



CBD AND HEMP: AN OVERVIEW OF THE GLOBAL MARKET, GROWTH, AND OPPORTUNITIES.

Cannabis Collaborative Conference
Beau Whitney, New Frontier Data
January 23, 2019

CONTENT



- Introduction
- Global Opportunities
- U.S. Updates
- The Farm Bill and the FDA
- Issues and Trends
- Summary

INTRODUCTION

ABOUT NEW FRONTIER DATA



- New Frontier Data is an independent, technology-driven analytics company specializing in the cannabis industry. It offers vetted data, actionable business intelligence and risk management solutions for investors, operators, researchers and policymakers.
- New Frontier Data's reports and data have been cited in over 82 countries around the world to inform industry leaders. Founded in 2014, New Frontier Data is headquartered in Washington, D.C. with additional offices in Denver, CO, London, UK, Bogota, Colombia, and Sydney, Australia.
- New Frontier Data does not take a position on the merits of cannabis legalization. Rather, its mission and mandate are to inform cannabis-related policy and business decisions through rigorous, issue-neutral and comprehensive analysis of the legal cannabis industry worldwide.

THE GLOBAL CANNABIS MARKET

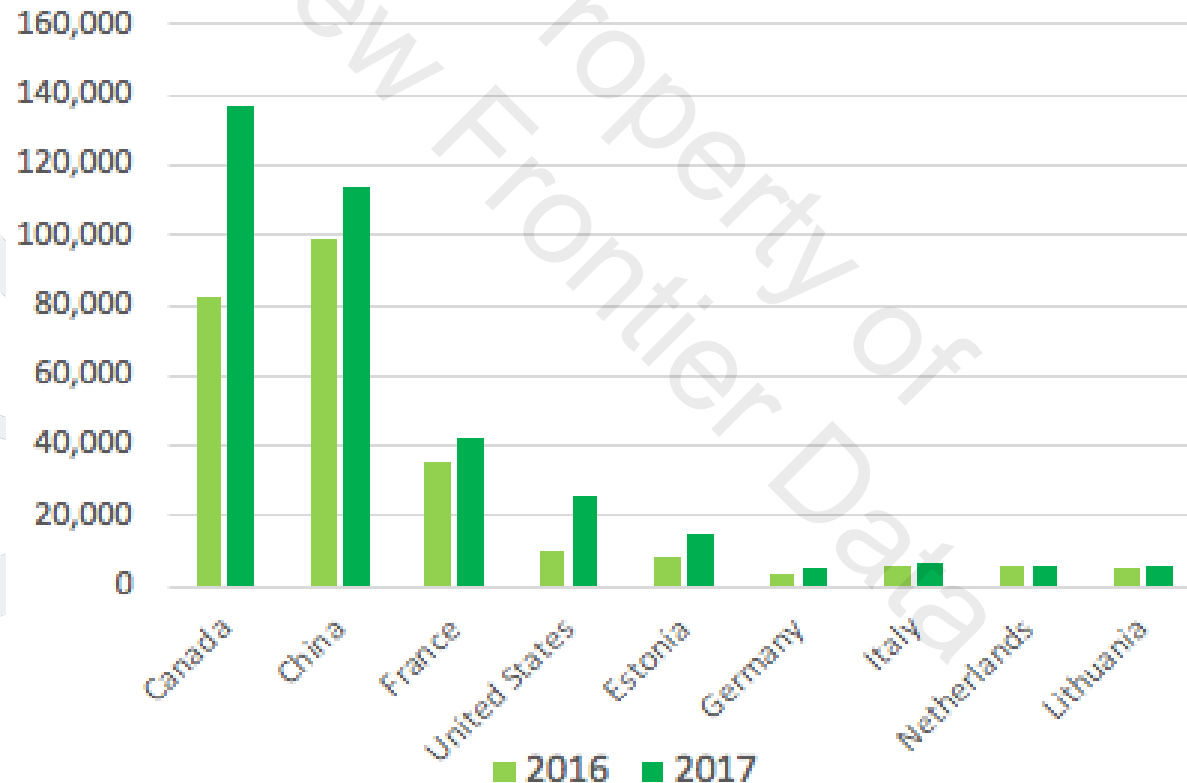




THE GLOBAL HEMP MARKET IS EXPLODING

- 50 countries global have some form of legalized hemp policies (Medical, industrial or research)
- Canada, China and the E.U. are the leaders in terms of exports and production

