



Life Cycle Assessment & Business Innovation in Cannabis Industry

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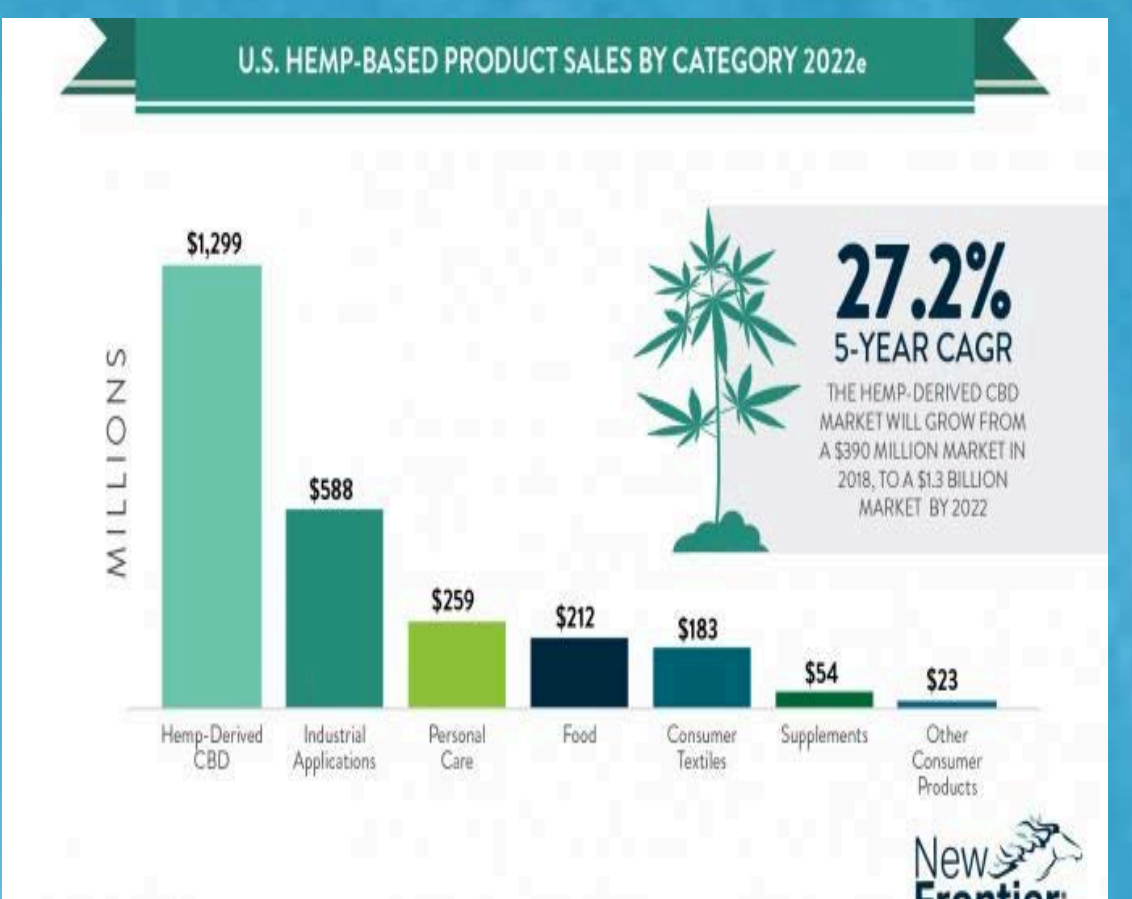
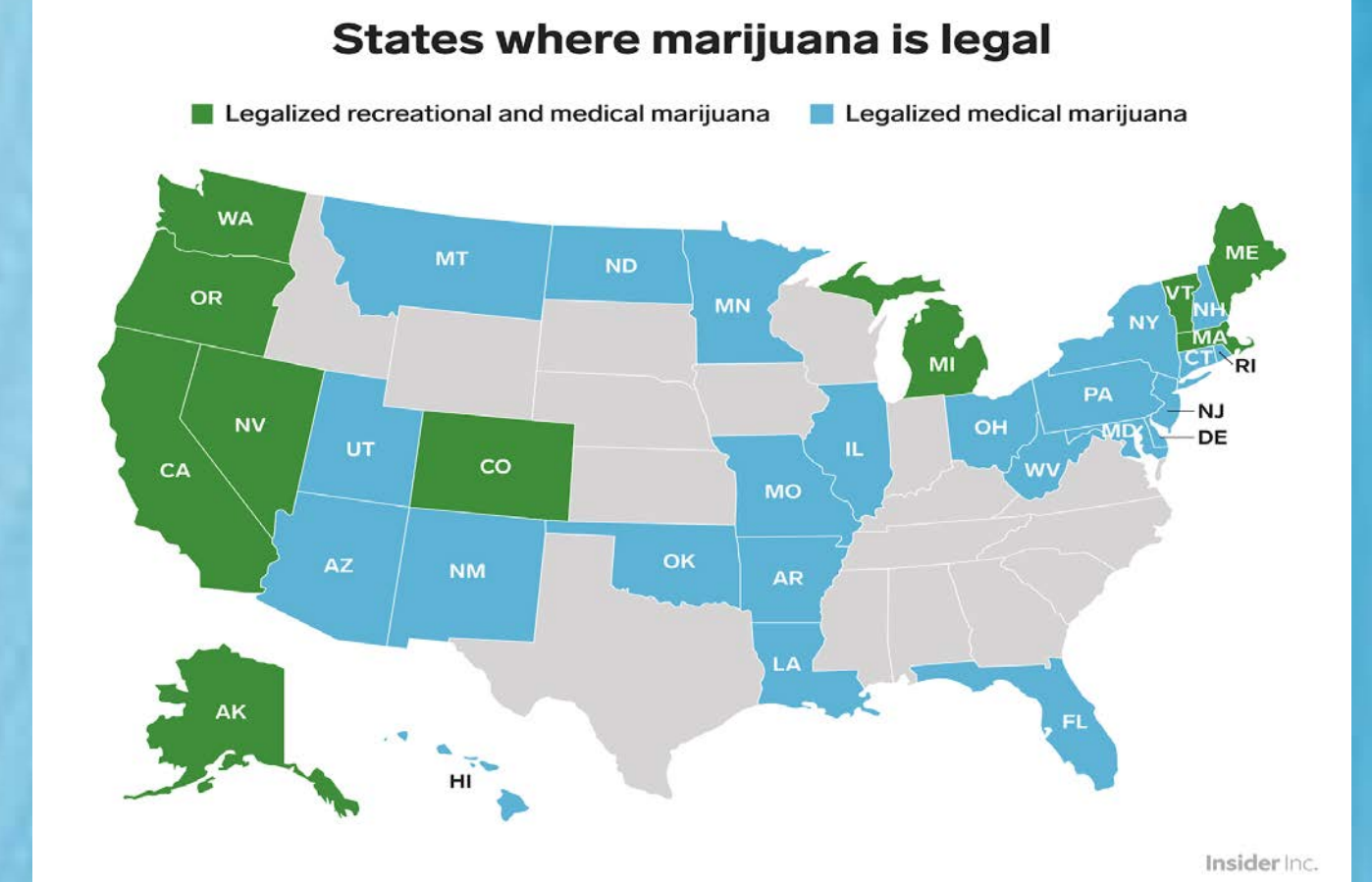


