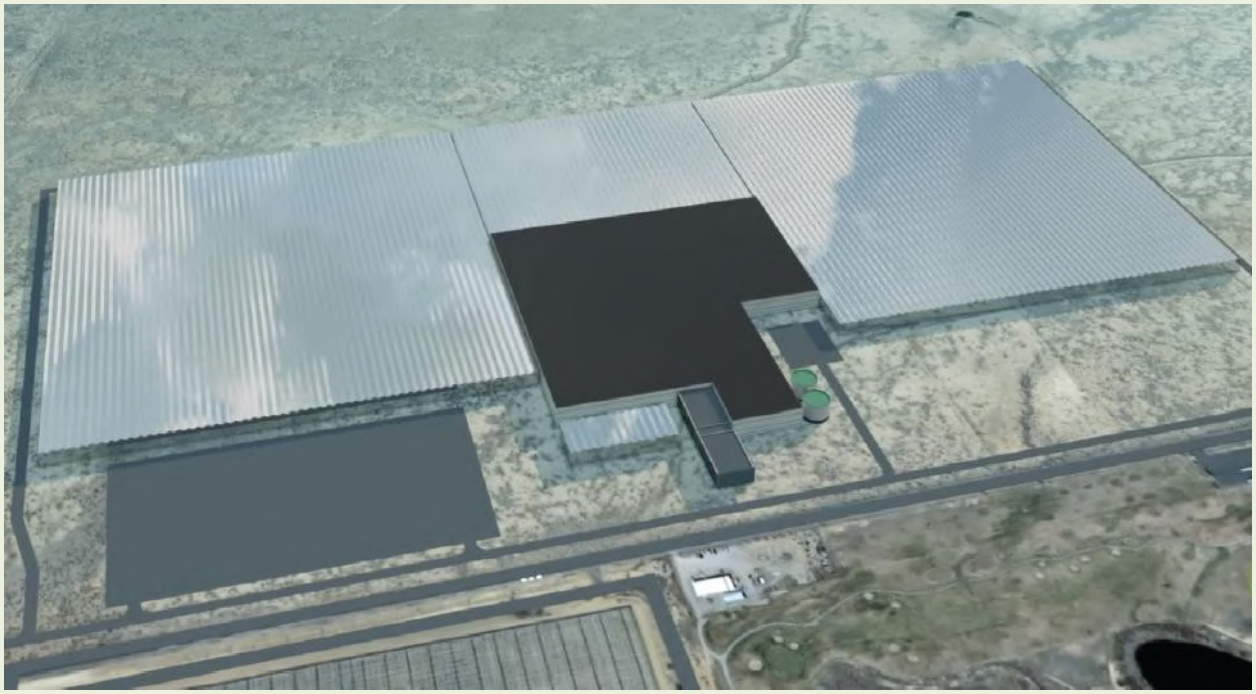
BGC Cannabis Manufacturing and Research Master Project Phase 2

ACTUAL BUSINESS PLAN

Pursuant to 8 CFR §204.6(j)(4)(B) and Matter of Ho

December 2022



Sponsored by:

EB5AN Southwest Regional Center LLC
(USCIS Designated EB-5 Regional Center)
3801 PGA Blvd., Suite 902
Palm Beach Gardens, FL 33410

Contents Private and Strictly Confidential

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bakertilly

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ANY OFFERING OR SOLICITATION WILL BE MADE ONLY TO QUALIFIED PROSPECTIVE INVESTORS PURSUANT TO A CONFIDENTIAL OFFERING MEMORANDUM AND THE SUBSCRIPTION DOCUMENTS, ALL OF WHICH SHOULD BE READ IN THEIR ENTIRETY.

Matter of Ho Element	Business Plan Section
"The plan should set forth the business's organizational structure and its personnel's experience."	**Section 2.0**
"The plan should detail any contracts executed for the supply of materials and/or the distribution of products."	**Section 5.0**
"The plan should list the required permits and licenses obtained…"	**Section 5.0**
"If applicable, it should describe the manufacturing or production process, the materials required, and the supply sources."	**Section 3.0**
"It should contain sales, cost, as well as operating expense and income projections and detail the bases therefore. Most importantly, the business plan must be credible."	**Section 6.0**
"The plan should contain a market analysis, including the names of competing businesses and their relative strengths and weaknesses, a comparison of the competition's products and pricing structures, and a description of the target market/prospective customers of the new commercial enterprise."	**Section 7.0**
"It should discuss the marketing strategy of the business, including pricing, advertising, and servicing."	**Section 7.4**
"It should explain the business's staffing requirements and contain a timetable for hiring, as well as job descriptions for all positions."	**Section 5.0** and **Section 8.2**

1.0 EXECUTIVE SUMMARY

New Commercial Enterprise

Bright Green Corporation ("BGC") is the New Commercial Enterprise ("**NCE**") in which the foreign investors will be investing for the purpose of financing the job creating project. The NCE intends to solicit $458,400,000 from five hundred and seventy-three (573) EB-5 Investors.

NCE Management

BGC is managed by its Board of Directors, which will manage the NCE's day-to-day business operations (Section 2.2.1).

Regional Center Affiliation

EB5AN Southwest Regional Center LLC (referred to as the "Regional Center"), a USCIS designated EB-5 Regional Center, which received its most recent amendment approval on November 17, 2022, is sponsoring the Project and will ensure that all EB-5 compliance matters with respect to the EB-5 funds are met (Section 2.2.2).

Project Management

Bright Green Corporation is also the Job Creating Entity which will develop, own, and operate the Project (Section 2.2.3).

The Project

The ***BGC Cannabis Manufacturing and Research Master Project***, which may be referred to simply as the "**Master Project**", is a phased development consisting of the following:

- Renovation of the NCE's existing 22-acre production facility
- The purchase of Alterola Biotech, Inc.
- Research and development of Alterola assets
- Development of a 118-acre state-of-the-art agricultural manufacturing and research facility
- Future greenhouse developments

The focus of this business plan is Phase 2 of the Master Project, known officially as the ***BGC Cannabis Manufacturing and Research Master Project Phase 2,*** which may be referred to simply as the "**Project**". Phase 2 of the Master Project consists of the following (Section 3.0):

- Completion of Alterola Biotech Inc.'s acquisition
- Research and development of Alterola assets
- Development of a 118-acre state-of-the-art agricultural manufacturing and research facility

Project Location

The Master Project in its entirety will be located within Cibola County, New Mexico at **1033 George Hanosh Boulevard, Grants, NM 87020**, which may be referred to as the "**Subject Property**" (Section 3.2).

Use of Funds

Equity investment into the NCE will be utilized for the purpose of financing the construction and operations of the Project. The total Project costs are summarized in the following table (Section 4.1):

Acquisition Costs	$48,725,000
Construction Costs	$306,004,719
FF&E Costs	83,000,000
Soft Costs	70,887,570
Pre-Opening Costs	29,982,711
Total Development Costs	**$538,600,000**

Source of Funds

Total capitalization requirements for the Project will be met through a combination of the following (Section 4.2):

EB-5 Funds	$458,400,000
Senior Debt	40,000,000
Private Equity	40,200,000
Total Capitalization	**$538,600,000**

Development Schedule

Total Phase 2 development time will be approximately thirty-nine (39) months, including twenty-four (24) months of construction. The following are key Project milestones (Section 5.0):

- Commencement of facility construction: Jan. 2023
- Completion of Altorola Biotech Inc.'s purchase: Q1 2023
- Commencement of Alterola R&D: Q2 2023
- Commencement of Phase 2 Operations: Q1 2024

Financial Projections

The following table summarizes revenue and expenses for the first four years of Phase 2 business operations specific to Phase 2 acreage and including Alterola profits before taxes (Section 6.0):

Phase 2 Operations - 4-Year Forecast					
		2024	2025	2026	2027
Total Revenue	$	829,704,030	$ 1,530,165,278	$ 2,003,320,950	$ 2,260,173,855
Total Cost of Goods Sold		68,489,729	109,250,235	145,705,296	161,635,224
GROSS MARGIN		**761,214,301**	**1,420,915,043**	**1,857,615,654**	**2,098,538,631**
Total Operating Expenses		24,045,999	112,122,415	152,097,871	153,799,827
EBITDA	**$**	**737,168,302**	**$ 1,308,792,628**	**$ 1,705,517,783**	**$ 1,944,738,804**

Rural TEA

The Subject Property is located within an area that qualifies as a rural Targeted Employment Area ("TEA"). Therefore, the minimum investment per foreign investor is $800,000 (Section 8.1).

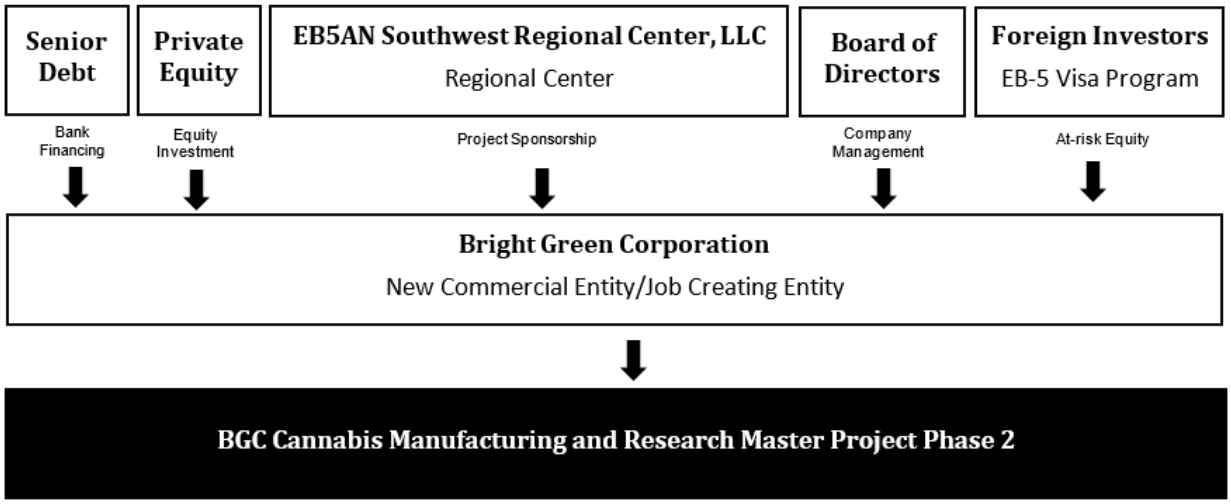
Job Creation Projections

According to the referenced economic analysis, **the Project will create 7,164.7 jobs** that are a result of the development and operation of the Project. Therefore, **each investor will be assigned 12.5 jobs** to meet the EB-5 capital raise of $458,400,000 from 573 EB-5 Investors (Section 8.2).

2.0 BUSINESS OVERVIEW

2.1 Investment Organizational Structure

The following diagram provides the investment structure of the Project:



The NCE expects to receive at-risk equity investment totaling $458,400,00 from five hundred and seventy-three (573) EB-5 investors.

2.2 Management Team

2.2.1 New Commercial Entity

The **NCE**, ***Bright Green Corporation,*** was formed as a Delaware Corporation on April 16, 2019 for the purpose of financing a job-creating business development within the geographic designation for the sponsoring Regional Center. On October 30, 2020, the NCE received a Certificate of Authority from New Mexico, which authorized the NCE to do business in the State of New Mexico (Exhibit A-1). The NCE has been listed with the Nasdaq Stock Market as of May 2022. The NCE owns land, greenhouses, patents and licenses for the growth, production and research of medicinal plants.

Background

Since incorporation, the NCE has completed the following transactions:

On May 28, 2019, the NCE merged with Bright Green Grow Innovation, LLC. This was a related party transaction in which the NCE acquired 110 acres of land in New Mexico and a greenhouse building.

On October 30, 2020, the NCE acquired Grants Greenhouse Growers, Inc. The NCE acquired options to acquire additional land assets covering an additional 505 acres.

On November 10, 2020, the NCE acquired Naseeb, Inc. This was a related party transaction in which the NCE acquired assistance in obtaining the following licenses and patents:

- New Mexico Hemp License: Industrial Hemp is an agricultural plant that uses all byproducts of the plan such as seeds and twigs in the production of hemp seed, hemp fiber, and other eco-friendly products.
- New Mexico Board of Pharmacy Schedule 1 Bulk Manufacturers License: Securing the license was required as part of the application and consideration for a federal license. Additionally, being licensed as a Schedule 1 Bulk Manufacturer allows the NCE to develop and distribute Schedule 1 drugs; an authorization precedent to the ability to grow, extract, and distribute other cannabidiols, such as CBG and CBN. Moreover, with this license, the NCE is exempt from the restrictions generally applicable to the cannabis industry, such as plant count and per plant taxes.
- Federal Medical Marijuana License: The NCE has a formal agreement with the Drug Enforcement Administration (DEA) for the construction and operation of a federally licensed agricultural center to grow and distribute marijuana, or its chemical constituents, supplying legitimate researchers in the United States.
- Patents: The patents held by the NCE provide innovative medical therapies to a wide range of conditions. These patents can be sold, licensed, or directly marketed as clinical trials are conducted and approved by the FDA.

The following individuals make up BGC's current Board of Directors:

Terry Rafih, *Chief Executive Officer ("CEO") & Chairman*

Terry Rafih has been Chairman of Bright Green Corporation's Board since October 2019. Since January 1989, Mr. Rafih has been the Owner and Chief Executive Officer of Rafih Automotive Group, one of Canada's largest networks of auto dealerships. Mr. Rafih has decades of business experience and has managed mergers and acquisitions representing several billion dollars in aggregate value. Mr. Rafih received his B.S. in business administration from the University of Windsor. Mr. Rafih brings over 30 years of executive leadership experience to the Board. Mr. Rafih's insights are critical to Board discussions.