Global Hemp Cultivation Leaders: Acreage



Source: Health Canada, EIHA, FOASTAT, Vote Hemp and Hemp Business Journal



GLOBAL HEMP TRENDS

- Hemp demand is growing globally.
 - <https://newfrontierdata.com/product/stateofhemp/>
- Many focused on agricultural development, addressing rising healthcare costs and tapping into the export markets.
- Many challenges exist globally including lack of infrastructure, access to water, lack of post harvest processing capacity and lack of expertise.
 - Confusion between lower THC industrial cannabis versus higher THC medical and adult-use cannabis exacerbates this at the policy levels.
- Many countries are targeting the E.U. for medical and industrial access to markets.
 - Oceania looking to support China and S.E. Asian markets
- As global expansion continues, look for international standards to become key barriers to entry and differentiating factors.
 - GMP (Good Manufacturing Practices), GACP (Good Agricultural and Collection Practices, and GSP (Good Storage Practices)

- The Global State of Hemp is currently being offered for pre-sale
- <https://newfrontierdata.com/product/stateofhemp/>

**THE GLOBAL
STATE OF HEMP**
2019 INDUSTRY OUTLOOK

New Frontier[®] data
HempBusinessJournal
a Division of New Frontier Data

HempBusinessJournal
a Division of New Frontier Data

**THE GLOBAL
STATE OF
HEMP**
2019 INDUSTRY OUTLOOK

Sponsored by
HOBAN
S&B
NEARBY

Published by
New Frontier[®] data
© NEW FRONTIER DATA. ALL RIGHTS RESERVED.

New Frontier Data
produces the most trusted
cannabis industry research,
cited in over 80 countries.

Purchase Presale Today:
NewFrontierData.com/StateofHemp

Strength in Knowledge™

AS FEATURED IN:

The New York Times



FORTUNE



CNN Money



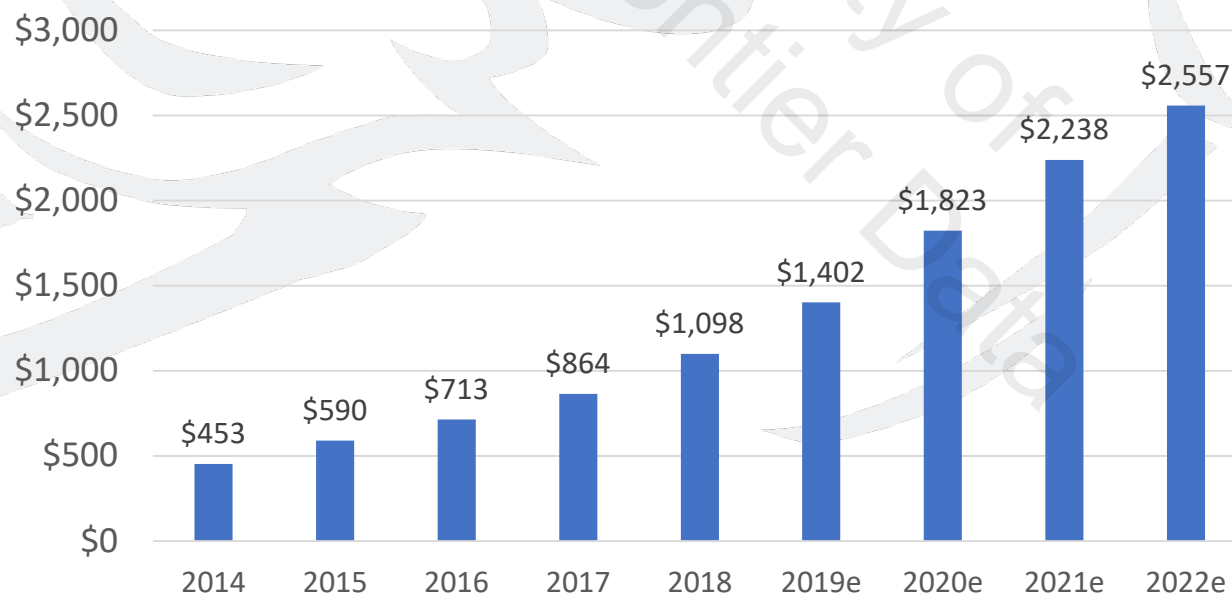
U.S. UPDATE



U.S. HEMP DEMAND IS INCREASING SIGNIFICANTLY

- The U.S. Hemp demand is growing significantly over the next 5 years
- Over 20 states are now allowing some form of industrial hemp production or research
- 40 universities are doing research
- 3,546 licenses have been issued

U.S. Hemp Sales Growth Projections
(USD\$ Millions)



18.4% CAGR

Compound Annual
Growth (2018 – 2022)



U.S. HEMP DEMAND - DETAILS

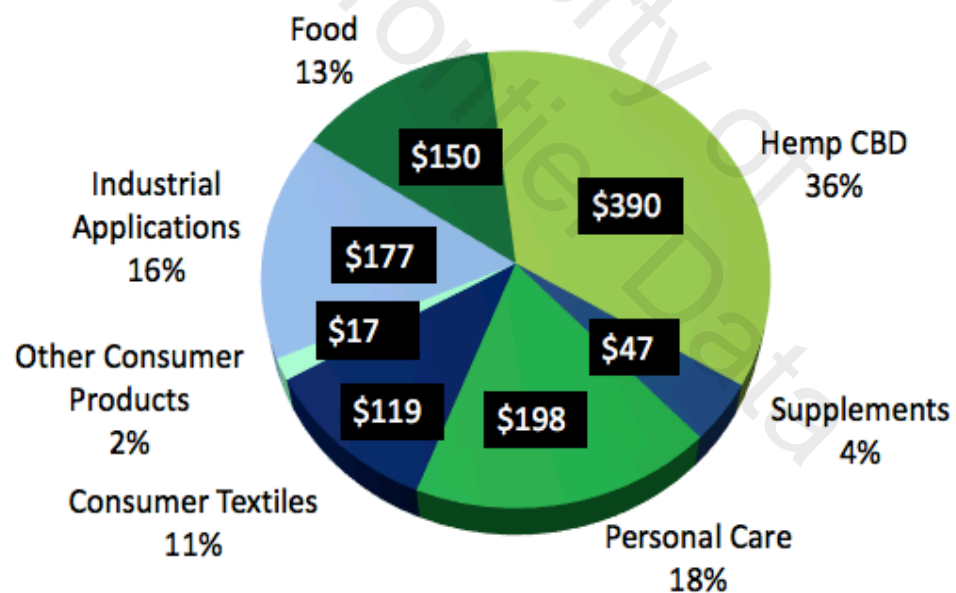
- The passage of the Farm Bill will catalyze growth of the domestic hemp market, but the speed of growth will hinge on how quickly cultivators
- Availability of processing capacity, including large scale harvesting equipment, decorticators to produce textiles, and oil processing technologies will be critical to the market's growth.
- With the passage of the Farm Bill, the hemp-derived CBD market is now looking to the FDA for guidance on CBD's status under the new law. The FDA issued a letter to the industry hours after the Farm Bill passed, and we expect the expansion of the hemp-derived CBD market will hinge largely on how the FDA's regulatory plan unfolds. More information on the FDA and CBD will be available in New Frontier Data's upcoming Global State of Hemp Report.
- These estimates are based on the current primary applications for hemp, which include foods from hemp seed, textiles, and CBD. They do not include estimates for nascent but potential applications including industrial applications (hempcrete, bio-plastics, bio-fuels, and other applied materials).
- The trajectory of market for these new applications will be highly contingent on factors including federal and state policy, commercial capacity, market interest, and comparative costs relative to available alternatives.