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Introduction

The cannabis industry is experiencing rapid growth with a total of thirty-three states legalizing marijuana for medical use. This includes fourteen which allow adults to legally use the drug for recreational use. These changes has propelled the demand from both recreational and medical users. As the legal cannabis industry continues to develop and grow, public support has increased for legalization of recreational and medical marijuana. An increasing number of investors have recognized this trend. In fact, market research suggests that the legal marijuana market will be worth \$66.3 billion by 2025. As the marijuana industry grows, so do marijuana business. Not only new dispensaries and growers are cropping up, there are a variety of unique and innovative marijuana products and businesses booming. In consideration of this factor, this study researches business innovation in the cannabis industry.



Objectives and Hypotheses

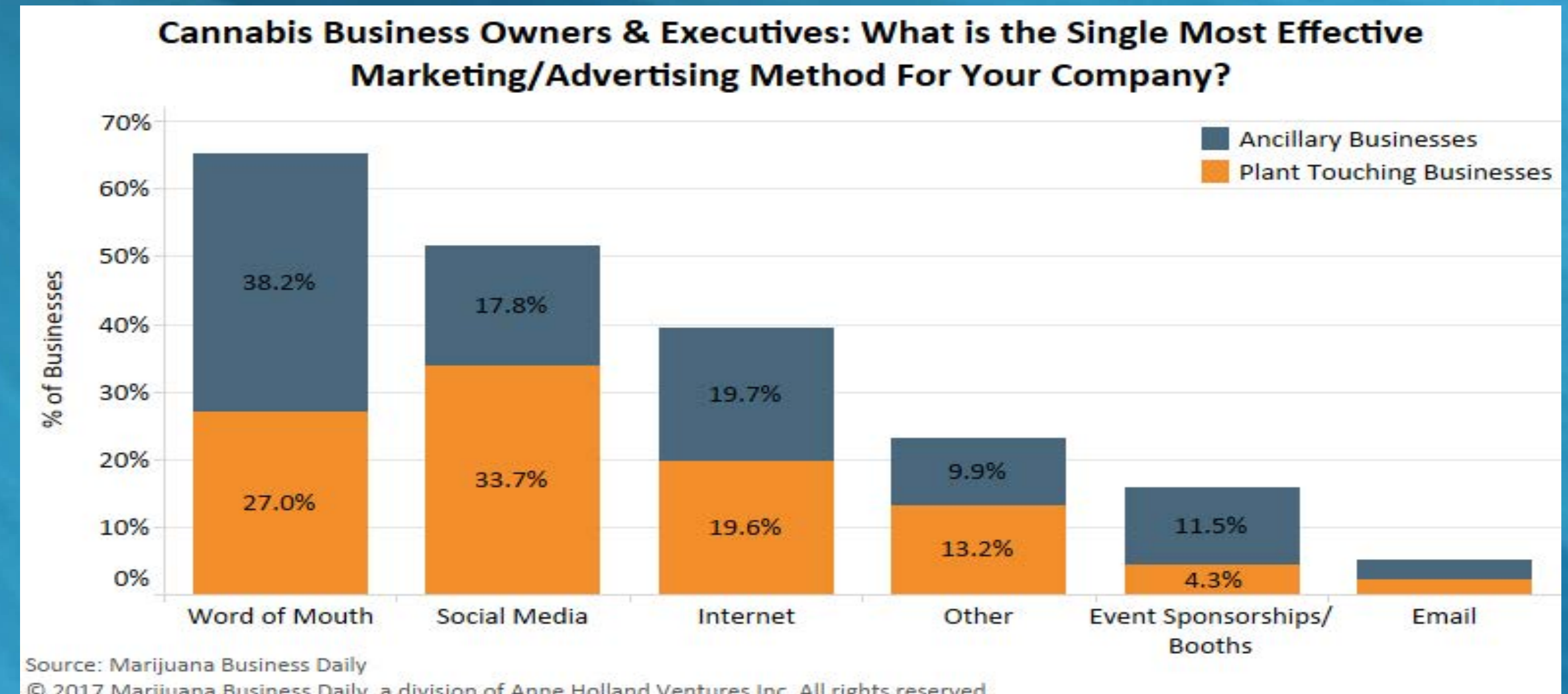
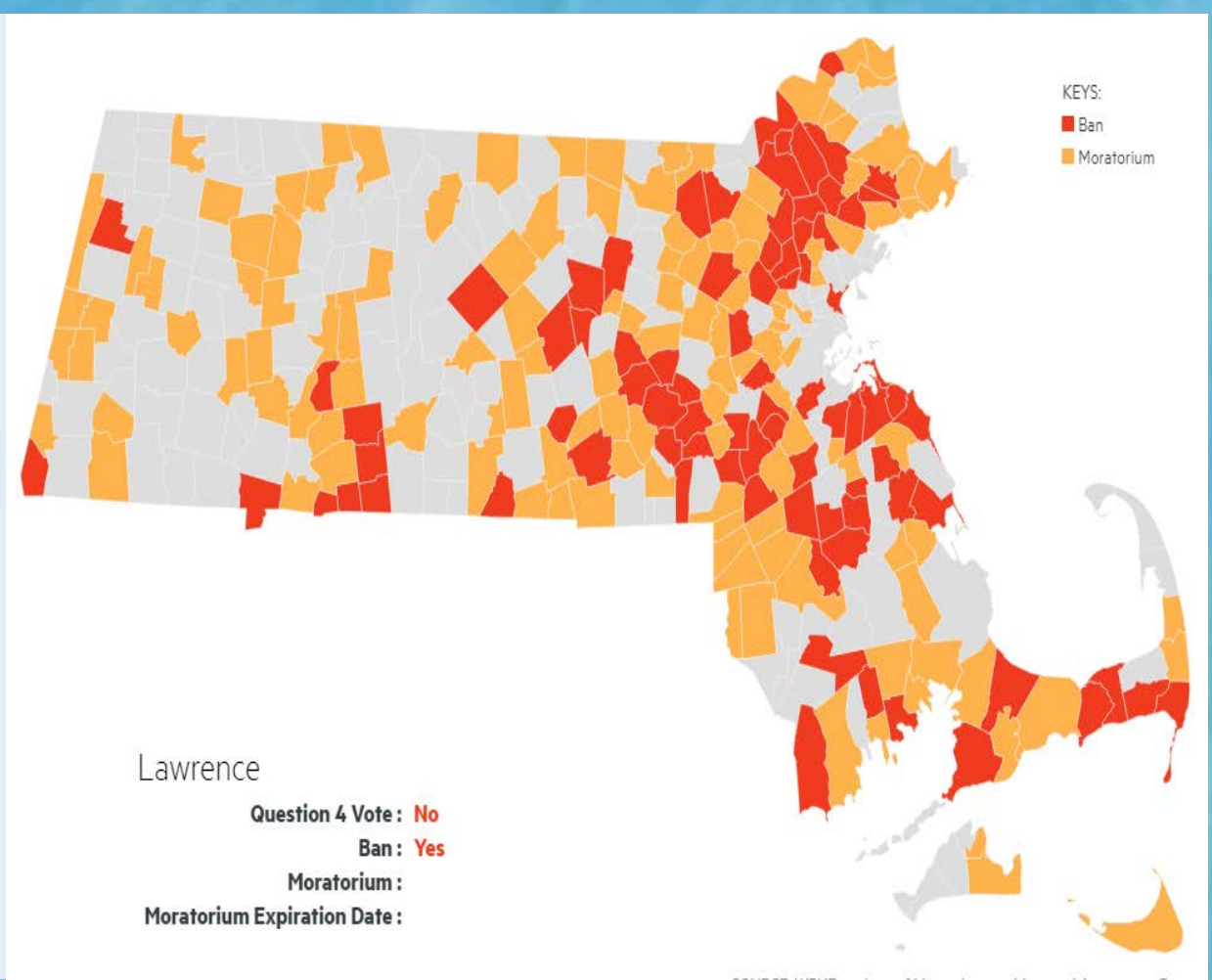
Aim: To study the Cannabis industry for business innovation and profitability
Objective 1: Production & marketing economics of Cannabis in MA
Objective 2: To develop a business plan for innovating Cannabis enterprise
Hypothesis 1: Cannabis industry is profitable in Massachusetts
Hypothesis 2: It is possible to have a successful business plan in Cannabis products