Lynn Stockwell, *Founder and Director*

Lynn Stockwell is the founder of Bright Green Corporation and has been a Director of BGC's Board since its inception. From 2015 to 2020, Ms. Stockwell was a Managing Member of Bright Green Innovations, LLC, a concept for a federally legal emerging cannabis company, where Ms. Stockwell was responsible for managing the Company's industry, business, and medical research relationships. Ms. Stockwell has served as a Director of a hospital and held senior leadership positions in connection with fundraising events to promote the use of natural additives as an alternative to opioids. Ms. Stockwell is a sponsor of biomedical research and clinical trials and a member of AHP, the Association for Healthcare Philanthropy, with an interest in plant-based bioidentical hormone replacement.

Dean Valore, *Director*

Dean M. Valore has been a Director of BGC's Board since 2020. Mr. Valore is managing partner of Vallore & Gordillo L.L.P., a law firm based in Cleveland, Ohio, which he co-founded in January 2012. Since January 2021, Mr. Valore has also acted as Magistrate with the South Euclid Municipal Court in Ohio. Mr. Valore has been an adjunct professor of law, focusing on federal procedure, with the Cleveland-Marshall College of Law at Cleveland State University since January 2011. Before entering private practice, Mr. Valore was a United States Attorney. Mr. Valore is an expert in matters related to federal corporate compliance and acts as legal counsel to several medical-grade cannabis and cannabis-related companies. Mr. Valore received his J.D. from Cleveland State University – Cleveland-Marshall College of Law and his B.S. in finance from Miami University. Mr. Valore brings decades of corporate governance and federal regulatory and legal experience to the Board.

Robert Arnone, *Director*

Robert Arnone has been a member of BGC's Board since July 2021. Since 2006, Mr. Arnone has been co-owner and Chief Executive Officer of Levaero Aviation, the exclusive Canadian dealer for Pilatus Aircraft, and a globally recognized leading aircraft brokerage ("Levaero"). Mr. Arnone joined Levaero in 1999 and held various leadership positions before acquiring the company in 2006. Under his leadership, Levaero has expanded significantly and regularly records annual sales in excess of $75 million. Mr. Arnone holds a B.A. from Lakehead University and is a Certified Public Accountant.

Dr. Alfie Morgan, *Director*

Dr. Alfie Morgan has been a Director of BGC's Board since 2020. Dr. Morgan has been an Emeritus Professor of Business Administration at the University of Windsor in Canada since September 2016. From 10969 to 2003, he served as a Professor with the University of Windsor, retiring as a full-time member of faculty. He is the author/co-author of numerous publications and a book covering topics in the areas of strategic management, strategic planning, entrepreneurship, new venture formation, corporate strategy, and corporate best practices. He has served as a Director of the Windsor Regional Chamber of Commerce since 2003 and served as a Director of the Better Business Bureau of Southwest Ontario from 2018 to 2020. He previously maintained a management consulting practice specializing in strategic planning, and new venture formation. Dr. Morgan holds a B. Com from Cairo University, an M.B.A. from Boston University, and a Ph.D. from American University. Dr. Morgan brings decades of management, research, and leadership experience to the Board.

The following are additional members of the BGC executive management team that do not hold positions on the Board of Directors:

Saleem Elmasri, *Chief Financial Officer ("CFO")*

Saleem Elmasri has been Bright Green's Chief Financial Officer since March 2022. He has been working at Titan Advisory Services LLC, a boutique advisory firm focused on providing collaborative and customized financial operations and CFO services to early-stage companies, as Principal since September 2020. Mr. Elmasri was Managing Director at DLA LLC, a professional services firm providing clients internal audit, accounting and advisory, and corporate finance services, from June 2019 to April 2021 (ended full time employment September 2020 and became a consultant to DLA through April 2021). Prior to that, Mr. Elmasri worked as Senior Director for Pine Hill Group LLC, a boutique accounting and transaction advisory firm, from March 2018 to June 2019, and worked as Senior Manager for PricewaterhouseCoopers LLP, a Big-4 Accounting and Global Professional Services firm, from September 2007 to March 2018. Mr. Elmasri is a CPA and seasoned business professional who has a passion for delivering meaningful and measurable value to clients through practical solutions. Mr. Elmasri has over 15 years of experience in financial and management consulting. He began his career at PricewaterhouseCoopers and worked on several of the firm's Fortune 500 clients, primarily focused on the Life Sciences and Pharmaceutical industry. From PwC, Mr. Elmasri transitioned to lead advisory practices at boutique consulting firms, specializing in transaction and complex accounting advisory. Mr. Elmasri has a B.S. in Accounting and Finance from Rutgers University.

Seamus McAuley, *Chief Operating Officer ("COO")*

Mr. McAuley is a specialist in the commercial strategy, launch, and growth of Medtech products and his experience spans a wide variety of sectors and therapeutic markets. He brings strong analytical, stakeholder management, and leadership skills to proactively deliver new opportunities. A highly strategic leader, with an innate focus on innovation and future capability, Seamus offers a proven capacity and successful results across the commercial environment through strong and focused leadership.

Scientific Advisory Board

The Board of Directors has recently appointed members to its Scientific Advisory Board which will guide the Board of Directors and the NCE through the clinical and scientific rigors required to ensure compliance and adherence to the required applicable standards:

Colin Stott, *Chairman of the Scientific Advisory Board*

Mr. Stott is a Medicinal and Pharmaceutical Chemist, Preclinical and Clinical Development Specialist as well as being the Chief Operating Officer at Alterola Biotech Inc. He spent 19 years with GW Pharma as an R&D Operations Director (17 years) and latterly Scientific Affairs Director (Internal Division, 2 years). He was intimately involved in the invention and development of both Sativex (THC/CBD) and Epidiolex (CBD) and has unrivalled knowledge of bringing high value cannabinoid products to market.

Guy Webber, *Advisory Board Member*

Guy Webber is the founder of DMPK Services, a consultancy focused on pre-clinical investigational new drug applications.

Dominic Schiller, *Advisory Board Member*

Mr. Schiller is a qualified European Patent Attorney with 19 years of experience as an external IP counsel to GW Pharma. He provided strategic direction as well as created and managed GW Pharma's IP portfolio. He also conducted big pharma work with GSK, Compass Pathways and acted as an advisor to several investment funds.

Tamás Bíró, *Advisory Board Member*

Tamás Bíró holds a MD, PhD, and DSc and is a Professor of Physiology, Neurobiology, and Immunology. Mr. Bíró is a renowned academic and researcher with over 20 years of experience in academia.

Brian Thomas, *Advisory Board Member*

Brian Thomas holds a PhD and is a former medical researcher with over 28 years of experience as a Principal Investigator on National Institute on Drug Abuse (NIDA) research contracts at Research Triangle Institute (RT) and the University of Mississippi.

2.2.2 Regional Center Sponsorship

EB5AN Southwest Regional Center LLC, the **Regional Center**, was initially designated as EB5 Affiliate Network State of Texas, LLC by the U.S. Citizenship and Immigration Service ("USCIS") under the EB-5 Regional Center Program on May 12, 2015 with a geographic area consisting of all Counties within the State of Texas. Through its most recent amendment, which was approved on November 17, 2022, the Regional Center's name was changed to its current name, EB5AN Southwest Regional Center, LLC and its geographic area now includes all Counties within the States of Arizona, New Mexico, Oklahoma, and Texas (Exhibits A-2 and A-3).

The Regional Center has been designated for the following target industry clusters (Exhibit A-2):

NAICS 236115	New Single-Family Housing Construction
NAICS 236116	New Multifamily Housing Construction
NAICS 236220	Commercial and Institutional Building Construction
NAICS 713940	Fitness and Recreational Sports Centers
NAICS 722511	Full-Service Restaurants

The Project will focus on the following target industry clusters:

NAICS 2362	Nonresidential Building Construction
NAICS 3254	Pharmaceutical & Medicine Manufacturing
NAICS 4238	Machinery, Equipment, and Supplies Merchant Wholesalers

The Regional Center is managed by the following executive team:

Samuel B. Silverman

Sam has extensive real estate development, management, financing, and brokerage experience in Florida, Pennsylvania, California, Georgia, and internationally in the People's Republic of China. Prior to EB5AN, Sam served as the Director of Corporate Strategy and Expansion for Professional Golfer Jack Nicklaus in the People's Republic of China, living full time in Beijing. Sam was also previously employed by the Boston Consulting Group, one of the top management consulting and business strategy firms in the world where he worked directly with Fortune 500 Companies in the food service, media, manufacturing, hospitality and real estate spaces in the U.S., Europe, and Middle East. Sam is also a Forbes Magazine 30 Under 30 National Winner for Social Entrepreneurship. Sam holds a B.A. in Economics with a concentration in Mandarin Chinese from Yale University, a Certificate in Financial Accounting from the London School of Economics and Political Science, and an M.B.A. from the Stanford Graduate School of Business.

Michael Schoenfeld

Mike has extensive private equity investment, business diligence, management consulting, and entrepreneurship experience. In addition to founding EB5AN, Mike founded PRelocate, the leading designated promoter focused on helping individuals and companies leverage the tax incentives in Puerto Rico. Previously, Mike worked for AEA Investors, a leading middle-market private equity firm with $10B+ under management, focused on making control-oriented investments in consumer goods, industrial goods, and business services companies. Mike was previously employed by the Boston Consulting Group, one of the top management consulting and business strategy firms in the world where he worked directly with Fortune 500 Companies in the transportation, financial services, industrial goods, information technology, and real estate spaces. Mike is also a Forbes Magazine 30 Under 30 National Winner for Social Entrepreneurship. Mike holds a B.A. in Economics and B.S. in Business Administration from the University of North Carolina at Chapel Hill.

2.3 Consultants

Michelle Henrie, Esq.

Michelle is an accomplished attorney with extensive experience in Schedule 1 drug governance processes and requirements.

Thomas Larssen

Thomas is a BGC Shareholder, founder, and President of ALPS Inc., with more than 30 years' experience building large-scale greenhouses. He is an expert in cannabis production and product quality.

Jeff Hannah

As a security practitioner, Jeff has served as Manager of Security for one of Canada's largest commercial retail properties. He has also worked with numerous legal cannabis operations in Canada.

Joel Fuzat

With years of experience leading large-scale cannabis production, Joel has managed multiple build outs and has overseen more than $750 million worth of cannabis capital projects.

Economic Impact Consultant

Baker Tilly US, LLP's ("Baker Tilly") EB-5 team provides consulting services—specializing in economic studies, business plans, regional center operational plans, and TEA analysis. Baker Tilly has successfully prepared over 1,200 economic studies to evaluate and summarize the job-creation and economic impact attributed to regional center and individual EB-5 projects. Baker Tilly's methodologies and economic research are well-vetted and considered to be in accordance with the best practices and standards of professional economists nationwide. The economic study conducted by Baker Tilly is referenced throughout this business plan and will be submitted along with this business plan (https://www.bakertilly.com/).

3.0 PROJECT DESCRIPTION

3.1 Project Details

The **Master Project** is a phased development consisting of the following:

- Renovation of the NCE's existing 22-acre production facility
- The purchase of Alterola Biotech, Inc.
- Research and development of Alterola assets
- Development of a 118-acre state-of-the-art agricultural manufacturing and research facility
- Future greenhouse developments

When completed, the Master project will the nation's largest federally authorized manufacturing and research facility for plant-based therapies, supplying researchers across the United States and internationally with high-quality cannabis and derivatives and will be capable of producing up to approximately 100,000 grams of resin per day with a concentration of a minimum of 85% useful cannabinoids.

Phase 1 of the Project consists of the renovation of the NCE's existing 22-acre production facility to process medicinal plants, including cannabis and hemp, as well as the purchase of 25% of Alterola Biotech, Inc. stock, which occurred on October 3, 2022. 2023 operations of Phase 1 greenhouse acreage are expected to result in a net profit of $163.4 million, which will be available for Phase 2 capitalization, as necessary.

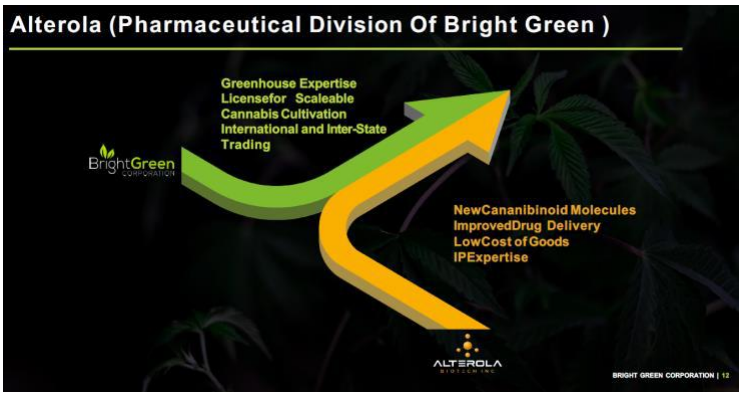
The Project within this business plan focuses on Phase 2 of the Master Project, which consists of the following:

- Completion of Alterola Biotech's acquisition
- Research and development of Alterola assets
- Development of a 118-acre state-of-the-art agricultural manufacturing and research facility

<u>Completion of Alterola Biotech Inc.'s Acquisition</u>

The NCE will exercise a call option to purchase the remaining outstanding shares of Alterola Biotech Inc., which it aims to complete by Q1 2023, making Alterola a division of BGC. This immediately enhances and expands the product range and addressable markets available to the NCE. Fundamentally, the goal for the combined BGC and Alterola team is to move to a point of normalizing the use of cannabinoids in the pharmaceutical, food, and cosmetic industries given the work already achieved by such companies as GW Pharma and Compass Pathways. The NCE's goal is to move beyond the question of "Can we use cannabinoids as medicine?" and instead focus on using their breadth of experience and work to date to truly begin to deliver impactful medicines and molecules which are cannabinoid based and build on the milestones achieved by these early trailblazing companies.

