that provide businesses in the industry with funding. Cryptocurrency is seemingly emerging as a viable solution for people in the cannabis space seeking financial partnerships and support. Additionally, from a commerce perspective, digital currency can be privately used to purchase cannabis for users with privacy concerns.⁹² Some cannabis related cryptos include Potcoin, Budbo, and Hempcoin.

There is much excitement within the industry regarding the way in which blockchain can facilitate growth with technology known as “seed-to-sale tracking.” Blockchain has the potential to stand as a supply-management tool that allows users to share and track the history of a product’s life cycle. It can provide complete transparency on the type of strain being used, including where the crop was raised and how it was distributed.⁹³

Another company disrupting the space is Eaze, a cannabis delivery app. While traditional marijuana delivery usually involves searching for a nearby dispensary, ascertaining its delivery policy, texting in an order and hoping for the best, Eaze offers medical marijuana patients cannabis at their doorsteps within 20 minutes. So far, it has been exceptionally popular amongst the baby boomer generation.⁹⁴ Not only does Eaze deliver reliably, but it also leads other apps in transaction volume and legislative muscle. Crucially, it was one of the first apps of its kind to analyze the data on the back end and use that information to fuel expansion. Eaze has investment from Snoop Dogg’s Casa Verde Capital.

Company’s such as Ceria Beverages are hoping to take full advantage of the current focus on alternative methods of consuming cannabis. Ceria isn’t a traditional brewery but is instead focused on making cannabis beer and hopes to release a THC-infused lager by the beginning of next year. Industry

⁹⁰ <https://cannabisnow.com/cannabis-industry-trends/>

⁹¹ <https://business.financialpost.com/business-trends/where-cannabis-meets-e-commerce>

⁹² <https://hightimes.com/business/major-trends-cannabis-industry-2018/>

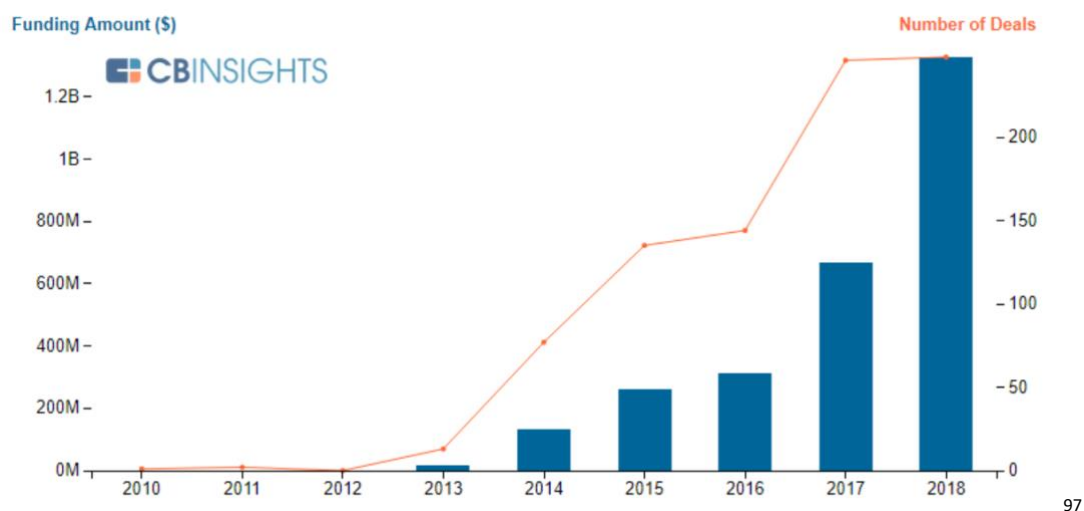
⁹³ <https://banyanhill.com/pot-blockchain-mega-trend/>

⁹⁴ <http://adage.com/article/digital/weed-people-cannabis-delivery-meets-mobile-data-science/312683/>