U.S. HEMP MARKETS ARE WIDE RANGING

- With so much emphasis on CBD, other significant markets are potentially being overlooked
- There is significant diversity among hemp products, and this is just the beginning

\$1.1 Billion U.S. Hemp-Based Product Sales by Category in 2018



Source: *Hemp Business Journal* estimates (\$mil., consumer sales)



U.S.A. HEMP - 2018 ACREAGE

- Big jump from Montana
- OR and VT mainly for CBD Oil
- CO, KY, and MT grow for CBD, seeds, fibers

State	2016	2017	2018
Montana	-	542	22,000
Colorado	5,921	9,700	21,578
Oregon	500	3,469	7,808
Kentucky	2,525	3,271	6,700
Tennessee	225	130	3,338
North Carolina	-	965	3,184
North Dakota	70	3,020	2,778
New York	30	2,000	2,240
Nevada	216	417	1,881
Wisconsin	-	-	1,850
Vermont	180	575	1,820
Minnesota	51	1205	710
Pennsylvania	-	36	580
Maine	1	30	550
South Carolina	-	-	256
West Virginia	10	14	155
Washington	-	175	142
Virginia	37	87	135
Massachusetts	-	-	21
Indiana	2	5	5
Hawaii	1	1	2
Nebraska	1	1	0.5
Illinois	-	-	0.1
TOTAL	9,770	25,643	78,176 *
Source: Vote Hemp, Crop Report			
* Includes 10,090,188 square feet of greenhouse or indoor cultivation			