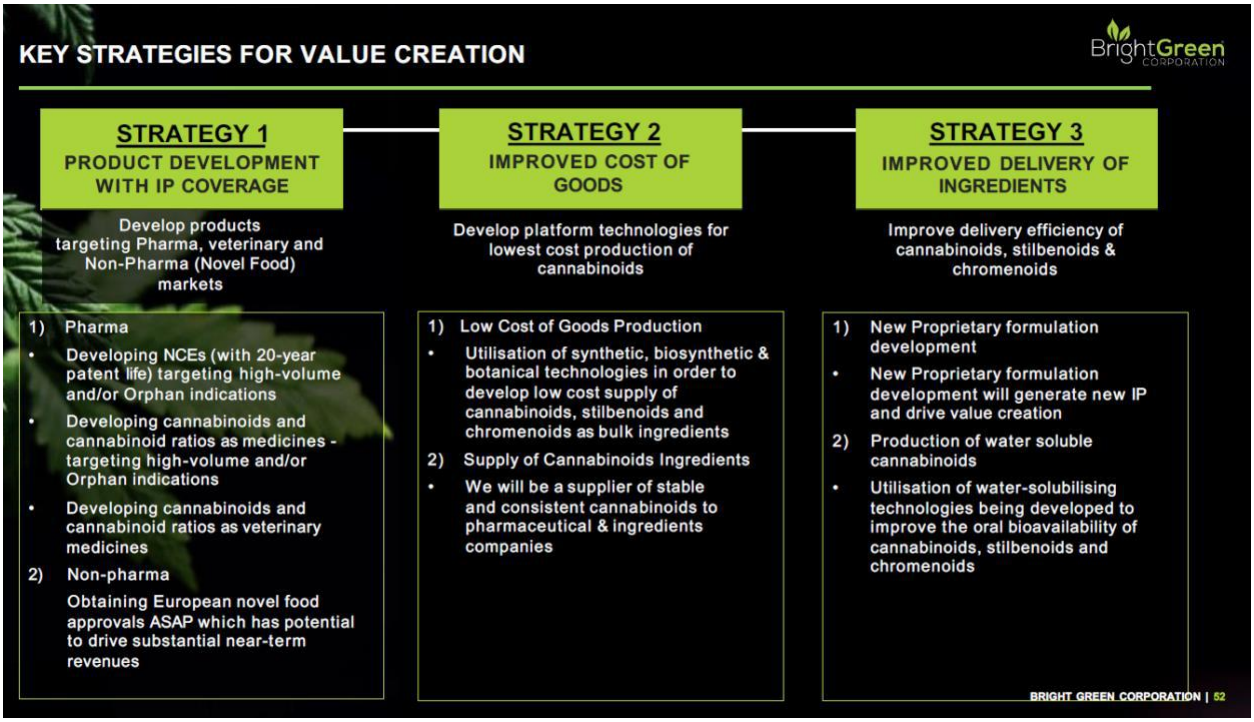
Alterola brings a portfolio of patents consisting of 209 unique molecules, a team who have all delivered cannabinoid products for GW Pharma and Compass Pathways and the industry know-how to create a unique and compelling proposition to deliver a diverse, therapeutic and patient focused portfolio unrivalled in the world today. In short, the aim is to make the NCE the largest pharmaceutical cannabinoid botanical development company in the world.



The consolidation of these entities puts the NCE in a unique position to capitalize on its business plan through the exclusive ownership of key assets including the licenses, patents, and capital assets to commence production licensed both by the state and the federal government for the medicinal plant market, which can be used for both research and commercial applications.

Research and Development of Alterola Assets

The development of the assets acquired through the Alterola transaction will provide the NCE with an enormous opportunity, through its future Alterola division, to develop significant and impactful medicines to treat a number of clinical indications. GW Pharma was the first company to successfully achieve marketing authorization for a cannabinoid medicine to much lauded success. Combining the know-how of the key employees, who will drive the NCE's clinical development program, with the Botanical capability from the greenhouse facilities will position the NCE uniquely in the marketplace.



The following slide outlines the products in which research and development of Alterola's assets will target:

The R&D allocation will ensure rapid thorough trial and approval of significant cannabinoid medicines, which will exponentially enhance the Total Addressable Market dynamics available to the NCE throughout the coming years. Such development will also facilitate the option to license products and/or know-how thereby creating a new revenue stream, which will be articulated throughout the R&D investment cycle.

Agricultural Manufacturing and Research Facility

The NCE will construct, develop, and operate a state-of-the-art agricultural manufacturing and research facility, which has been reengineered to be 100% carbon neutral. The facility will operate its own solar field and supplemental CO2 necessary for growing operations will be derived from natural CO2 extracted direct from the ground. The facility will be the first completed facility of its kind in the world.

The facility will consist of the following elements:

Total area:	118 acres
Greenhouses:	2, 57-acre fully-automated greenhouses
Handling and Service Building A:	41,760 square meters
Handling/service Building B:	35,680 square meters
Energy building:	3,360 square meters
Solar Farm:	100 MW

Under its MOA with the DEA, the NCE's manufacturing and research facility will be permitted to conduct the following commercial activities:

The NCE will sell mostly the extracted oils from medicinal plants growing in their high-tech greenhouses and processed through a proprietary system that vertically integrates the genetically altered growth of the plants to conform to automated growing systems.

Operations

The NCE's cannabis breeding program will begin with a multitude of unique cultivars that were generated, cross-bred, and then selected for key characteristics including:

- Homogeneous cannabinoid expression
- Powdery mildew tolerance
- Plant architecture

The proposed growing methods are engineered to create short stature, consistent, and high-potency plants.

Pharmaceutical researchers prize consistent production to maintain academic rigor; therefore, the NCE will produce their crops using tissue culture propagation, the growth of highly productive mature clones from tiny clippings in a manner that preserves consistency, minimizes disease and eliminates potential for genetic drift.

The NCE complies with and exceeds all DEA security requirements, using sophisticated inventory management and tracking software.

Physical security:

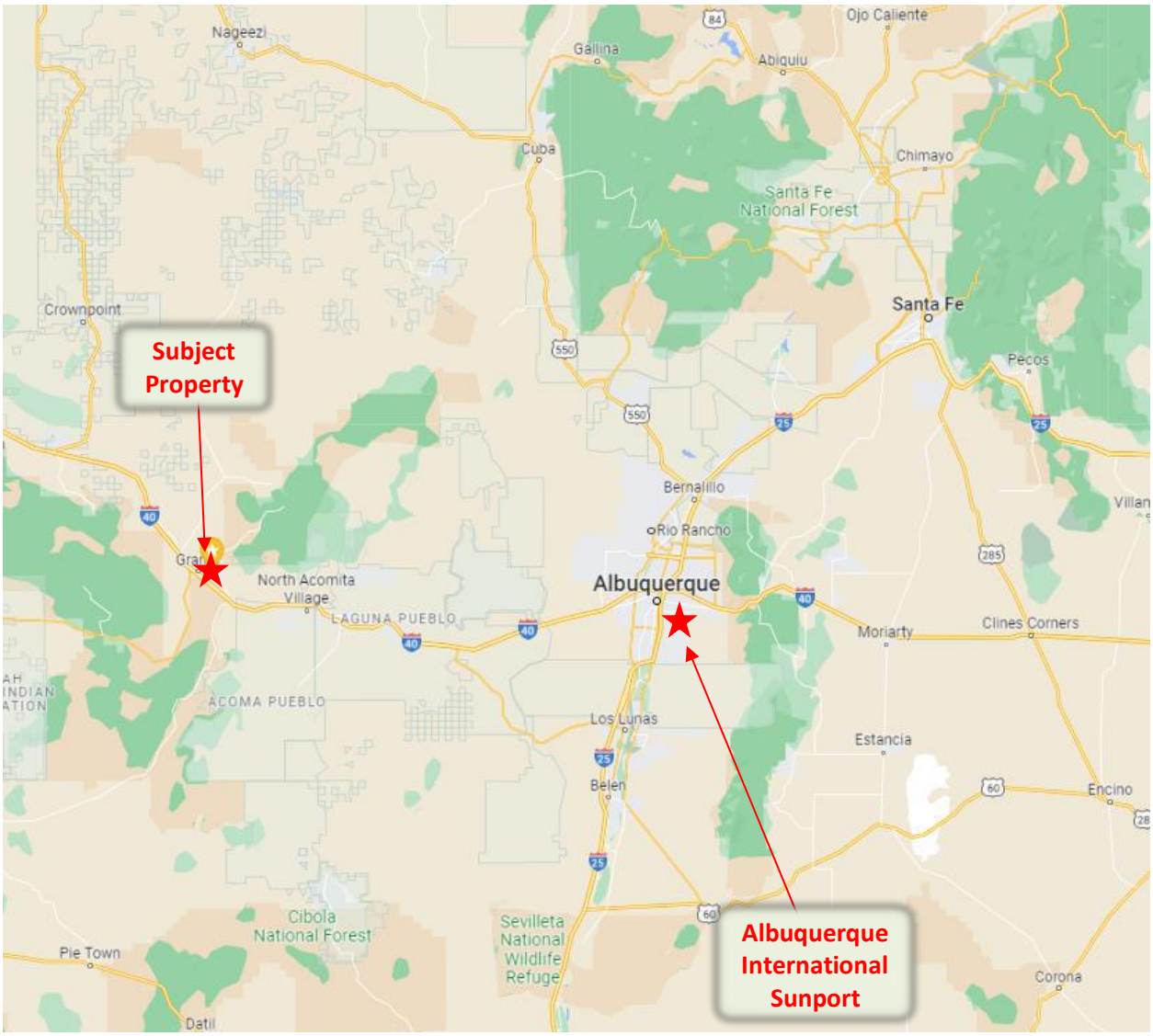
- Ascending concentric circles of protection
- The closer you get to finished cannabis products, the more security increases
- Physical security will include:
    - Cameras
    - Secure perimeter
    - Limited access areas
    - Secure vaults
    - Locks and alarms

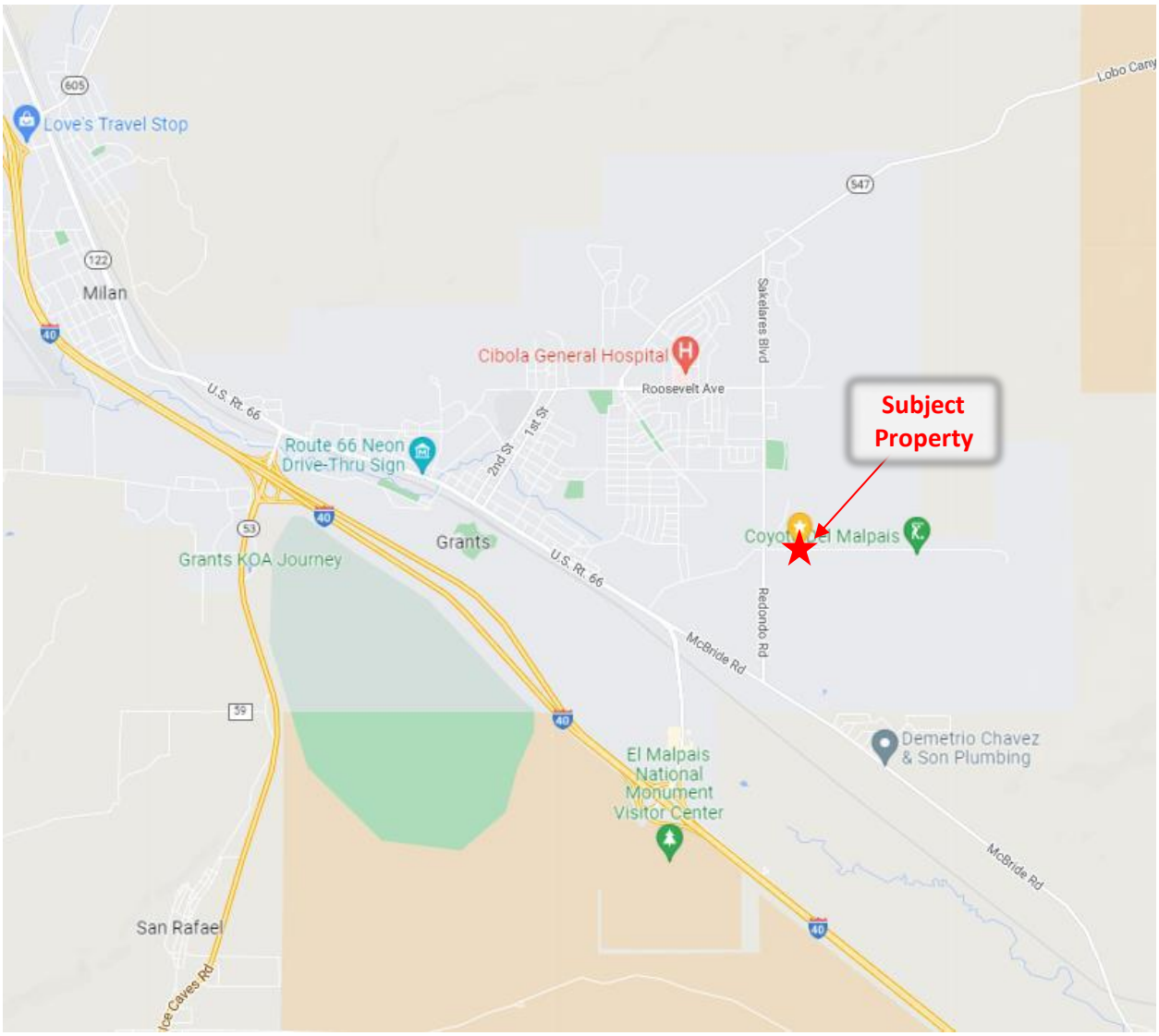
Organizational security:

- Track & trace technology
- Robust employee anti-diversion protocols from hiring to day-to-day operations
- Secure reporting and recordkeeping procedures

3.2 Subject Property

The Project consists of an agricultural manufacturing and research facility within Cibola County at **1033 George Hanosh Boulevard, Grants, NM 87020**. The Subject Property approximately 2.8 miles from I-40 Exit #85 and approximately 80.2 miles west of Albuquerque International Sunport, as shown in the following maps:




Subject Property
Love's Travel Stop
Milan
Cibola General Hospital
Roosevelt Ave
Sakelares Blvd
U.S. Rt. 66
Route 66 Neon Drive-Thru Sign
2nd St
1st St
Grants
Grants KOA Journey
Coyote
El Malpais
McBride Rd
Redondo Rd
Demetrio Chavez & Son Plumbing
El Malpais National Monument Visitor Center
San Rafael
Lobo Canyon
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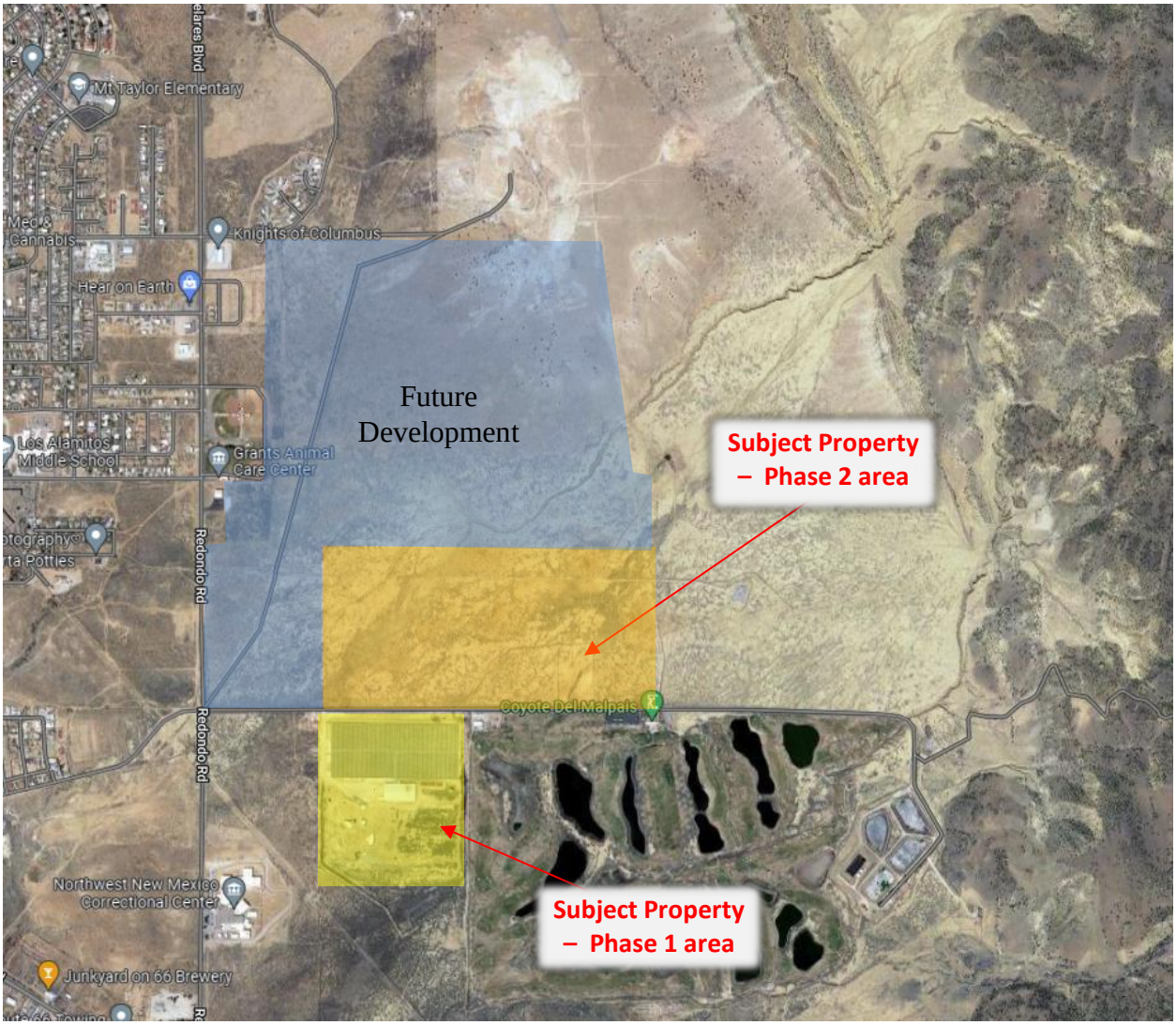
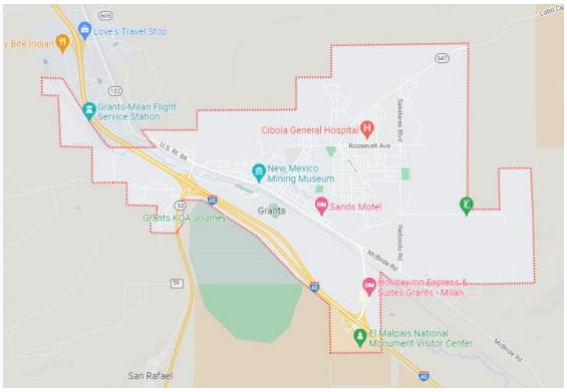


The Subject Property's New Mexico location was strategically chosen as it provides an ideal environment for cultivating high-quality cannabis. Cannabis requires abundant light and low humidity to grow properly and New Mexico provides both.

3.3 Subject Property Area Profile

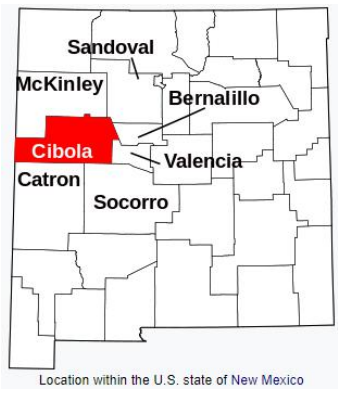
3.3.1 City of Grants Overview

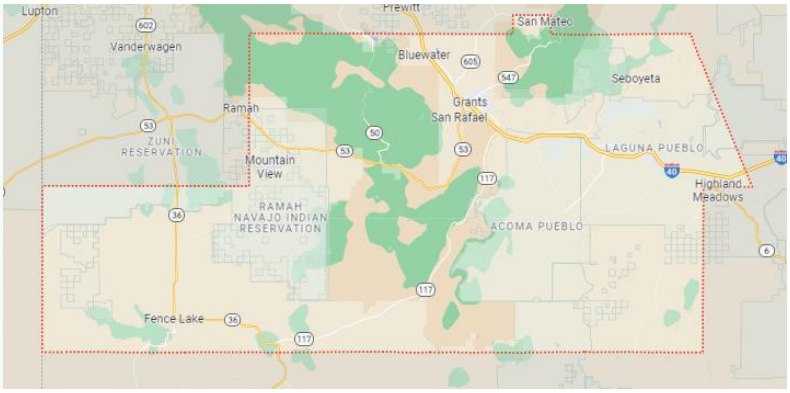
Grants, located in northwest New Mexico, is a gateway to a number of national parks, monuments, and Native American pueblos, including Chaco Canyon, El Malpais, El Morro, Acoma-Sky City and Laguna. It is 70 miles west of Albuquerque and 80 miles east of the New Mexico/Arizona border via Interstate 40. The region encompasses lakes, mesas, spectacular lava flows, Indian ruins, and majestic mountains like 11,301 ft Mount Taylor. Today, Grants is a growing tourist destination favored for its fishing and boating at Bluewater and Ramah lakes, its championship golf, its proximity to Anasazi ruins and its outdoor recreation in national monuments and forests (DesertUSA).



3.3.2 Cibola County Overview

Cibola County is located in west central New Mexico; its western border coterminous with the Arizona border and encompasses an area of approximately 4,540 square miles. Interstate 40 runs through the county along with U.S. Route 66, BNSF provides rail transport, and the Grants Milan Airport offers regional flight service. Economic activity derives from tourism (national forest areas, wilderness areas), entertainment and lodging (casinos, various events such as the Seven Trails of Gold, Octoberfest, etc.), mining activity, agriculture, and the service sector (retail and healthcare are major employers) (New Mexico Counties).





3.3.3 Population

The following table shows populations from the last three U.S. Census surveys (U.S. Census Bureau, *Population Unit Counts*; U.S. Census Bureau, *QuickFacts*):

Location	2010	2020	2021 (est.)	*Population Change* 2010-2020	2020-2021(est.)
City of Grants	9,182	9,163	9,170	-0.2%	+0.08%
Cibola County	27,213	27,172	27,184	+6.3%	+0.04%
New Mexico	2,059,179	2,117,522	2,115,877	+2.8%	-0.1%

The following table presents demographical statistics for Cibola County and the City of Grants (U.S. Census Bureau, *QuickFacts*):

SOCIAL AND INCOME DEMOGRAPHICS		
Statistic	**Cibola County**	**City of Grants**
Number of Households	8,408	3,026
Median Household Income	$44,731	$44,122
Per Capita Income	$20,507	$22,704
Median Value of Owner-Occupied Housing Units	$88,800	$103,600
Median Gross Rent	$676	$710
Percent of Persons (Age 25+) Graduating High School	81.5%	80.8%
Percent of Persons (Age 25+) Attaining bachelor's degree	17.3%	21.4%
Households with a computer	81.2%	83.9%
Households with broadband internet	64.2%	73.8%

3.3.4 Employment

Major Employment Industries

Cibola County has 296 businesses and government entities employing 5,406 people with a payroll of $198.7 million. The following table summarizes the top five industries for employment within Cibola County (U.S. Census Bureau, *2020 County Business Patterns*):

Industry	Number of Paid Employees	Number of Establishments	Annual Payroll ($1,000)
Health care and social assistance	1,602	50	64,460
Accommodation and food services	1,078	44	21,378
Retail trade	842	59	21,834
Administrative and support and waste management and remediation services	450	9	21,656
Educational services	270	4	12,085

Top Employers

The following table lists the top ten principal employers for 2021 within the State of New Mexico (State of New Mexico):

Employer	Business Sector	Employees
State of New Mexico	Government	27,024
Federal Government	Government	21,766
UNM	Education	20,675
Sandia National Laboratories	Government	14,500
Walmart Corporate	Retail	14,022
Los Alamos National Laboratories	Government	13,806
Presbyterian Healthcare	Healthcare	11,178
Albuquerque Public Schools	Education	10,297
City of Albuquerque	Government	5,800
NMSU	Education	3,800

4.0 DEVELOPMENT COST AND CAPITALIZATION

4.1 Use of Funds

The Project's development costs are summarized as follows:

Development Cost			
Property Acquisition	2,725,000		
Alterola Acquisition	46,000,000		
Total Acquisition Costs		**$**	**48,725,000**
Construction	295,531,719		
Water infrastructure improvements	10,473,000		
Total Construction Hard Costs			**306,004,719**
Solar Farm	83,000,000		
Total FF&E Costs			**83,000,000**
Alterola R&D	50,000,000		
delivery, transportation, building site, preparation, taxes	20,782,250		
Permits	105,320		
Total Soft Costs			**70,887,570**
Working Capital	29,982,711		
Total Pre-Opening Costs			**29,982,711**
TOTAL DEVELOPMENT COST			**$ 538,600,000**

Costs are based upon the following:

Acquisition Costs:

Property Acquisition refers to all costs attributable to acquiring property necessary for the development of the Master Project, excluding Phase 1 land. This includes the estimated value of land contributed by Lynn Stockwell at $200,000 as well as the cost to be incurred to exercise two real estate option agreements, which is calculated at a rate of $5,000/acre with the total area between both real estate option agreements being approximately 505 acres (Exhibits B-1 and B-2).

Alterola Acquisition refers to the cost of $6 million cash and approximately $40 million in equivalent BGC stock to be incurred to exercise the call option to purchase the remaining outstanding shares of Alterola.

Construction Costs:

Construction refers to all costs of construction activities necessary to construct a 118-acre state-of-the-art facility, which includes two 57-acre greenhouses, necessary for business operations. The total for this cost is based on a contract provided by Universal Fab (Exhibit B-3).

Water Infrastructure Improvements refers to all costs to be incurred from necessary improvements on the city's water infrastructure and the JCE's facilities in order to support the Project.

Furniture, Fixtures, and Equipment ("FF&E"):

Solar Farm refers to all costs to be incurred from the purchase and installation of equipment necessary to develop a solar farm. The total for this cost is based on a contract provided by Universal Fab (Exhibit B-3).

Soft Costs consist of Alterola R&D, delivery, transportation, building site preparation, taxes, and permit costs.

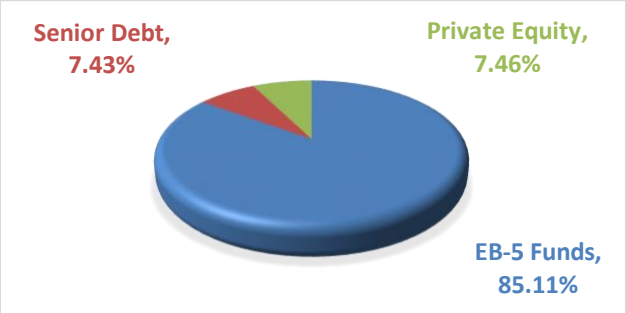
Pre-Opening Costs consist of working capital.