Background

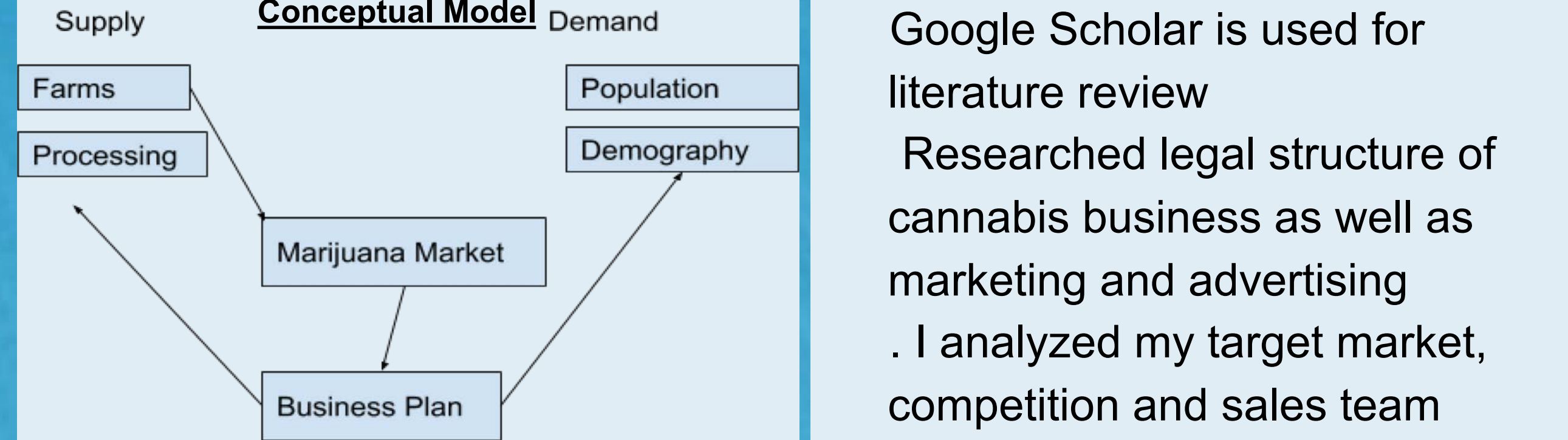
During the first full year of the recreational marijuana business in Massachusetts, dispensaries have made more than \$420 million in sales. Marijuana sales are taxed at a rate of 17% to 20%. That includes 6.25% state sales tax, 10.75% state excise tax, and up to 3% local taxes. The median salary for cannabis workers is 10.7% higher than the median salary in the US. While the median salary for the cannabis industry is \$58,511 per year, the median salary for all US jobs is \$52,863, according to Glassdoor's December 2018 Local Pay Report.