52,533

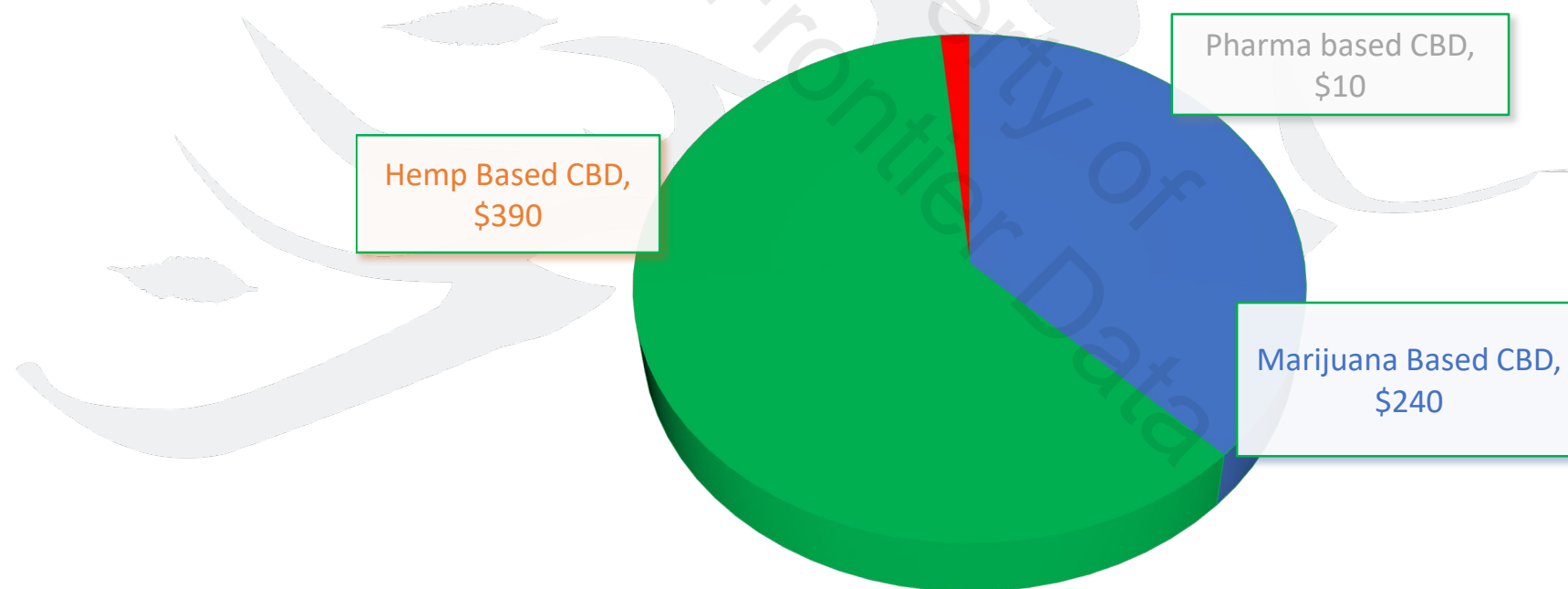
Change in U.S. total acreage
since 2017



U.S. CBD MARKET IS WIDE OPEN

- The U.S. CBD market is divided up between hemp, cannabis for medical and