4.2 Sources of Funds

EB-5 foreign investor capital combined with other sources will be used to achieve the objectives of the Project and to fully finance its capitalization requirements. The sources of funding for the Project are summarized as follows:

Source of Funds by Amount	
EB-5 Funds	$458,400,000
Senior Debt	40,000,000
Private Equity	40,200,000
Total Capitalization	**$538,600,000**

Source of Funds by %



EB-5 Funds to be solicited is $458.4 million from five hundred and seventy-three (573) foreign investors.

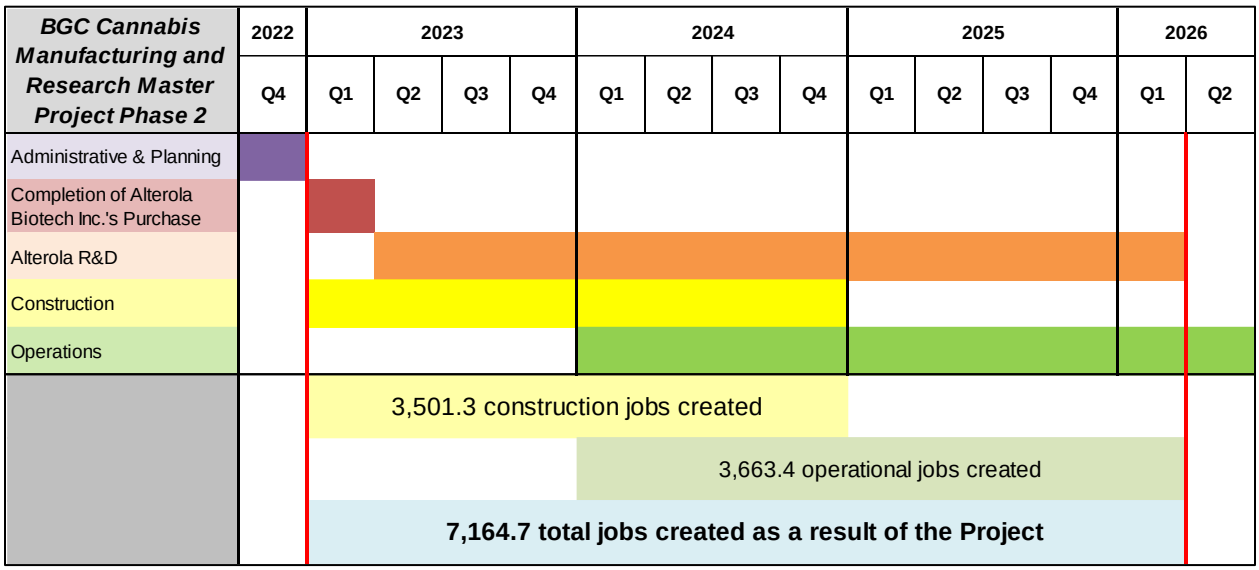
Senior Debt: A loan will be obtained as necessary to fully capitalize the Project. With the Project cost of $538.6 million, $40.0 million is an 7.4% Loan-to-Cost ("LTC").

Private Equity: Approximately $40 million in equivalent BGC stock will be paid as part of the NCE's call option to purchase the remaining outstanding shares of Alterola Biotech Inc.

In exchange for 9,500 shares of restricted BGC stock, Lynn Stockwell has contributed a 40-acre parcel of land, with an estimated value of $200,000.

5.0 PROJECT DEVELOPMENT TIMELINE

Total Phase 2 development time will be approximately thirty-nine (39) months, including approximately twenty-four (24) months of construction. The EB-5 job-creation period for the *BGC Cannabis Manufacturing and Research Master Project Phase 2* commences with the start of the Project's construction activities. The following high-level Work Breakdown Structure illustrates the development schedule based on the NCE's expectations:



ADMINISTRATIVE & PLANNING

Major activities include conducting operational analyses and resource planning for the project as well as financial planning and forecasts of future operational costs and revenue.

The following are typical permits and approvals that may be required for the development of various Project elements:

- Site Plan Approval
- Building Permit
- Electrical Permit
- Plumbing Permit
- HVAC Permit

CONSTRUCTION (24 MONTHS)

After any planning issues are resolved, permits are received, contractors selected, and fees paid, site work activities begin. This may include securing soil engineer and land surveyor, construction fencing, rough grading, soil excavation/import/compaction, and underground wet and dry utilities, as well as any needed demolition.

After site work is complete building/facility construction begins (including exterior and interior construction). Tasks may include excavation and foundation (to the extent not completed in pre-construction/site work phase), underground rough plumbing and electricity, pour and form slab/curb, framing, rough electrical, rough plumbing, fire sprinkler, internal framing and walls, roofing, glass and glazing.

OPERATIONS (ONGOING)

Operations and supply of materials are discussed in Section 3.0. The NCE will obtain all necessary licenses, permits, and/or approvals as applicable prior to the commencement of Phase 2 business operations.

The NCE is currently licensed by the New Mexico Department of Agriculture to transport, possess, propagate, and market Cannabis sativa L. plants and plant material that meet the definition of hemp (less than .3% THC post-decarboxylation) (Exhibit B-4).

The NCE is currently licensed by the New Mexico Board of Pharmacy for production and manufacturing of schedule 1 drugs (Exhibit B-5).

In May 2021, the NCE executed a MOA with the DEA to grow cannabis for federally sanctioned research. Upon final registration, anticipated in Q1 2023, the NCE will receive a Controlled Substance Manufacturing Registration for the production of cannabis. In addition, the agreement enabled the NCE to supply federally-approved researchers in the United States and supply marijuana and derivatives for medical therapies developed from this research (Exhibit B-6).

This business plan takes into consideration the resulting business activities within its market analyses (Section 7.0). Operational jobs are considered for job creation (Section 8.0).

The NCE has been in discussions with large pharmaceutical companies to supply wholesale oils for their product development as well as distribution companies such as CVS and Walmart for the NCE’s own products added to therapeutic compounds.

6.0 FINANCIAL PERFORMANCE

The following pro forma is a summary of revenue and expense projections for the first four years of business operations specific to Phase 2 greenhouse acreage and including Alterola profit before taxes:

Phase 2 Operations - Four Year Financial Projections					
REVENUES		**2024**	**2025**	**2026**	**2027**
Wholesale Revenue		186,839,730	339,384,128	418,992,750	475,789,545
Retail Revenue		564,864,300	1,089,381,150	1,452,508,200	1,767,218,310
Alterola Profit before taxes		78,000,000	101,400,000	131,820,000	17,166,000
Total Revenue	**$**	**829,704,030**	**$ 1,530,165,278**	**$ 2,003,320,950**	**$ 2,260,173,855**
EXPENSES					
Cost of Goods Sold					
Plants		12,414,600	12,414,600	12,414,600	12,414,600
Utilities		24,829,200	24,829,200	24,829,200	24,829,200
Distribution Overhead		16,945,929	32,681,435	43,575,246	53,016,549
Labor		14,300,000	39,325,000	64,886,250	71,374,875
Total Cost of Goods Sold		**68,489,729**	**109,250,235**	**145,705,296**	**161,635,224**
GROSS MARGIN	**$**	**761,214,301**	**$1,420,915,043**	**$1,857,615,654**	**$2,098,538,631**
Operating Expenses					
Sales & Marketing expense		13,752,899	100,875,005	139,800,720	140,347,961
General & Administrative expense		10,293,100	11,247,410	12,297,151	13,451,866
Total Operating Expenses		**24,045,999**	**112,122,415**	**152,097,871**	**153,799,827**
EBITDA	**$**	**737,168,302**	**$ 1,308,792,628**	**$ 1,705,517,783**	**$ 1,944,738,804**

Revenue

Wholesale Revenue is derived from the sale of extracted oil from cannabis and/or hemp plants to be sold wholesale to researchers across the United States and internationally and through direct sales to big pharma for the requirements of their own products or additives to brand named products currently marketed and sold worldwide.

Retail Revenue is derived from the sale of extracted oil from cannabis and/or hemp plants sold direct to individuals with medical prescription for cannabis.

The following table outlines assumptions made by the NCE in determining anticipated sales revenue:

ASSUMPTIONS	2024	2025	2026	2027
Facility Capacity	57	114	114	114
Plants Harvested for Wholesale	2,482,920	2,482,920	2,482,920	2,482,920
Plants Harvest for Retail	2,482,920	7,448,760	7,448,760	7,448,760
Product Yield (grams/plant)	35	45	60	73
Percentage of Yield for Wholesale Revenue	50%	75%	75%	75%
Percentage of Yield for Retail Revenue	50%	25%	25%	25%
Wholesale Price per gram ($)	$4.30	$4.05	$3.75	$3.50
Retail Price per gram ($)	$13.00	$13.00	$13.00	$13.00

Alterola Profit before taxes is derived from the sale of cannabinoid and cannabinoid-based pharmaceutical products developed from the research and development conducted by the future Alterola division of BGC less associated expenses incurred by this division.

Revenue across all four years is reasonable and conservative in comparison to the calculated 5-year-average annual revenue for the Pharmaceutical & Medicine Manufacturing industry across the entire US Sales Class: >$500m, as shown in the following table (Bizminer, *3254 Industry Financial Profile*; Exhibit C):

NAICS 3254 All US	
Year	**Average Annual Revenue**
2017	$8,616,667,526
2018	$2,715,067,672
2019	$3,152,606,911
2020	$2,512,331,029
2021	$2,470,240,593
Average	**$3,893,382,746**

Expenses

Sales & Marketing Expense is reasonable in comparison to the average of the calculated 5-year average ratio-to-sale from 2017 to 2021 reported by Bizminer for NAICS code 3254 Pharmaceutical & Medicine Manufacturing Sales Class: >$500m for the entire US, as shown in the following table (Bizminer, 3254 Industry Financial Profile; Exhibit C):

5-Year Average	
Ratio-to-sales	**NAICS 3254**
Advertising	2.4%

All Other Expenses, including Cost of Goods Sold are based upon the experience and expectations of the NCE and its management.

7.0 MARKET ANALYSIS

7.1 Industry Activities

The NCE will engage in the following industry activities as sponsored by the Regional Center, which are considered for job creation analysis for the EB-5 financing:

- Nonresidential Building Construction (NAICS 2362)
- Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)
- Greenhouse, Nursery, and Floriculture Production (NAICS 1114)
- Pharmaceutical and Medicine Manufacturing (NAICS 3254)

7.2 Other Food Crops Grown Under Cover

The following market analyses focus on the *Other Food Crops Grown Under Cover (NAICS 111419)* sub-sector of the *Greenhouse, Nursery, and Floriculture Production* (NAICS 1114) parent industry. This U.S. industry comprises establishments primarily engaged in growing food crops (except mushrooms) under glass or protective cover (NAICS, *111419*).

7.2.1 Medical – Recreational Marijuana Growing

Industry Overview

The Medical and Recreational Marijuana Growing industry grew exponentially over the last five years, bolstered by increasing consumer acceptance and sweeping legalization victories across the United States. More states legalized recreational or medical marijuana, or both in certain cases, in the 2016 and 2020 election cycles. While cannabis is not legalized at the federal level, several states have paved the road for market expansion. Currently, 37 states and Washington, DC have legalized marijuana in some form, with 19 states legalizing the sale of recreational marijuana as of the November 2020 election. The industry also includes operators that grow both medical and recreational marijuana on a for-profit basis in states that legalized recreational marijuana. As a result, industry revenue grew precipitously over the five years to 2022, increasing at an annualized rate of 35.4% to reach $19.4 billion. In 2022 alone, revenue is expected to jump 16.6% (Thomas; Exhibit D-1).

The industry exhibits the following key trends (Thomas; Exhibit D-1):

- States have recently moved to legalize marijuana for medical purposes
- Strong demand growth caused more companies to enter this industry
- Many businesses run the risk of being shut down of experiencing a property seizure without notice
- Increasing levels of discretionary income are projected to support continued demand
- The movement to decriminalize recreational marijuana is expected to fuel the industry's growth
- As the number of physician visits increases, demand for medical marijuana will grow accordingly
- Legislative victories fueled strong growth for industry operations and provide many opportunities for growth

Industry performance is heavily influenced by the following key external drivers (Thomas; Exhibit D-1):

- OD – Regulation
- Per capita disposable income
- Number of adults aged 50 and older
- OD – External competition

Demand Determinants

Government Regulation

Demand for Medical and Recreational Marijuana Growing industry products is primarily determined by government regulation. The federal government regulates cannabis as a Schedule I controlled substance and considers all marijuana cultivation, sale and consumption illegal. In states that lack laws legalizing the medical or recreational use of cannabis, marijuana use is explicitly prohibited.

However, a total of 37 states across the United States and Washington, DC have some level of legalization of medical marijuana. Nonetheless, federal policy continues to limit some consumer demand in states where medical marijuana is legal because of pervasive fears of violating federal law. President Obama's December 2014 passage of an omnibus spending bill included a directive preventing the Department of Justice from using federal funding to impeded states from implementing their own state laws that authorize the use, distribution, possession or cultivation of medical marijuana. Over the five years to 2027, the legalization of medical and recreational marijuana in a score of other states will likely occur.

Income and Demographics

Household income is a primary determinant of consumers' ability to acquire cannabis products. The legalization of medical marijuana, and recreational marijuana in some states, has created a market for high-quality cannabis, which can be expensive. Furthermore, since medical marijuana is typically not covered under health insurance plans, demand is largely dependent on patients' income levels.