Study area

The climate of Massachusetts is mainly a humid continental climate, with hot, humid summers and cold, snowy winters and abundant precipitation. Summers are warm with average high temperatures in July above 80 °F and overnight lows above 60 °F common throughout the state. In western Massachusetts, 90% of our soil is sandy loam.

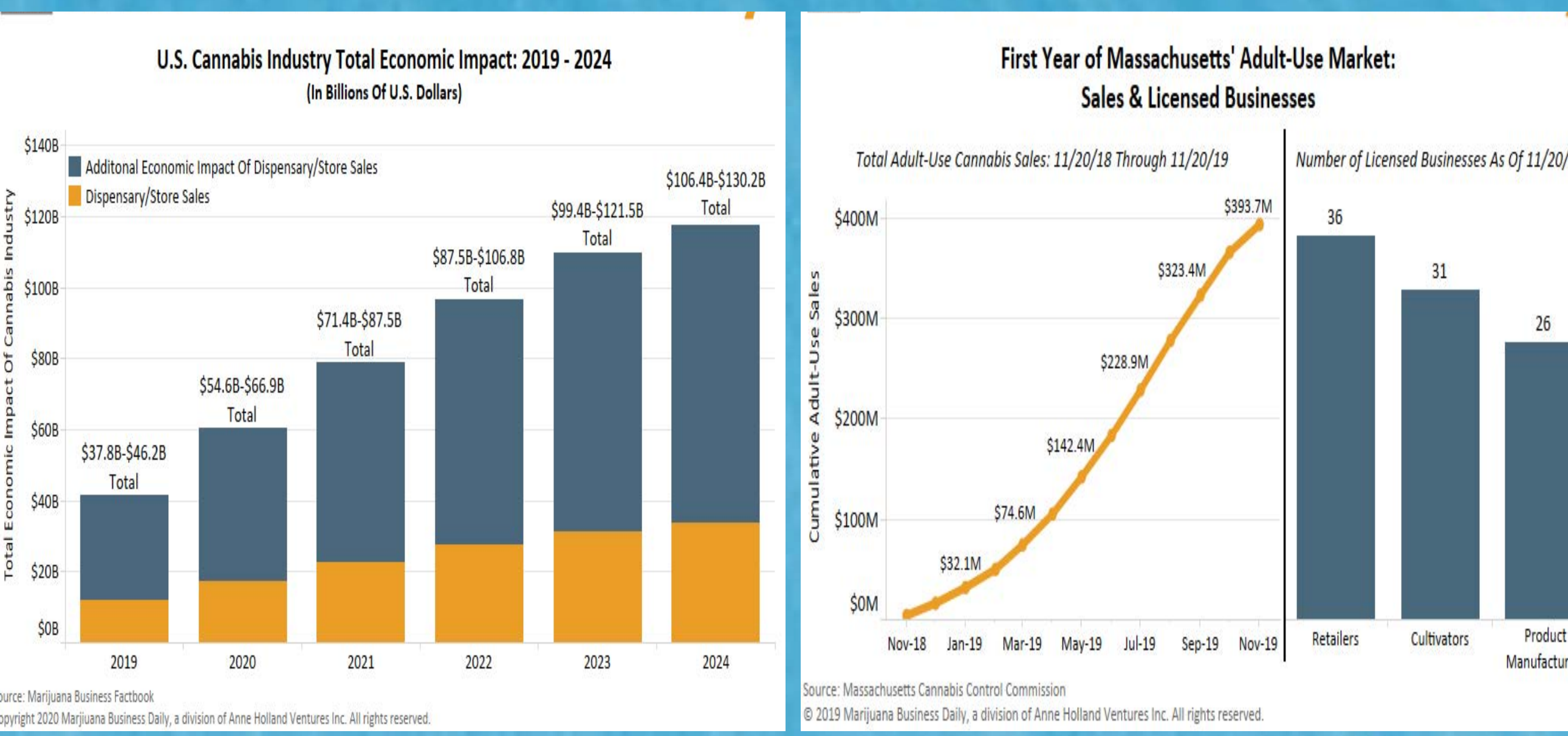


Methods

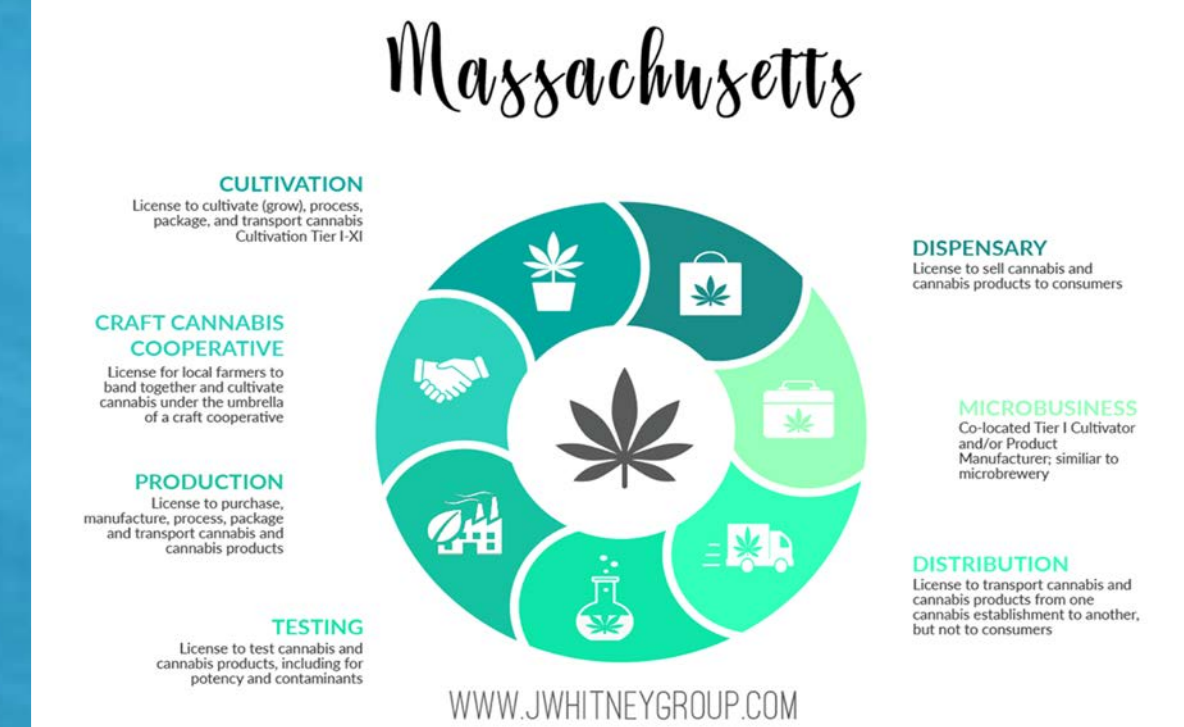


Google Scholar is used for literature review
 Researched legal structure of cannabis business as well as marketing and advertising
 I analyzed my target market, competition and sales team

Results and Discussion

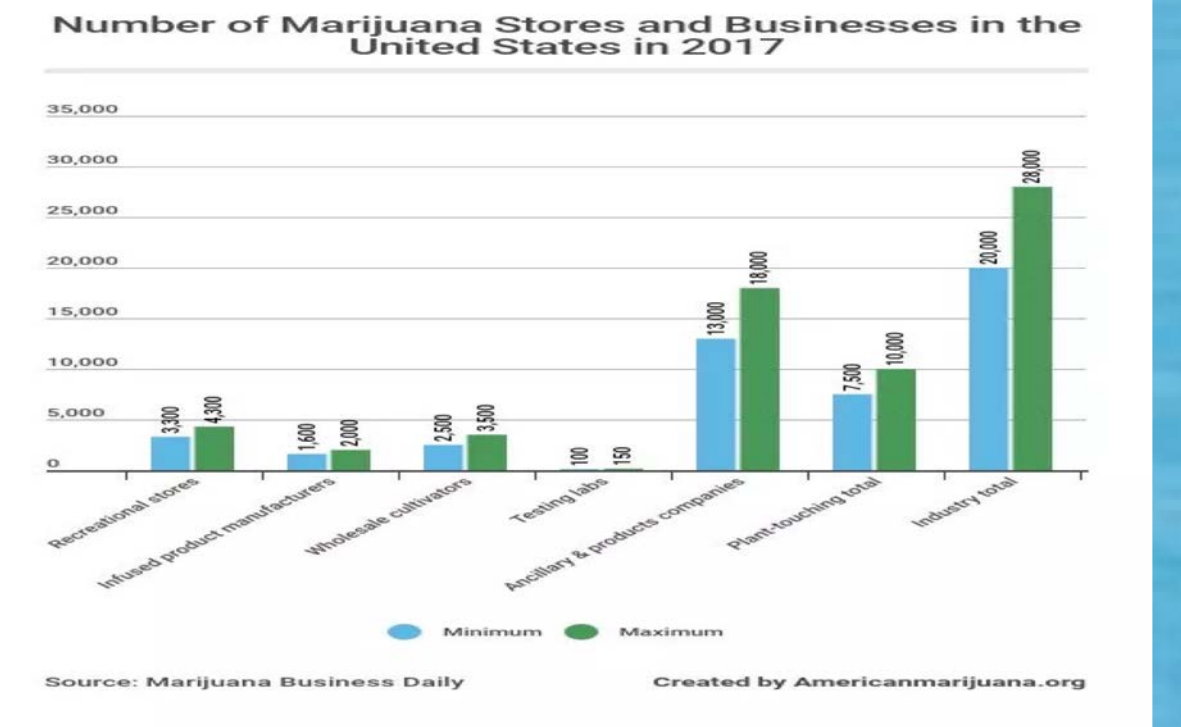


Research	Study	Findings
Author Mitchell C. Olsen (2020)	studied the cannabis industry and its natural laboratory for marketing strategy research.	The legal cannabis industry is growing rapidly in the United States. It presents marketing researchers with a rare opportunity to opening in different geographic areas at distinct times and various levels.
Author Jenna Valleriani (2020)	studied market competition and the emerging legal medical cannabis market in Canada.	The emergence of legal cannabis markets and the future of cannabis legalization in Canada presents an abundant avenue for emerging markets, organizations, and entrepreneurial activities within the cannabis industry.
Author Nehama Lewis (2019)	studied the engagement with medical cannabis information from online and mass media sources.	She found positive engagement towards medical cannabis in the media becoming legalized. With increase in media attention, support for recreational cannabis legalization may be expected to grow.