adult use, and pharmaceutical
- Look for all three sectors to expand, particularly for pharmaceuticals

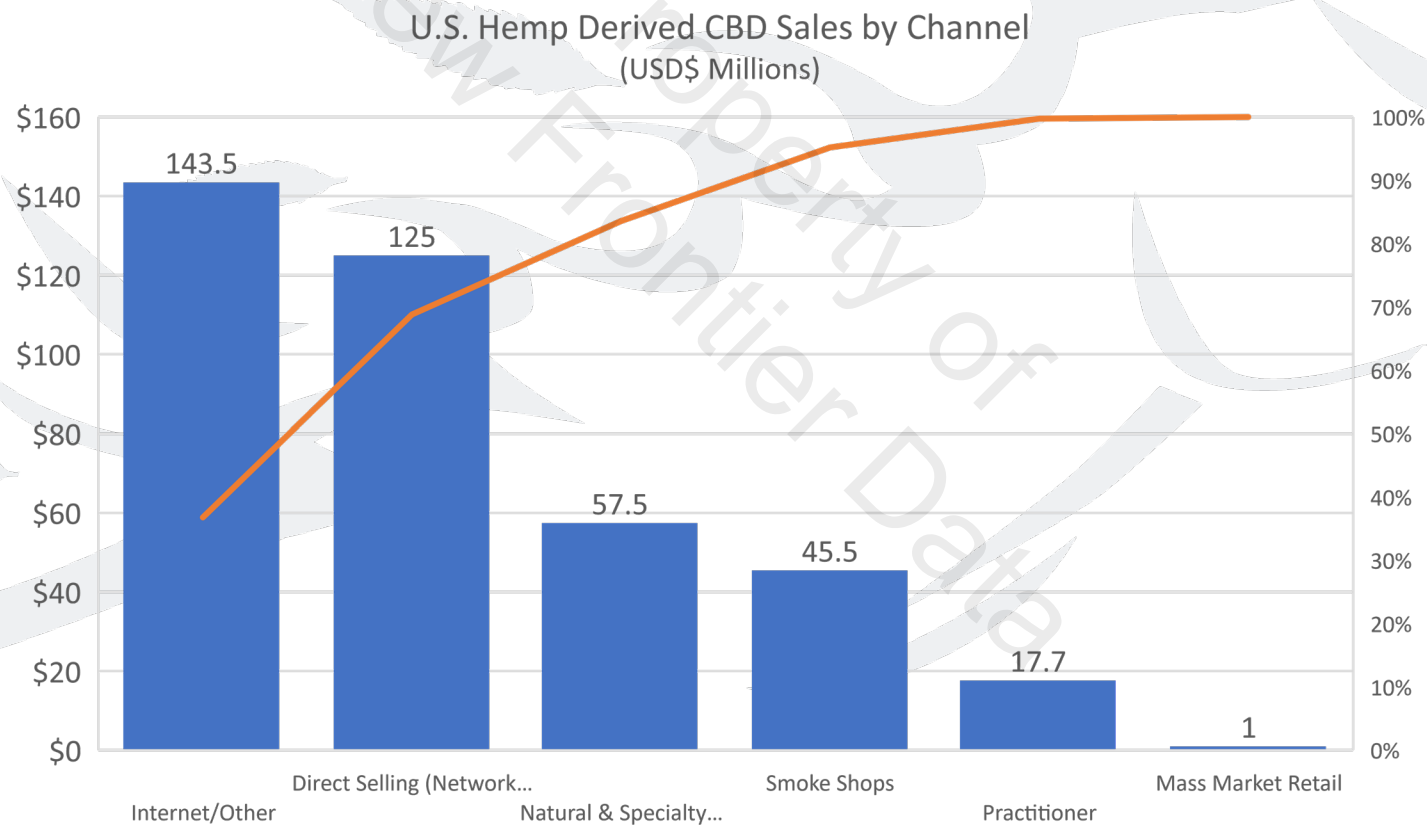
U.S. TOTAL CBD MARKET 2018
(USD\$ MILLIONS)