Population demographics, particularly age, also dictate demand trends for medical marijuana. Although adults aged 50 and older are more likely to develop health conditions such as cancer, Alzheimer's, chronic pain, glaucoma and other diseases that can be treated with medical marijuana, obtaining a medical marijuana card is not difficult in many states. As a result, the average age of a medical marijuana patient is 45.5 years of age. Moreover, changing societal norms have made marijuana use much more acceptable today.

Outlook

The Medical and Recreational Marijuana Growing industry is poised to reach new highs over the next five years. Although the industry will continue to benefit from increasingly favorable attitudes toward medical marijuana-based treatments, industry growth will be led by consumer demand for recreational marijuana. Combined with increasingly favorable consumer sentiment and rising disposable incomes, IBISWorld forecasts that revenue will continue to increase at an annualized rate of 13.5% to reach $36.6 billion during the outlook period. In particular, as the economy recovers from the COVID-19 (coronavirus) pandemic, increasing levels of discretionary income are projected to support continued demand for

industry products and growing acceptance of medical applications of marijuana. Additionally, the Biden administration has expressed support for the industry, which is expected to benefit the industry. It should be noted that any major shifts in regulation may alter the outlook period forecasts (Thomas; Exhibit D-1).

Competitor Analysis

Market Share Concentration

The Medical and Recreational Marijuana Growing industry currently has a low level of market share concentration. In 2022, the four largest operators are expected to account for less than 25.0% of revenue.

Basis of Competition

Medical and Recreational Marijuana Growing industry competition is very high since most industry operators grow the same types of products, making it harder to differentiate. Competition is further increasing as the legalization of recreational marijuana sales in 2014 has led the licensing of larger recreational marijuana cultivators. Likewise, in Oregon, the licensing of larger recreational marijuana cultivators along with the legal sale of recreational marijuana began in 2016. Today, 19 states and Washington, DC have legalized recreational marijuana, making the industry more attractive for new entrants.

Internal Competition

Industry vendors compete on product price and quality. Marijuana can have diverse properties and qualities, and only vendors that can consistently cultivate high-quality marijuana will attract demand from dispensaries. In addition, vendors must be able to provide competitive prices or donation requirements. Dispensaries can source marijuana from all members of their collective, making it easy to only acquire products from the lowest-priced vendors. Over the five years to 2022, favorable state legislation paved the way for a large number of new entrants to this industry.

External Competition

Industry operators experience competition from pharmaceutical companies that manufacture drugs to treat chronic pain, cancer, HIV and other illnesses that medical marijuana helps relieve. Medical marijuana users, for example, typically only turn to marijuana after other treatment has failed, though, resulting in limited external competition from drug manufacturers (Thomas; Exhibit D-1).

7.2.2 Industrial Hemp Production

Industry Overview

After a long history of stringent regulations, the Industrial Hemp Production industry has suddenly experienced explosive growth over the last five years. Industrial hemp, which is commonly called hemp, is a variety of the cannabis sativa plant. Cannabis contains the chemical compound tetrahydrocannabinol (THC), which is responsible for the psychoactive effects of marijuana. Industrial hemp must have a THC content of less than 0.3% by weight, while marijuana has higher concentration of THC. Industrial hemp is a versatile crop that can be used to produce fibers, foods, oils and other products. However, hemp's close association with marijuana has led to large amounts of regulation. Until 2018, with few exceptions, growing hemp was illegal in the US. However, the 2018 Farm Bill removed hemp from the list of Schedule I controlled substances and made it a standard agricultural commodity. With this decision, companies have been able to enter the industry and begin growing hemp, resulting in astronomical revenue growth. As a result, over the five years to 2021, industry revenue is expected to rise at an annualized rate of 126.8% to $744.1 million (Curran; Exhibit D-2).

The industry exhibits the following key trends (Curran; Exhibit D-2):

- CBD is a high-margin product because it sells for a high price and can be grown at a relatively low cost
- The rapid expansion of the industry has resulted in an oversupply of hemp
- Other countries have not had the same regulatory relationship with hemp
- The Industrial Hemp Production industry is expected to settle and stabilize over the five years
- Many companies that previously entered the industry are likely to exit
- Hemp farms compete with hemp producers in other countries
- The rapid expansion of the industry has contributed to an oversupply and declining hemp prices

Industry performance is heavily influenced by the following key external drivers (Curran; Exhibit D-2):

- Aggregate private investment
- Per capita disposable income
- Demand from medical and recreational marijuana growing
- Per capita expenditure on alcohol

Demand Determinants

Consumer demand

As consumer demand for CBD rises, it is expected that downstream retailers and outlet channels will place larger orders from upstream CBD processors, who in turn will place larger orders for more hemp, thus causing industry revenue to accelerate. The touted health benefits of CBD have been a major part of the products meteoritic rise, while price is not such a consideration due to weak hemp prices as a result of a boom in acreage.

Additionally, consumer demand for other industry products such as hemp soaps, face washes and textiles is usually tied to levels of per capita disposable income as well as the price of these products. During the current period, as popularity of these products rise, it is expected that so too has demand and industry revenue.

Industrial Demand

Demand for hemp as an industrial input is expected to trend in line with levels of consumer spending, as well as levels of per capita disposable income. Consumer products made from hemp are a nondiscretionary purchase and must be compared to other, similar products, which delineates prices as a factor in determining industrial demand for industry products. As consumer spending and per capita disposable income rise and they purchase more industrial hemp products at retail channels, demand at the production level should rise.

Healthcare Demand

CBD oil manufactured for medicinal purposes can be obtained over the counter, as well as via a prescription from a doctor. Demand for medicinal CBD products can be tied to the levels of health care spending, as well as the number of receptive doctors and health care professionals. As more consumers and professionals realize the health benefits of CBD oil, it is expected that demand for over the counter and prescription CBD oil will rise, thus causing industry revenue to also increase.

COVID-19

However, consumer spending took a negative turn in 2020 due to the outbreak of COVID-19, which caused industry performance to falter as consumers cut back on discretionary purchases. Ultimately, a weakening in consumer demand will undercut the industry at all outlet channels due to the fact that consumers are the final end user for industry products.

Outlook

After a period of both astronomical growth and steep decline, the Industrial Hemp Production industry is expected to settle and stabilize over the next five years. The hurdles affecting the hemp industry following legalization will continue to challenge industry growers and prevent massive rates. However, this will not be all bad for the industry as a whole. Companies that entered the industry hoping to turn a quick profit have begun to exit the industry, leaving just the companies that are best suited for the industry. Demand will likely continue to be strong for hemp-based products, so industry demand will remain high. As a result, over the next five years, industry revenue is projected to grow at an annualized rate of 6.6% to $1.0 billion. (Curran; Exhibit D-2).

Competitor Analysis

Market Share Concentration

The Industrial Hemp Production industry exhibits a low level of market share concentration, much like the majority of the Agriculture Sector in the United States. No major player exhibited has recorded a market share greater than 5.0% of industry revenue. This is due to the fact that since 2018, this industry has

become extremely saturated, with both the number of operators and total acres planted soaring since then, which has diluted individual operators' market share. Moreover, due to such a strong increase in acreage, most major players have discussed their need to continue expanding acreage to remain competitive, which drives the unit of revenue per acre down, limiting industry player returns. This is not expected to change or shift drastically over the next five years; however, it is worth noting that the downstream CBD processing industry is highly concentrated, oftentimes with vertically integrated industry players consuming 100.0% of their own hemp production in internal operations.

Basis of Competition

Internal Competition

The Industrial Hemp Production industry experiences a high degree of internal competition in the form of price competition. Overall, the total number of industry farms and acres planted has skyrocketed in recent years, causing competitive conditions to heat up. Due to the fact that the majority of industry players are small farms, most industry operators lack the effective scale economies and pricing power to currently set prices to downstream purchasers. Since most hemp is essentially substitutable, industry operators must either sell at more favorable prices, in a race to the bottom, or differentiate their cultivars, thus warranting the higher price. Internal competition has risen in recent years with such a strong influx in industry participation.

External Competition

This industry experiences external competition in the form of imports and from other industries such as those cultivating medical marijuana. Imported hemp accounts for nearly 16.0% of domestic demand, and due to current currency conditions, has a slight price advantage over domestically produced hemp. Therefore, hemp produced in other nations represents a source of external competition, though this factor may be declining as a competitive threat due to the surge in domestic production and the anticipated weakening of the dollar, preventing the increased reliance on imports.

Furthermore, industry operators compete with other producers of textiles, such as cotton and other fibers. This point of contention is typically determined by price, so industry external competition is lessened when the price point of other textile fibers rises above that of hemp. Overall, hemp's use in other consumer goods also competes with the production of traditional soaps and facial products, as well as creams and oils.

Lastly, this industry experiences a strong degree of external competition via the recreational and medical marijuana industry. CBD can be produced from cannabis cultivars such as hemp and marijuana, therefore this industry's highest margin and most prevalent product segment competes with the CBD products produced by the medical and recreational marijuana industries. Overall, sales of CBD made from marijuana is not considered industry relevant and represents a source of external competition (Curran; Exhibit D-2).

7.3 Pharmaceutical and Medicine Manufacturing

This market analysis focuses on the *Pharmaceutical and Medicine Manufacturing (NAICS 32541)* sub-sector of the *Pharmaceutical and Medicine Manufacturing* (NAICS 3254) parent industry. This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing biological and medicinal products; (2) processing (i.e., grading, grinding, and milling) botanical drugs and herbs; (3) isolating active medicinal principals from botanical drugs and herbs; and (4) manufacturing pharmaceutical products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions (NAICS, *32541*).

7.3.1 Brand Name Pharmaceutical Manufacturing

Industry Overview

Revenue for the Brand Name Pharmaceutical Manufacturing industry is expected to increase an annualized 3.6% to $227.1 billion over the five years to 2022, including an increase of 2.6% in 2022 alone. However, despite strong revenue performance, industry operators have contended with a changing competitive landscape due to mounting competition from lower-cost generic drugs, biosimilars and the patent expirations of several blockbuster drugs. Operators have also contended with increasing research and development (R&D) costs and intensifying price scrutiny. As a result, industry profit, measured as earnings before interest and taxes, has decreased to 7.4% of industry revenue in 2022, down from 8.3% in 2017 (Khaustovich, *Brand Name Pharmaceutical Manufacturing*; Exhibit D-3).

The industry exhibits the following key trends (Khaustovich, *Brand Name Pharmaceutical Manufacturing*; Exhibit D-3):

- The industry relies heavily on imported active pharmaceutical ingredients
- The biggest challenge that industry operators contend with is the loss of blockbuster drugs' patent exclusivity
- The industry landscape has been prone to a high level of competition from generic drug manufacturers
- Manufacturers will continue to heavily invest in research and de3velopment of orphan drugs
- Generic biologic drugs, or biosimilars, are expected to shake up the industry landscape
- Industry operators will continue to derive a large share of revenue from global consumers
- The industry has benefited from strategic partnerships with the federal government in vaccine development

Industry performance is heavily influenced by the following key external drivers (Khaustovich, *Brand Name Pharmaceutical Manufacturing*; Exhibit D-3):

- Number of people with private health insurance
- Federal funding for Medicare and Medicaid
- Median age of population
- Research and development expenditure
- Trade-weighted index

Demand Determinants

Demand for brand name pharmaceuticals is determined by several factors, including disease rates, prevalence of chronic illness, market availability of generic drugs and government healthcare policies. Other factors include the price of pharmaceutical products, doctors' prescribing patterns, patient prescription usage rates and patients' insurance coverage.

Insurance providers

Insurance plays a significant role in determining consumer demand for prescription drugs. By incurring some of the costs for prescription drugs, health insurance providers' prescription drug coverage typically stimulates consumer demand for industry products. The level of insurance coverage drives consumer purchasing behavior, as individuals typically choose more expensive drugs when they do not incur the full cost of their medication. Additionally, demand for brand name prescriptions is influenced by negotiations between brand name pharmaceutical manufacturers and health insurance providers. Insurance companies have formulary tiers, ranging from tier one to tier four, which determine co-payment prices. Tier one drugs consist of off-patent brand drugs and generics, tier two is brand drugs or expensive generics, tier three comprises brand drugs and tier four accounts for specialty drugs. If brand manufacturers effectively negotiate with pharmacies, brand drugs can become a "preferred brand," or a tier two drug. Insurance companies use formularies to control costs by steering demand toward lower-cost drugs. Brand pharmaceutical manufacturers will increase demand for their product by negotiating for a lower formulary tier, therefore lowering consumers' co-payment costs.

Population demographics

Typically, research and development (R&D) spending rises in line with growth in the prevalence of particular health ailments. The burgeoning elderly population, which typically has a high prevalence of chronic ailments, will drive industry sales. As a result, drug markets are devoting more R&D resources to develop drugs for health ailments related to aging. Demand for prescription drugs will be boosted by an aging population with a longer life expectancy, an increase in chronic illness and higher disability rates. The cost of managing chronic diseases and funding Medicaid and Medicare will be bolstered by the growing number of baby boomers that will live with numerous chronic illnesses and be eligible for these programs for longer periods of time.

Marketing

Pharmaceutical manufacturers incur marketing expenditures to influence consumer demand and physician prescribing practices. Typically, the most heavily advertised products tend to be newer, more expensive drugs with the potential to increase overall revenue. Consumers and their physicians report to the Kaiser Family Foundation that prescription drug advertisements are increasingly influential. Many physicians report that their patients have asked them about drugs due to advertising. Companies that carry out successful marketing campaigns benefit from increased consumer demand. However, direct-to-consumer advertising is regulated by the FDA, which requires inclusion of a drug's risk information and disclosure of sources for drug prescribing information.