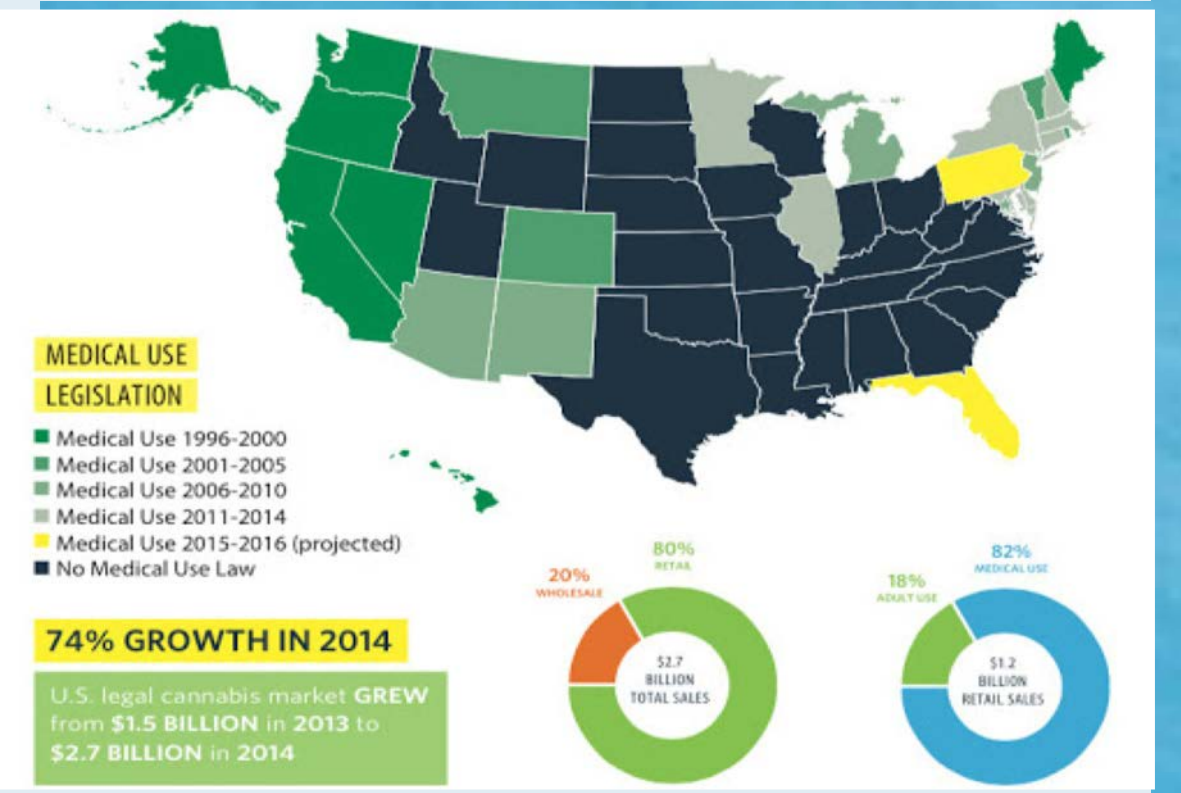


7 types of innovative cannabis businesses

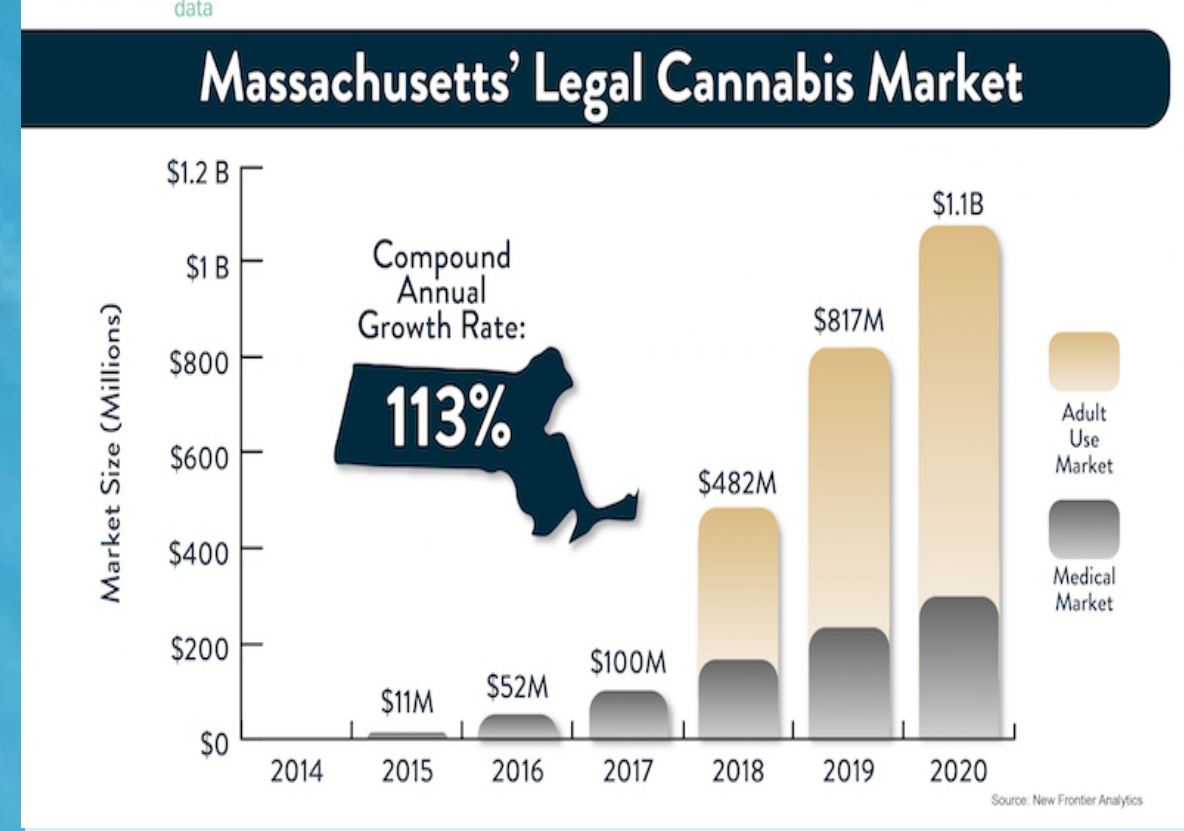
Executive Summary
Opportunity
Problem Summary
Solution Summary
Market
Why Us?
Expectations