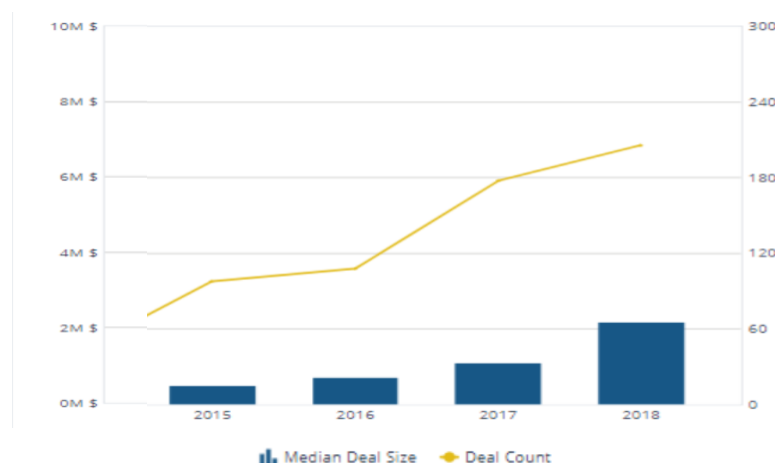
insiders predict that beverages will be the largest sector of “edibles” by far.⁹⁵ Opportunities in the cannabis space include distribution, as well as the use of data to manage logistics.⁹⁶

Cannabis deals are growing rapidly

As the legal cannabis market starts to gain traction, both the number of deals as well as the value of total funding is beginning to rapidly grow. In 2017, for instance, the total value of funding was around 2X that of the previous year in the US alone.



The increase in deals is indicative of the way in which investors are hungry to capture a portion of the industry, whilst the increase in median deal size demonstrates the compelling demand from VCs to hedge their bets on a market promising significant returns over the next decade.⁹⁸



⁹⁵ <http://www.grubstreet.com/2018/08/why-beer-made-with-marijuana-is-so-exciting.html>

⁹⁶ <https://www.ganijapreneur.com/how-to-survive-in-the-increasingly-competitive-cannabis-industry-according-to-data/>

⁹⁷ <https://www.cbinsights.com/search/deals/?sdate=2010-01-01&edate=2018-10-14&comLists=299668&limit=25&offset=0&displayType=chart&chartTab=activity>

⁹⁸ https://my.pitchbook.com/search-results/s1281582/deal_chart

Investments over the past decade have so far exceeded \$2.71B, across nearly 1000 deals.

\$2.71bn

Total Funding

866

Deals

\$3.62M

Avg. Deal Size

\$840K

Median Deal Size

Additionally, five of the largest acquisitions in the industry all occurred within the last few months of 2018:⁹⁹

- Aurora Cannabis acquired CanniMed Therapeutics for \$1B, which is indicative of the wave of consolidation occurring in the Canadian cannabis market. Aurora is a medical cannabis producer and distributor, whilst CanniMed has significant experience in servicing the medical cannabis-market.¹⁰⁰
- In a similar ballpark, MedMen (one of the most recognizable brands in the industry) acquired medical-marijuana dispensary chain PharmaCann in a \$682M all-stock transaction in October 2018.¹⁰¹
- Aphria, which focuses on medical marijuana and cannabis oil, bought Nuuvera for \$670M as well as Broken Coast Cannabis for \$185M, also a medical cannabis company.
- In a fascinating move which marks the continued foray by alcohol companies into the cannabis space, Constellation Brands (the seller of Carona beer), spent \$3.8B to add to an already existing 9.9% stake in Canopy Growth Corp. Their total stake is now around 38%.

Firms providing capital to the sector

As the institutional money starts to stream into the cannabis market at an unprecedented rate, it is interesting to note that there are a relatively small number of firms providing the capital to cannabis companies. The key firms providing capital are heavily intertwined and seemingly invest alongside each other in almost every notable deal – indicating that there is certainly space for players to enter the game, and that the landscape in this regard is still exceptionally early stage.