U.S. CBD MARKET IS WIDE OPEN

- Internet and direct selling are the strongest sales channels
- Mass market retail is virtually untapped



THE U.S. FARM BILL



- Farm Bill was passed in December 2018 and has a significant impact on the U.S. hemp market
- Key Provisions and Implications of the Farm Bill
 - Removes from CSA, limits DEA authority, FDA authority remains in place
 - Hemp businesses can operate like “normal” businesses
 - Allows for banking and other financial services
 - It is now up to the bank to offer financial services, including credit and debit card processing
 - Allows for interstate commerce
 - Assuming marketing, labeling and other food, medical and supplements aspects meet FDA requirements
 - Farmers can get insurance
 - This helps farmers and investors reduce risk

THE FDA AND HEMP

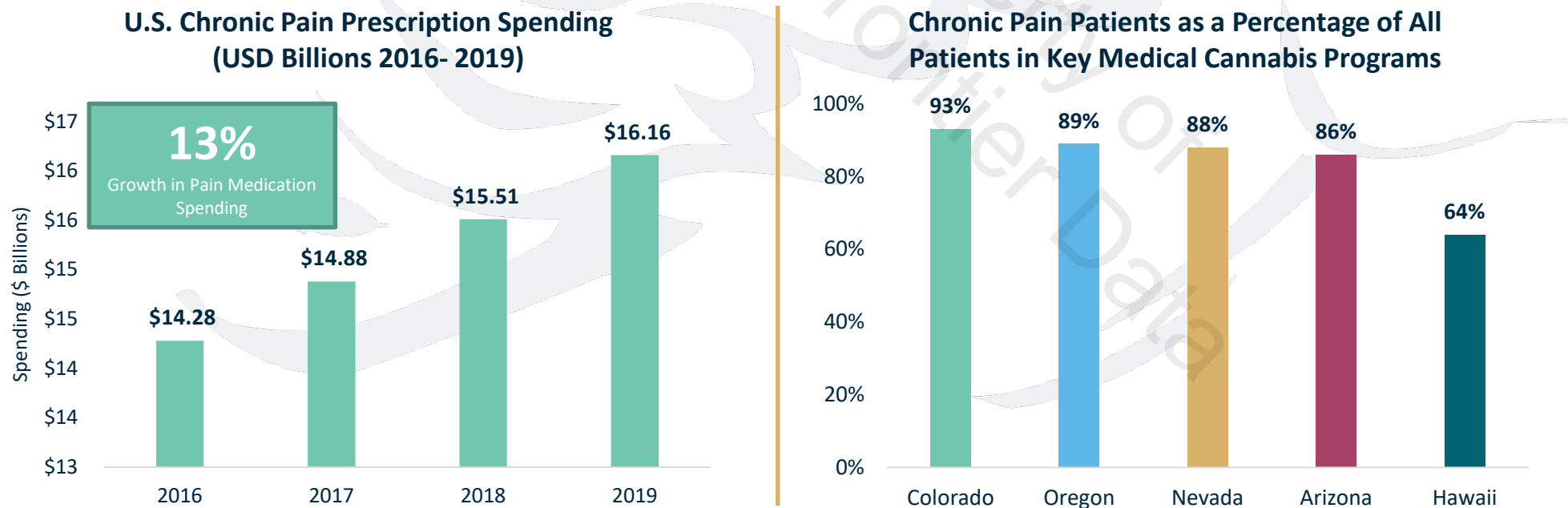


- Although the Farm Bill passed in December 2018, it does not necessarily mean that everything is legal
- FDA published memorandum almost immediately after the signing of the Farm Bill reiterating its hemp policy
- Current policy
 - Needs to be approved by FDA if it is to be considered a medicine
 - If advertised as a dietary supplement, requires FDA approval
 - Foods need to be reviewed by FDA prior to shipping interstate
- Next steps:
 - FDA will need to go through a period of rules making just like any other industry to adjust current rules to conform to new laws
 - Expect 6 – 12 months for review. FDA already announced it wants public input

HEALTHCARE IMPACT: LEGAL CANNABIS USE FOR PAIN; DISPLACING PRESCRIPTION DRUG SPENDING



- As U.S. spending on pain management continues to rise, patients are increasingly turning to cannabis as an alternative therapy. The use of cannabis to treat pain was affirmed by the U.S. National Academies of Sciences which concluded in 2017 that there is “substantial evidence that cannabis is an effective treatment for chronic pain in adults”.
- In medical cannabis states where pain is a permitted qualifying condition, pain patients make up the vast majority of program participants. Furthermore, government spending on pain related medications was 11% lower in medical cannabis states than in non-legal markets.



-11%

Reduction in Government
Pain Medication Spending in
U.S. Medical Cannabis
Markets vs Non-Legal
Markets

CANNABIS ISSUES, TRENDS AND OBSERVATIONS

INDUSTRY ISSUES, TRENDS AND OPPORTUNITIES



- Canadian LP's and big, pharma, tobacco and alcohol will start entering the market for scale and market access
- FDA and state regulators will play a large role in shaping the industry
- Look for increased access to banking and other financial services
- More global standards will be deployed and will create opportunities for differentiation and access to markets
- Cannabis growers from medical and adult use industry will convert
- Industrial applications will expand as will demand for pain related products.
- Mass retail opportunities are nascent

KEY TAKEAWAYS



- Still a tremendous opportunity in hemp, the market is expanding globally and is evolving quickly.
- Local, state and federal regulators play a major role in shaping the market.
 - Policy makers must keep pace with the industry.
- This is a global industry that is impacted by local issues. Think global, act local
- This is just the beginning of the global opportunity