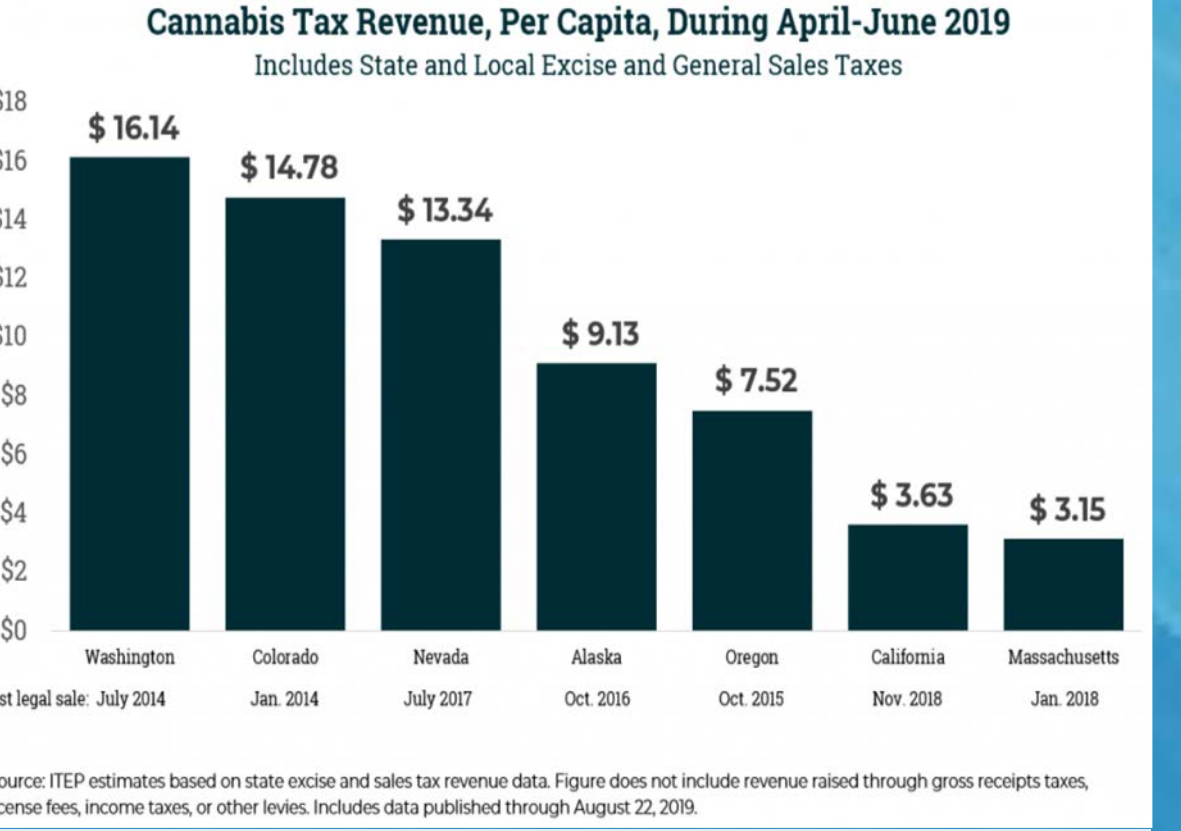
Average of cannabis stores and businesses in MA in 2017