- In terms of the most active investors, **7thirty Opportunity Fund** has an exceptional accelerator called Canopy Boulder, essentially a mentorship-driven seed-stage business accelerator and investment fund with a broad focus on marijuana as well as ancillary products. They've made a total of 93 investments in the space, with 23 of those coming within the last 24 months. As for 7thirty Opportunity Fund themselves, they currently have 3 investments in notable cannabis companies with phenomenal potential. BDS Analytics is a market trends and consumer insights leader in the space, whilst PathogenDx delivers disruptive testing technology to the Botanicals, Cannabis Food, and Agriculture Industries. Furthermore, OurCrowd has recently entered into partnership with the 7thirty Opportunity Fund to set up a new \$30M global cannabis technology venture capital fund.¹⁰²

⁹⁹ <https://www.fool.com/investing/2018/03/01/deals-deals-and-more-deals-in-the-marijuana-indust.aspx>

¹⁰⁰ <https://www.bloomberg.com/news/articles/2018-01-24/marijuana-growers-aurora-cannimed-said-to-reach-deal-on-merger>

¹⁰¹ <https://www.businessinsider.com/marijuana-retailer-medmen-acquires-pharmacann-for-682-million-2018-10>

¹⁰² <https://www.timesofisrael.com/ourcrowd-7thirty-set-up-30-million-fund-to-invest-in-cannabis-tech/>

- Snoop Dogg's **Casa Verde Capital** continues to make investments in ancillary companies with long term potential such as Eaze (mentioned above), Leaflink, Green Bits, Merry Jane and, more recently, Dutchie, a new online delivery business. Their first fund had \$50M in capital whilst their second fund (currently funding) aims to have a significant \$200M. Currently they focus primarily on investments in data and analytics but in the future hope to invest in distribution platforms and payment solutions.¹⁰³
- **Lerer Hippeau Ventures** is an NYC based VC with investments in digital media and eCommerce. Notably, both Casa Verde and Lerer Hippeau invested in Vagnt in March of this year. Vagnt hopes to become the leading employment resource for the cannabis industry.¹⁰⁴ The two firms have also made an investment in Leaflink together, whilst Lerer Hippeau has an additional position in Herb, a cannabis content website.¹⁰⁵ They have assets under management (AUM) of \$585.20M.
- **Poseidon Asset Management** is a dedicated cannabis fund focused on investing in areas like agricultural technology, SaaS and Data Analytics.¹⁰⁶ They rank 11th on Pitchbook in terms of active investors, with 11 in the last five years and two in the last six months. Their last two investments were in Flow Kana, a premier sustainable sun grown cannabis focusing on the craft farm ecosystem, and Wurk, a workforce cannabis solution for cannabis.
- **Gotham Green Partners** led the \$22M Flow Kana round with a \$15M investment alongside Poseidon. Since November 2017, Gotham Green have participated in four deals and are essentially a New York-based private equity firm that invests in cannabis and cannabis-related enterprises on a global scale.¹⁰⁷
- **Phyto Partners** also ranks within the Pitchbook top ten. They are a venture capital fund investing in businesses operating in the cannabis space. They offer accredited investors a professionally managed vehicle to get involved in the market. They recently announced that they received capital commitments from limited partners totaling \$14M.¹⁰⁸ This funding includes follow-on participation from LPs in Phyto's first fund, Phyto Partners I, LP (Phyto I) launched in 2015.¹⁰⁹ They just participated in the Series A round of Front Range Biosciences, a leading agricultural biotech company specializing in tissue culture propagation of high value crops.¹¹⁰ Phyto also participated in the Eaze and Leaflink deal alongside Casa Verde, as well as the Wurk deal alongside Poseidon.
- **Salveo Capital** is also on these deals, a private investment fund focusing on cannabis. According to Pitchbook, Salveo have invested in Wurk twice, as well as Flow Kana. Notably, they're investors in Tokyo Smoke as well. They recently announced that they have acquired a

¹⁰³ <https://www.cashinbis.com/snoop-doggs-firm-casa-verde-capital-chooses-cannabis-investments-cannabis-companies/>

¹⁰⁴ <https://www.newcannabisventures.com/cannabis-jobs-platform-vangst-2-5-million-capital-raise-led-by-lerer-hippeau/>