Another form of marketing is the prevalence of pharmaceutical representatives in the healthcare system. A recent study conducted by the National Survey of Physicians found that 37.0% doctors surveyed will write a prescription for brand drugs, regardless of generic drug availability, if a patient requests it. Similarly, a study by the Journal of the American Public Health Association found that physicians who receive large quantities of brand name drug samples are more likely to prescribe them. Therefore, pharmaceutical representatives will be pivotal for brand drug sales. However, an increase in pharmaceutical representatives' transparency may curb consumer demand for brand name drugs, as consumers are wary of how gifts and other incentives may influence healthcare providers' prescribing patterns.

Outlook

The Brand Name Pharmaceutical Manufacturing industry is expected to expand over the next five years, despite intensifying market competition and increasing price scrutiny on branded products. Still, the movement to provide low-cost drugs to a healthcare system that is acutely focused on containing rising costs is expected to dampen revenue prospects during the outlook period. Consequently, industry revenue is forecast to rise at an annualized rate of 2.6% to $258.1 billion over the five years to 2027 (Khaustovich, *Brand Name Pharmaceutical Manufacturing*; Exhibit D-3).

Competitor Analysis

Market Share Concentration

The Brand Name Pharmaceutical Manufacturing industry is characterized by a low to moderate level of market share concentration, with the four largest enterprises accounting for nearly 34.2% of total industry revenue in 2022. Meanwhile, the fifty largest companies represent nearly 78.9% of industry revenue in 2022. During the past two decades, concentration in this industry has remained largely unchanged.

Basis of Competition

The Brand Name Pharmaceutical Manufacturing industry contended with intensifying competition from both internal and external competitors. Pricing pressures from the government and health insurance providers, coupled with the proliferation of generic drugs, intensified competition for brand name pharmaceutical manufacturers. In response, many manufacturers moved toward specialization, with low-volume products as opposed to high-value, high-volume, primary care blockbuster drugs.

Internal Competition

This industry competes heavily on product innovation. Companies with a consistently strong drug pipeline will maintain not only steady demand from consumers, but a competitive edge over their counterparts. Nevertheless, product innovation is expensive and involves long lead times and high risk, with only one in 5,000 new drugs in preclinical testing making it to human testing. Furthermore, only one in five is approved for human use, according to the California Biomedical Research Foundation. According to the Pharmaceutical Research and Manufacturers of America (PhRMA), it can take between 10 and 15 years and an estimated $1.5 billion to develop a new product, and only two out of 10 products recover their associated research and development (R&D) costs.

Companies also compete on the ability to market their products. Over the five years to 2022, there was a growing need for pharmaceutical manufacturers to incur marketing expenses, given the rapid pace of growth in developing and launching new versions of existing products. A report by the US Government Accountability Office noted that increases in direct-to-consumer (DTC) advertising contributed to overall increases in spending on both the advertised drug itself and on other drugs that treat the same conditions. Consumer surveys suggest that DTC advertising increases the likelihood that consumers will request the advertised drugs from their physicians.

Additionally, the industry is expected to increasingly compete on the basis of price. Downstream markets, such as pharmacies, are influenced by insurers and pharmacy benefit managers that use drug formularies to drive purchasing behavior. A drug formulary is a list of preapproved prescription drugs that will be reimbursed to the patient or pharmacy in three tiers. Tier one has the lowest co-payment and tier three has the highest, although some plans offer a fourth tier for specialty prescriptions. Tier one consists of generic drugs and off-patent brand drugs, while tier two and three are composed of brand name drugs. Brand pharmaceuticals offer rebates to insurers in exchange for their brand drug to be placed in a lower formulary tier. Studies from Harvard University and Medco Health revealed that consumers, when dealing with significant co-payment costs, such as tier three, may opt to stop taking their medication. Therefore, industry operators may compete by attempting to lower their formulary tier.

External Competition

Patent protection is a critical basis of competition for industry operators. As industry products lose patent protection, brand name pharmaceuticals grapple with high competition from generic pharmaceutical manufacturers, which can replicate the drug without investing in R&D. Over the past five years, many top selling brand name drugs lost patent protection, thus causing external competition to intensify. In some instances, even when a product's patent has expired, the original innovator company can compete with its generic rivals, benefiting from brand name recognition and brand loyalty. However, as competition levels increase, there has been a growing trend among companies to manufacture their own generic brands for drugs with expired patents. These companies market their drugs through generic pharmaceuticals companies or extend their product lines via next generation products. Some companies, similar to Merck & Co. Inc., have resorted to purchasing generic companies (Khaustovich, Brand Name Pharmaceutical Manufacturing; Exhibit D-3).

7.3.2 Generic Pharmaceutical Manufacturing

Industry Overview

Revenue for the Generic Pharmaceutical Manufacturing industry has declined over the last five years, driven by a decreasing share of generic drugs. Based on data from IQVIA and IBISWorld estimates, generic drugs' share of total drugs revenue is expected to hit 16.0% in 2022, a decline from 22.7% in 2017. Stiff price competition domestically and rising import penetration have increasingly challenged industry operators, contributing to lower profit. Consequently, the number of establishments in the industry has declined an annualized 1.7% to 491 operators over the five years to 2022. The number of employees per establishment has also declined, reflecting a long-term trend in growing automation. Overall, the number of industry employees has declined at an annualized rate of 3.6% to 47,351 workers over the five years to 2022 (Khaustovich, *Generic Pharmaceutical Manufacturing*; Exhibit D-4).

The industry exhibits the following key trends (Khaustovich, *Generic Pharmaceutical Manufacturing*; Exhibit D-4):

- Following the beginning of the pandemic, the OGD approved 776 generic drug applications
- The decline in generic drug prices has had a negative effect on industry revenue
- The industry I highly globalized and operates under a trade deficit
- The FDA will continue to focus on improving the assessment and review process for new drug applications
- Major brand name pharmaceutical manufacturers are expected to continue to reduce R&D expenditures
- International trade will remain a critical component of industry performance
- More companies have invested in biosimilar drugs, enabling industry operators to generate higher profit

Industry performance is heavily influenced by the following key external drivers (Khaustovich, *Generic Pharmaceutical Manufacturing*; Exhibit D-4):

- Federal funding for Medicare and Medicaid
- Number of people with private health insurance
- Research and development expenditure
- Median age of population
- Trade-weighted index

Demand Determinants

Socioeconomic and demographic factors, including levels of disease and chronic illness rates, government health policies, pharmaceutical prices, doctors' prescribing patterns and consumer utilization rates determine demand for generic pharmaceuticals. Factors that contribute to generic drug use, as opposed to brand name pharmaceuticals, include the amount that consumers have to pay out-of-pocket for healthcare, the prices of brand name drugs, population demographics and the rate of patent expirations. For example, IBISWorld expects the portion of the population that is older than 65 years old to increase over the five years, which may drive demand for the Generic Pharmaceutical Manufacturing industry's products because older people generally require more healthcare and have particular access to generics through Medicare.

Insurance plays a significant role in determining demand for generic prescription drugs. By implementing drug cost sharing plans and other forms of coverage, insurers enable individuals within their network to access more pharmaceuticals, boosting prescription drug utilization rates. For example, revenue rises when insured individuals fill prescriptions that they would have forgone if they lacked insurance. Similarly, the level of insurance affects purchases; for example, insured consumers choose more expensive drugs than those without insurance. In this regard, as insurance coverage increases, consumers may be less encouraged to purchase generic drugs.

Patent expiration for brand name drugs also drives demand for generics. Patent expirations have an immediate effect because brand name drugs tend to quickly lose market share once generic versions are on the market. However, generic entry is often delayed because of litigation and administrative issues. Patent cliffs tend to benefit generic drug manufacturers by providing them with access to previously unavailable demand. The largest patent cliff took place in the early 2010s. During this period, generic drugs' share of all drugs increased, contributing to growth in industry revenue. As some major blockbuster drugs are set to expire over the five years to 2027, industry revenue is expected to grow during the outlook period.

Outlook

The Generic Pharmaceutical Manufacturing industry is forecast to grow in the next five years, with revenue expected to increase an annualized 2.2% to $45.2 billion over the five years to 2027. A major source of revenue growth will be the expiration of exclusivity rights for major branded drugs such as Humira and Stelara. FDA's attempt to improve the assessment and approval of new drugs will likely benefit the industry in the longer term, although it will also contribute to higher competition. Growth in industry revenue will likely encourage new players to enter the industry. IBISWorld estimates the number of industry enterprises to rise at an annualized rate of 0.3% to 370 organizations. Meanwhile, the industry labor force is expected to grow at a slightly higher rate, with the number of industry employees increasing an annualized 1.0% to 49,815 workers over the five years to 2027 (Khaustovich, *Generic Pharmaceutical Manufacturing*; Exhibit D-4).

Competitor Analysis

Market Share Concentration

The top four companies are estimated to account for 18.8% of total industry revenue.

Basis of Competition

Competition in the Generic Pharmaceutical Manufacturing industry is intensifying as operators vie for a share of the generic drug market. Competition in the US generic market continues to increase, as evidenced by the continued price declines due to new entrants. Additionally, the US pharmaceutical market is undergoing, and is expected to continue to undergo, rapid and significant technological changes. IBISWorld expects competition to intensify as technological advances are made.

A significant proportion of US generic sales are made to a relatively small number of retail drug chains and drug wholesalers. These customers have been consolidating, which has resulted in customers gaining more purchasing power. Consequently, there is heightened competition among generic drug producers for business. Conversely, this trend provides a competitive advantage to large suppliers that are capable of providing cost-efficient quantities of high-quality products.

External Competition

Generic pharmaceutical companies experience intense competition from brand name pharmaceutical companies seeking to counter generic products. Many brand competitors try to prevent or delay approval of generic equivalents through several tactics, including legislative initiatives (e.g., pediatric exclusivity), extending patent protection and changing dosage forms or dosing regimens prior to the expiration of a patent. In addition, brand name companies will occasionally launch an authorized generic concurrent with the first generic launch. When this occurs, the patent challenger no longer has the full exclusivity granted by the Hatch-Waxman Act.

Methods of Competition

Generic manufacturers are increasingly competing on the basis of price. Price competition from additional generic versions of the same product results in significant reductions in sales and margins. To compete on the basis of price and remain profitable, a generic drug manufacturer must manufacture its products in a cost-efficient manner. In addition, competitors may develop products more rapidly or complete the regulatory approval process sooner, enabling them to market products earlier (Khaustovich, *Generic Pharmaceutical Manufacturing*; Exhibit D-4).

7.3.3 Vitamin & Supplement Manufacturing

Industry Overview

The Vitamin and Supplement Manufacturing industry includes enterprises primarily engaged in the production of dietary supplements, which include multivitamins, sports nutrition products, herbal supplements and other medicinal goods that can be purchased over-the-counter. Industry revenue has experienced consistent growth over the last five years, driven by increased demand from both young and old consumer demographics. For instance, the aging US population and rising healthcare expenses also encouraged more consumers to purchase relatively inexpensive dietary supplements to help prevent or alleviate common health complications. Additionally, expansion in disposable income levels and an increasing interest in natural treatments, holistic healthcare and active lifestyles have helped boost demand for industry products.

Overall, IBISWorld anticipates industry revenue to increase at an annualized rate of 1.6% to $37.2 billion over the five years to 2022. However, this annualized expansion includes a 0.5% decrease in 2022 alone, directly resulting from demand spikes amid the coronavirus pandemic as sales for immune system-related industry products climbed. However, current period growth also includes a slower growth in 2021, as industry revenue normalizes from pandemic stockpiling and panic purchases (Le; Exhibit D-5).

The industry exhibits the following key trends (Le; Exhibit D-5):

- Consumers of all ages have become more interested in preventative health and nutrition
- All product segments have experienced an increase in demand over the past five years, but none as much as herbal and sports nutrition products
- Growth in industry imports has far exceeded expansion in export revenue, indicating the presence of a trade deficit for domestic enterprises
- Demand from consumers across all age groups is expected to continue rising
- Despite an increasingly stringent regulatory environment and a saturated market for industry goods, IBISWorld forecasts industry revenue to grow
- While the industry remains highly fragmented due to the broad range of products on the market, it is anticipated to consolidate over the next five years
- As discretionary income continues to strengthen domestically, more consumers are expected to trade up to premium products

Industry performance is heavily influenced by the following key external drivers (Le; Exhibit D-5):

- Healthy eating index
- E-commerce sales
- Per capita disposable income
- Number of adults aged 50 and older
- Participation in sports

Demand Determinants

Demand for the Vitamin and Supplement Manufacturing industry depends on several factors. These include access to primary care, an aging population, health and wellness trends, price levels and product recalls. In addition to rising healthcare expenses, age drives demand for vitamins. According to the Agricultural and Applied Economics Association (AAEA), the reported dietary supplement intake is considerably higher among elderly adults. Furthermore, while younger consumers generally take supplements to fill nutrient gaps in diet or boost athletic performance, older consumers take supplements to treat age-related diseases such as macular degeneration, arthritis, joint pain, heart disease and digestive problems. Demand from elderly consumers is expected to grow as supplement manufacturers continue to broaden the array of condition-specific vitamin blends. Conversely, demand from younger consumers is generally driven by rising health consciousness and a desire to improve overall nutrition, rather than treating current health problems. According to a 2016 poll sponsored by the Council for Responsible Nutrition, 42.0% of respondents stated that they took dietary supplements to promote overall good health and wellbeing, whereas only 28.0% of respondents stated they took supplements to fill in nutrient gaps in their daily diets.