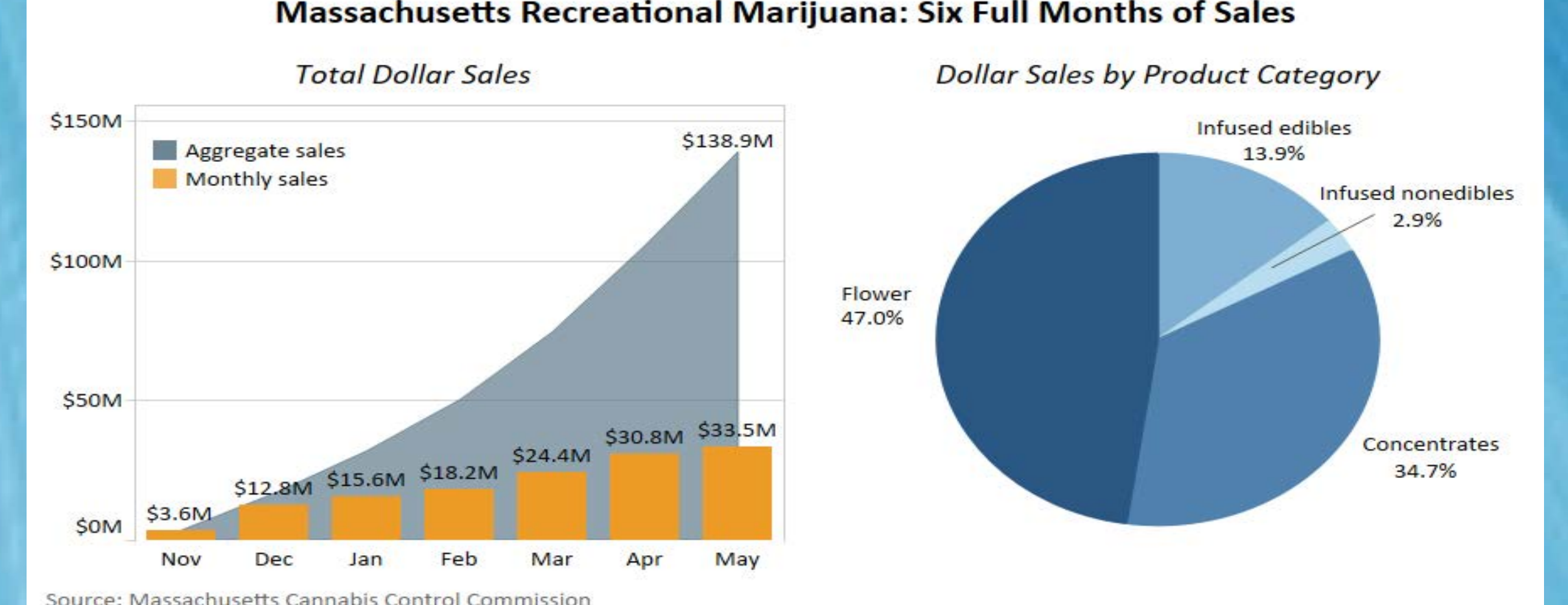
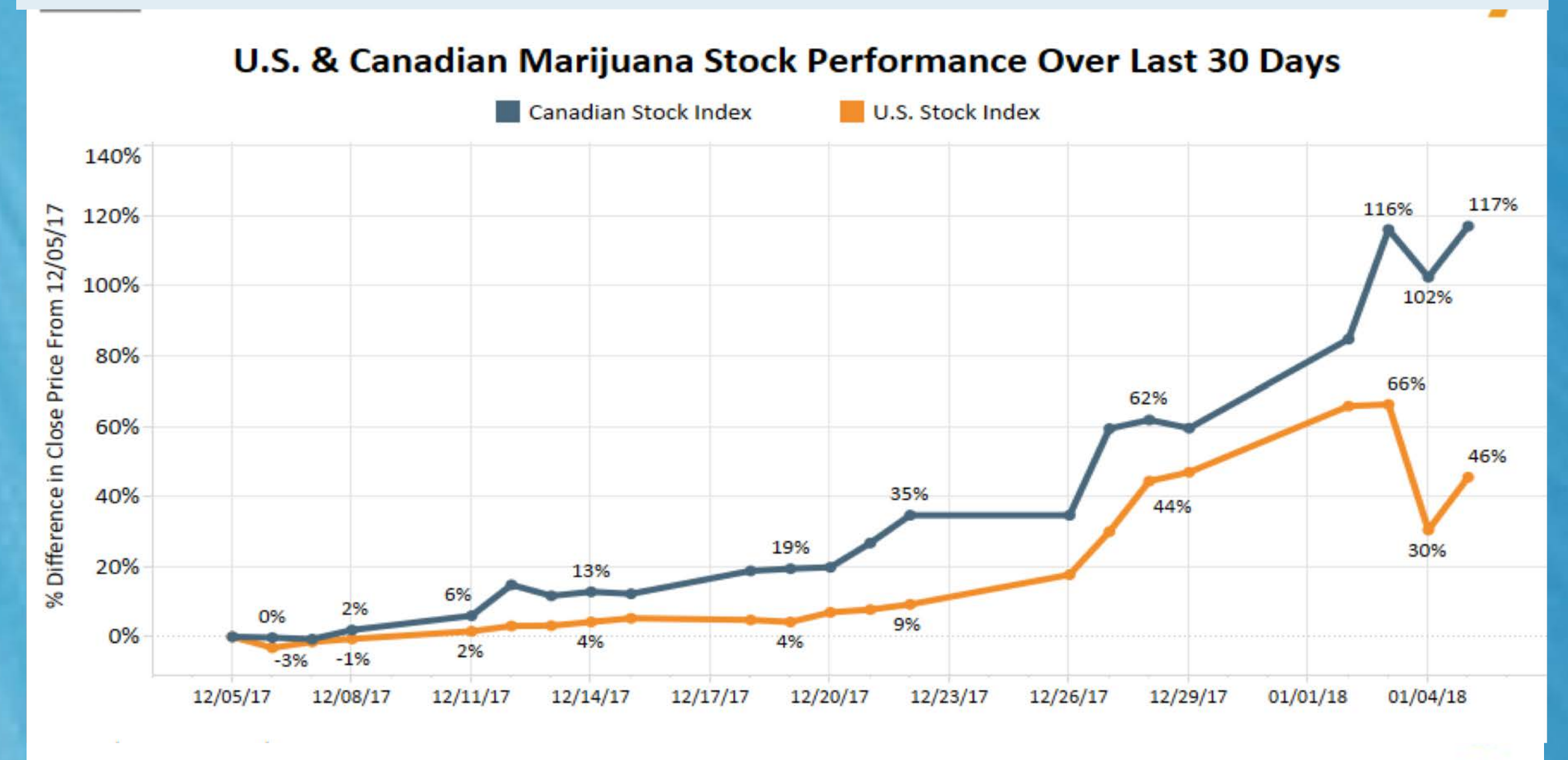
Medical use Legislation in MA and market growth



Bar graph showing increase in cannabis market within MA



Cannabis tax revenue in MA



First graph demonstrates stock performances increase over thirty days. The second table shows the average sale of Cannabis within just six months.

STARTUP COSTS AT A GLANCE

Licensing/Application	\$5K
Real Estate	\$100K annual rent, \$50K renovation
Professional Services	\$50K annually
Staffing	\$250K annually
Business Equipment	\$25K
Security & Surveillance System	\$50K
Marketing/Advertising	\$25K annually
Product	\$1,500/lb
Capital Requirements	\$150K

The average costs to starting a Cannabis business

Business plan:

1. Pick size and type of building for your Cannabis Cultivation Operation
2. Realistic Mission of the company
3. Real Estate details
4. Timeline of Licensing/Permits
5. Leadership Team
6. Financial Estimates/Plan
7. Amount of Funds needed
8. Use of Funds

Cannabis business license types required in MA:

Retailer, Cultivator, Product manufacturer, Independent testing lab, Transporter, Research facility, and Microbusiness.

Application fees in MA: For recreational marijuana businesses, the application fee is \$100 to \$600 for cultivation.
License fees in MA: Medicinal cannabis companies must pay a \$50,000 license fee, whether its new or a renewed license. Recreational cannabis retailers, product manufacturers, and testing labs must pay a \$5,000 license fee. Recreational cannabis cultivators have to pay a license fee ranging from \$625 to \$25,000. Recreational cannabis microbusinesses only have to pay half the fee they would normally pay.

Conclusions

When starting a business in cannabis it comes with many steps. I analyzed the production of cannabis and marketing economics by researching statistics about cost of production. Along with cannabis business license types required in MA and their costs. I also analyzed the basic steps to develop a business plan for innovating Cannabis enterprise by researching marketing economics of Cannabis in MA. With that I came to conclude developing a business plan for innovating Cannabis enterprise would be successful. The cannabis industry is profitable in Massachusetts. Which makes it possible to have a successful business plan in Cannabis products.

Acknowledgements

I gratefully want to thank Dr. Reena Randhir, Director of the STCC STEM Starter Academy and DHE for support. I acknowledge data from MA Cannabis Control Commission