¹⁰⁵ <https://techcrunch.com/2017/08/29/herb-seed-funding/>


¹⁰⁶ <https://poseidonassetmanagement.com/about-us/>

¹⁰⁷ <https://www.businesswire.com/news/home/20180702005300/en/Flow-Kana-Closes-22-Million-Series-Financing>

¹⁰⁸ <https://www.nasdaq.com/press-release/phyto-partners-closes-on-14-million-for-2nd-cannabis-venture-capital-fund-20180607-00410>

¹⁰⁹ <https://www.newcannabisventures.com/cannabis-investment-fund-phyto-partners-raises-14-million/>

¹¹⁰ <https://www.prnewswire.com/news-releases/front-range-biosciences-raises-10-million-in-series-a-financing-300724344.html>



minority equity interest in PathogenDx, a provider of DNA-based pathogen testing kits for the cannabis, botanical, food and agriculture industries.¹¹¹ Salveo are raising a \$25M fund.

- **Altitude Investment Management** also went in on the PathogenDx round, which had a total raise of \$3.4M. Altitude is a US-based, global venture capital fund that invests in early-stage to growth companies in the cannabis space. Alongside Poseidon and Salveo, they bought into Wurk too. Altitude has AUM to the value of \$18.7M.¹¹²
- Amongst the pioneers within the cannabis investment space is **Privateer Holdings**, backed by Peter Thiel. Earlier this year they raised \$100M to back more cannabis startups, valuing the firm at over \$600M.¹¹³ Privateer's most recent investment was in The Goodship Company – which is capitalizing on the edible craze by creating cannabis-infused baked goods for the mass market.
- Also leading the pack in relation to the amount raised is **Tuatara Capital**, a cannabis private equity firm which **raised \$93M** in 2016 for investments in the industry. Earlier this month they purchased a Connecticut based medical cannabis cultivator¹¹⁴, while earlier this year they invested \$3M in Eyechronic, a leading marketing platform for cannabis brands.¹¹⁵ Tuatara has significant assets under management of \$93M.
- **Merida Capital Partners** is a private equity fund with AUM of \$50M focusing on cultivation technologies and services associated with the evolution of cannabis as a product. They've made a total of 14 investments in the space, including two with Gotham Green (Steep Hill Las and GrowGeneration), one with Phyto (Hemp Business Journal) and one with Poseidon (MainStem Goods and Services). Notably, all of their deals have been completed within the last 12 months, with Freedom Leaf Inc. being the most recent. Freedom Leaf Inc. is a leading go-to resource for people looking for information pertaining to medical marijuana and industrial hemp industries.¹¹⁶
- **Y Combinator** is a California-based seed-stage accelerator making investments focused on software and web services. Thus far they've made investments in California Dreamin', a marijuana soda, Confident Cannabis, a stock-exchange-like platform for weed and Meadow, a marijuana delivery startup described as the "Amazon of weed".

¹¹¹ <https://www.businesswire.com/news/home/20180717005095/en/Salveo-Capital-Announces-Investment-PathogenDx>

¹¹² <https://www.newcannabisventures.com/new-york-cannabis-fund-altitude-investment-partners-raises-18-7-million/>

¹¹³ <https://techcrunch.com/2018/01/25/privateer-cannabis-startups-high-times/>

¹¹⁴ <https://www.pehub.com/2018/08/tuatara-capital-buys-connecticut-medical-cannabis-cultivator/#>

¹¹⁵ <https://www.prnewswire.com/news-releases/eyechronic-receives-3-million-in-funding-from-tuatara-capital-300591700.html>

¹¹⁶ <https://insiderfinancial.com/freedom-leaf-inc-otcmktsfrlf-surging-new-capital-injection>



Industry Updates

These are the latest updates through to Q4 2018 of the main developments in the cannabis industry:

- **Cronos Group** announced on December 7th, 2018, that tobacco giant **Altria** is buying a 45% stake in Cronos for around \$1.8B (2.4B in Canadian dollars).¹¹⁷ It's the second-biggest deal in the history of the cannabis industry, trailing only Constellation Brands' \$4B investment in Canopy Growth.
- Quintessential Capital Management and Hindenburg Research has issued a highly publicized short report against the cannabis leader **Aphria**, claiming that the company had spent over \$200M on tiny entities in Jamaica, Colombia, and Argentina that it acquired from companies affiliated with Aphria shareholder Andy DeFrancesco.¹¹⁸ "We believe something very sinister may be happening with this company," said Grego, who runs the hedge fund firm Quintessential Capital Management.
- **Canopy Growth Corporation** announced in December 2019 that it acquired **Storz & Bickel** in a €145M (\$220M CAD) deal. The German company, maker of the Volcano, is globally recognized as a leader in the design and manufacturing of medically approved vaporizers.¹¹⁹
- On May 2018, **Aurora Cannabis** bought rival **MedReleaf Corp** for C\$3.2B (\$2.51B) in the biggest deal yet to unify major Canadian pot growers.¹²⁰ The deal is the latest in a wave of mergers in the industry as marijuana producers, emboldened by pot legalizations in Europe and a number of US states, seek to cut costs and gain scale.
- In a move that seems to strengthen its position for the long run of the vaping leader game, on December 2018, big tobacco player **Altria**, has reportedly injected a fresh \$12.8B in exchange for a 35 percent stake in **Juul Labs**, in a deal that is valuating **Juul** as a \$38B company.¹²¹

¹¹⁷ <https://www.fool.com/investing/2018/12/08/altria-buys-a-18-billion-stake-in-cronos-group-3-t.aspx>

¹¹⁸ https://seekingalpha.com/article/4225889-investigating-aphria-gabriel-grego-hindenburg-research?mod=article_inline

¹¹⁹ <https://www.leafly.com/news/industry/canopy-growth-acquires-storz-bickel>

¹²⁰ <https://www.reuters.com/article/us-medreleaf-m-a-aurora-cannabis/aurora-to-buy-medreleaf-for-2-5-billion-in-biggest-ever-pot-deal-idUSKCN1IF16U>

¹²¹ <https://techcrunch.com/2018/12/20/juul-labs-gets-12-8-billion-investment-from-marlboro-maker-altria-group/>



Conclusion

As the industry data shows, the cannabis industry is set to bloom, with growth potential that is both broad and deep at a phenomenal rate. The kind of momentum at which this industry is moving forward is reminiscent of the early days of the Silicon Valley software boom. While the industries are different, the value may be as true for cannabis as it was for software.

The fact that many governments do not accept proceeds from the industry has opened countless opportunities for companies to service the industry which also greatly attributes to the value of the cannabis market. Many companies are setting up around the products to support and provide for the needs of the category. Just as some of the banks will not deal with money from cannabis, some major corporations do not want to be involved directly with proceeds of the industry either. This means these affiliated companies can jump into the sector with both feet to offer a unique solution to the industry and carve out a niche for themselves. The potential demand for safe, secure, and easy online e-commerce, inventory control, logistics, shipping, and customer service etc. means there is no end to the current opportunities. As the industry is still in its early stage, the opportunities are endless. There is a lot of room to become, for example, to become the leading online shopping experience for cannabis related products, like an 'Amazon' of the cannabis tech sector.

Although this report documents an overview of the cannabis sector, it is still interesting to explore in more depth the different aspects to the story. Just like the early days of the Silicon Valley, it's about identifying the right opportunity at the right time and taking action while the sector is still in its infancy. For investors, entrepreneurs and multinationals, now is the time to take a serious look at this industry.



About the Authors

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About OurCrowd

OurCrowd is a global investment platform, bringing venture capital opportunities to accredited investors worldwide. A leader in equity crowdfunding, OurCrowd is managed by a team of seasoned investment professionals and is led by serial entrepreneur Jon Medved. OurCrowd vets and selects companies, invests its own capital, and invites its accredited membership of investors and institutional partners to invest alongside in these opportunities. OurCrowd provides support to its portfolio companies, assigns industry experts as mentors, and creates growth opportunities through its network of strategic multinational partnerships. The OurCrowd community consists of almost 30,000 accredited investors from over 180 countries. OurCrowd has raised over \$1 billion in commitments and invested in 170 portfolio companies and funds.