CONTACT US



Beau R Whitney

Vice President and Senior Economist

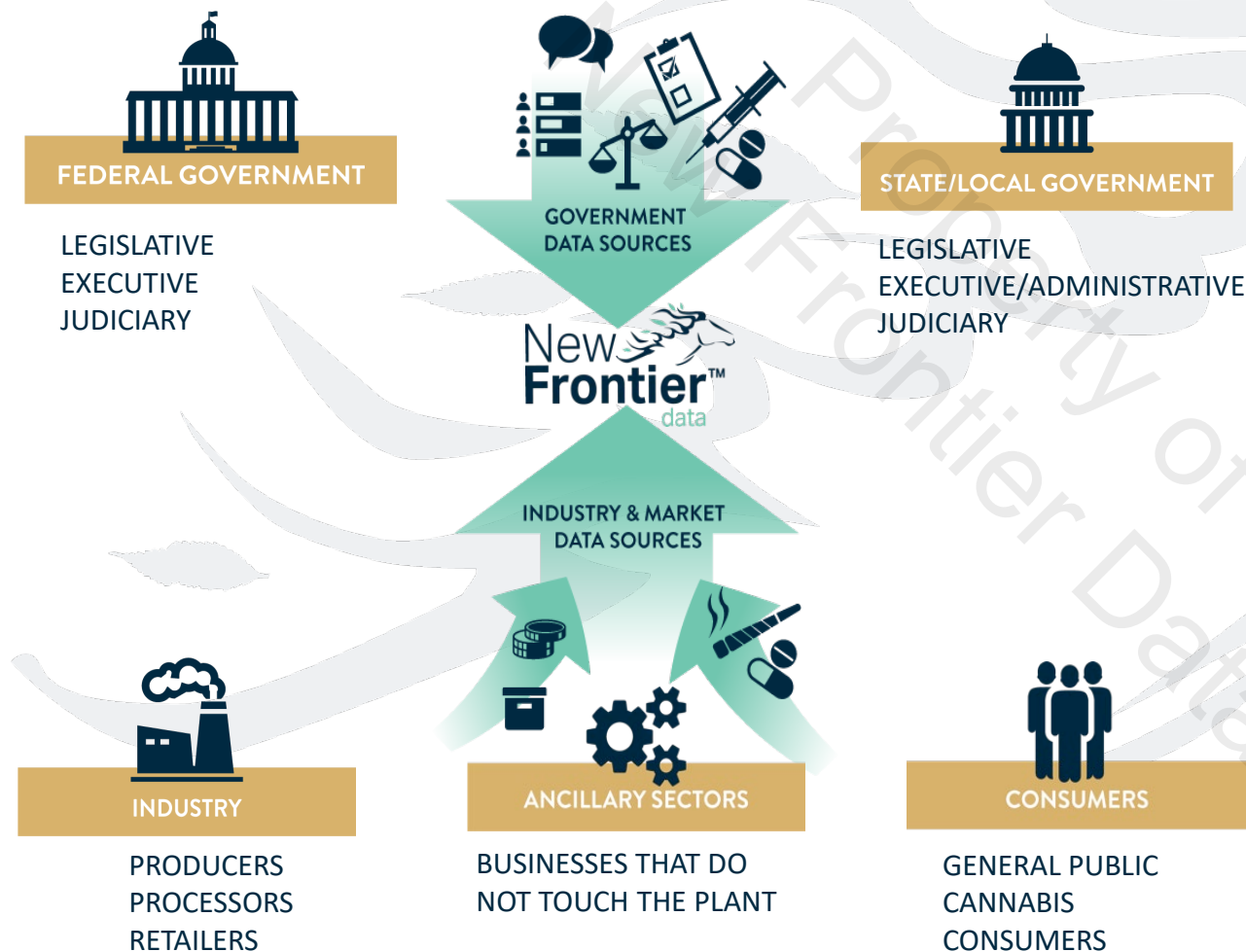
bwhitney@newfrontierdata.com

503-724-3084

www.NewFrontierData.com

@NewFrontierData

OUR DATA COLLECTION APPROACH



**DATA COLLECTED ACROSS
ALL FIVE DIMENSIONS IS
CRITICAL TO
UNDERSTAND AND
EVALUATE THIS NEW
SECTOR**

OUR REACH

- In 2016- Quoted in 45 countries, media reach of 3.3 billion
- In 2017- Over 69 countries, media reach of 5.3 billion
- In 2018- Over 82 countries, media reach of over 6 billion.



Forbes

The New York Times



FOX
BUSINESS

THE WALL STREET JOURNAL

The Washington Post



CNNMoney

TE TechCrunch

Inc.

FORTUNE

The Boston Globe

SHARE OF VOICE



OUR CLIENTS





Strength in Knowledge™

**THE GLOBAL AUTHORITY
IN CANNABIS REPORTING
& INTELLIGENCE**

NewFrontierData.com

📍 WASHINGTON DC, DENVER CO, LONDON, BARCELONA, BEIJING 📞 844 420 3882 🌐 NewFrontierData.com ✉️ Info@NewFrontierData.com

🐦 [@NewFrontierData](https://twitter.com/NewFrontierData) 📘 [FACEBOOK.COM/NEWFRONTIERDATA](https://facebook.com/NewFrontierData) 📺 [YOUTUBE.COM/C/NEWFRONTIERDATA](https://youtube.com/c/NewFrontierData) 📷 [INSTAGRAM.COM/NEWFRONTIERDATA](https://instagram.com/NewFrontierData)