New scientific research is also a driver of consumer demand for industry products. Industry surveys conducted by the Nutrition Business Journal reveal that consumers list scientific research as the single most compelling factor influencing their purchase and consumption of herbs, vitamins and mineral supplements. Well-publicized new research drives large swings in consumer demand for nutritional goods. For example, a study appeared in the Journal of the National Cancer Institute in July 2013 linking omega-3 intake with an increased risk of prostate cancer. A major study from the University of Minnesota concluded that women who used vitamins had higher rates of illness, while other studies have suggested that taking supplements carries no additional benefit for healthy individuals who already have nutritious diets. Supplement manufacturers responded by noting limitations and methodological flaws in these studies, which for the most part did help to alleviate uncertainty and suspicion surrounding dietary supplements. Nonetheless, demand for industry goods continues to be heavily influenced by scientific research and overall trends in the pharmaceutical and healthcare industry.

Price can also influence demand within some product segments. For example, an increase in the availability of more affordable generic dietary supplements will make the industry's products more accessible to a wider market and may increase demand. Changes in real household disposable income also influence demand, particularly for those products deemed nonessential, such as sports nutritionals and various herbal and botanical products. As discretionary income levels rise, consumers will be more likely to trade up to premium supplements or purchase industry products more frequently. Economic factors also have an indirect effect on demand for industry products. For example, rising disposable income levels may encourage more consumers to join fitness clubs or engage in outdoor recreational activities such as jogging, which in turn boosts demand for sports nutrition supplements.

As the COVID-19 (coronavirus) pandemic continues to spread, countries are taking increasingly stringent measures to curb the disease from spreading, such as shelter-in-place procedures. As a result, the economy is beginning to slow leading to greatly reduced consumer confidence. However, vitamins and other immune boosting supplements have.

Outlook

The Vitamin and Supplement Manufacturing industry is anticipated to continue growing steadily over the next five years. Industry revenue is anticipated to benefit from the aging US population, which is driving demand for age-specific products that help with memory loss, physical performance, muscle retention and skin care, among others. Similarly, demand for sports nutritionals is also projected to increase as more consumers engage in physical endurance activities and more active lifestyles. As per capita disposable income rises, more consumers will be able to trade up to premium vitamin brands and purchase a greater variety of supplements, helping sustain industry revenue growth.

Despite an increasingly stringent regulatory environment and an increasingly saturated market for industry goods, IBISWorld forecasts industry revenue to grow an annualized 1.2% to $39.5 billion over the five years to 2027. As in the previous five-year period, booming demand for sports nutrition products and herbal supplements will likely remain the key driver of industry growth in the coming years. Immune support and stress-relieving products are also expected to remain elevated from the previous period as the coronavirus pandemic continues to be a threat until at least the middle of the forecast period (Le; Exhibit D-5).

Competitor Analysis

Market Share Concentration

The industry has a low market share concentration, where the four largest companies are expected to account for less than 15.0% of the market share in 2022. Due to the wide range of products offered, the market for dietary supplements remains highly fragmented, with only one company expected to account for greater than a 5.0% share of the market.

Basis of Competition

The level of competition that Vitamin and Supplement Manufacturing industry participants contend with varies widely across product segments. In general, supplement manufacturers compete based on product quality and assortment, price, reputation and brand recognition.

Quality, Safety and Efficacy

The quality and effectiveness of vitamins, supplements and herbal products have become more important due to tainted, ineffective and harmful products that have resulted in numerous product recalls, warning letters from the Food and Drug Administration (FDA) and public outcries

For example, the 2012 debacle over whether 1,3-Dimethylamylamine (DMAA) was a natural and safe supplement resulted in the FDA warning 11 major sports nutrition manufacturers to immediately recall their products. Demand for products containing DMAA fell significantly, while demand for alternative sports nutrition products swelled. However, DMAA 'substitutes' such as AMP Citrate and dendrobium extract quickly entered the market in the following two years, although these products were also met with similar action by the FDA. Most notably, elite sports nutrition manufacturer Driven Sports Inc. was forced to recall pre-workout brand Craze from the market in 2014 after third-party tests found a tainted form of dendrobium extract that contained amphetamine-like compounds in the product. Similarly, the New York State Attorney General launched a highly publicized investigation into the domestic herbal supplements market in early 2015, which was followed up by warning letters sent to 14 domestic manufacturers of herbal supplement products.

Due to the publicity of such events, consumers are increasingly becoming more knowledgeable of dietary supplementation, which has enabled them to pay closer attention to where and how vitamins and supplements are produced and what ingredients they contain. Although these trends raise quality control and compliance costs for manufacturers, operators that commit to producing safer supplements will naturally experience higher demand for their products than operators that do not.

Price

Producers also compete on pricing. Due to the discretionary nature of vitamins and supplements, drastic price increases can significantly dampen demand, particularly from mainstream consumers who mostly use multivitamins and other standard supplements. However, along with branding, price levels help signify the quality of a brand at the retail level. Lower-priced, private label versions of some supplements are perceived to be less safe and of lower quality than higher priced, branded products. This is particularly true for premium herbal supplements and sports nutrition products, where perceived quality and brand name are usually a more important consideration than price for consumers.

Supply Chain Agreements

Producers also compete to obtain favorable contracts with downstream wholesalers and retailers. Due to the limited amount of shelf space devoted to vitamins and supplements at grocery stores and supercenters, it is difficult for smaller and new producers to obtain shelf space at the leading retail chain stores. Moreover, it is beneficial for manufacturers to obtain contracts with large mass merchandisers such as Walmart or major health supplement stores such as GNC. Conversely, online retailers such as Amazon, Bodybuilding.com and others have helped lesser-known manufacturers market their products to a wider consumer base. Over the five years to 2021, the rapid growth of the online supplements market segment (see IBISWorld report OD5091) has reduced the importance of developing supply chain agreements as a competitive factor.

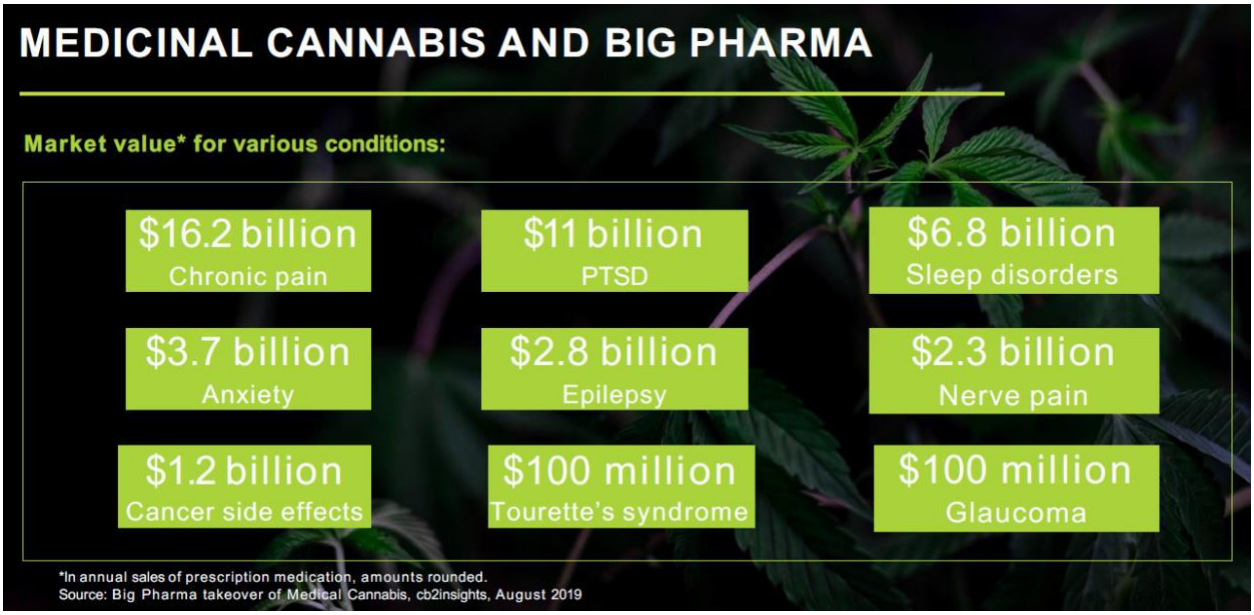
External Competition

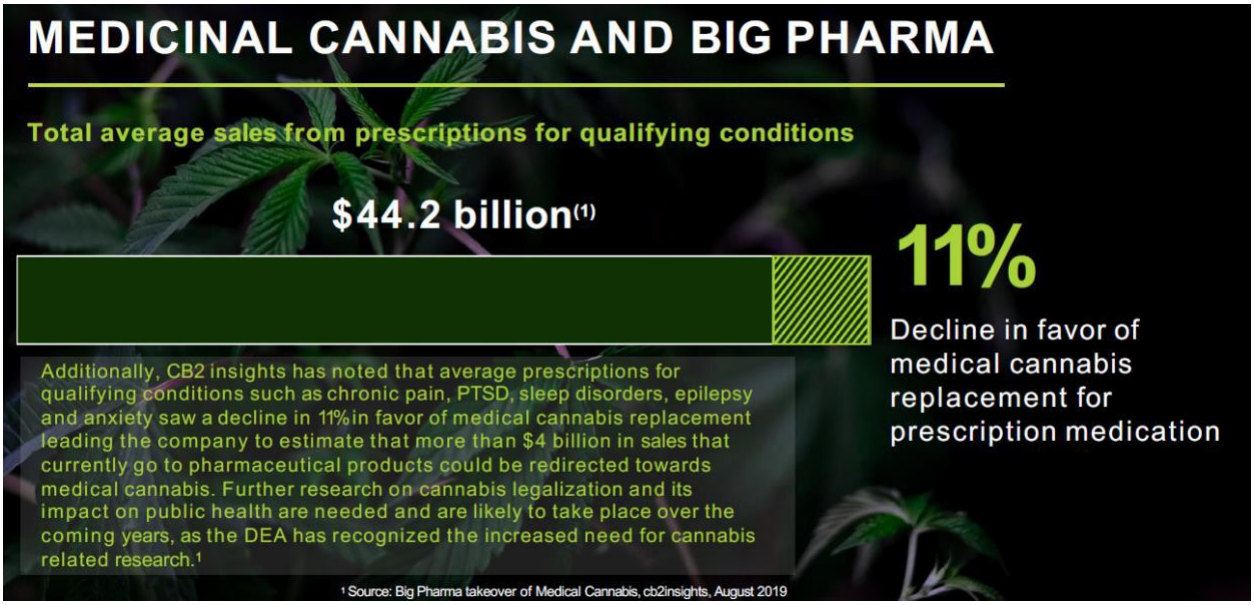
Industry operators contend with some degree of external competition from producers of substitute products and, to a lesser extent, imports. Producers also compete with manufacturers of substitute goods, including brand name and pharmaceutical medicines, over-the-counter consumer products, nutrient-enhanced foods and skin care products. In recent years, external competition has risen due to growing demand for nutrient-enhanced food. Food manufacturers can fortify their products with added protein, iron, fiber and a variety of other minerals and nutrients. In response, supplement manufacturers have introduced new multivitamin selections that not only provide higher percentage totals of common vitamins and minerals, but also contain antioxidants, enzymes and other essential nutrients not commonly found in processed foods. Overall, IBISWorld expects the threat from external competition to remain low over the five years to 2026 (Le; Exhibit D-5).

7.3.4 Cannabis Markets

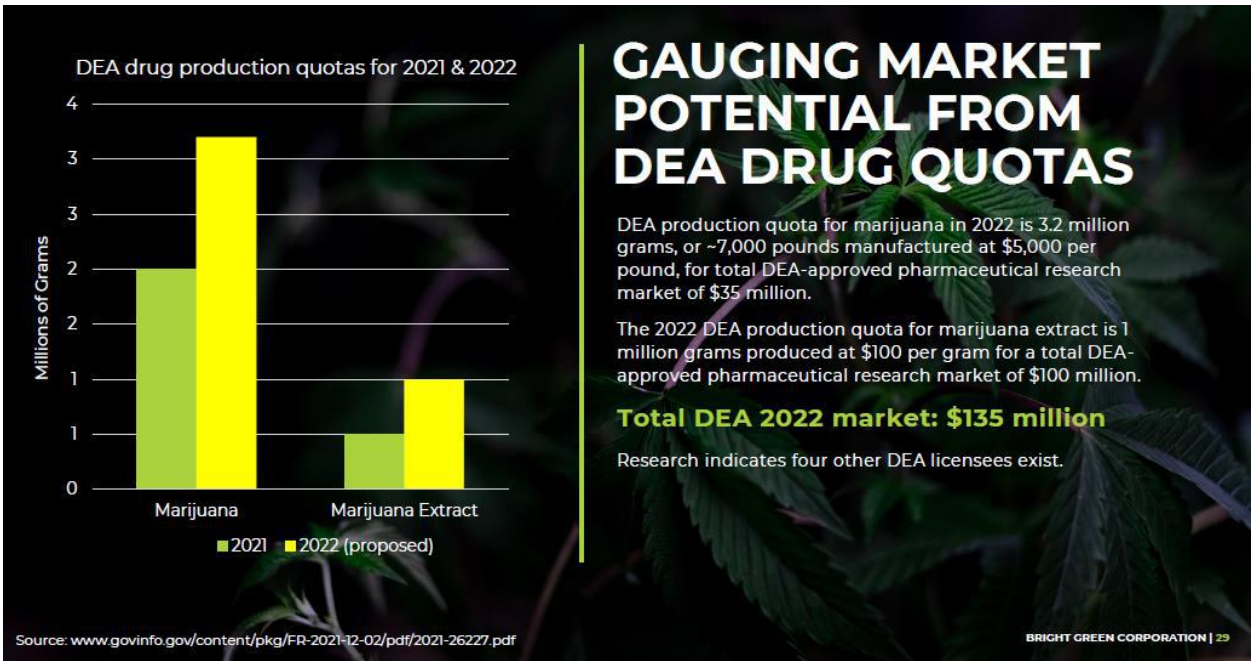
Medicinal Cannabis

The following slides outline the NCE's determination of market potential for medicinal cannabis from various sources:



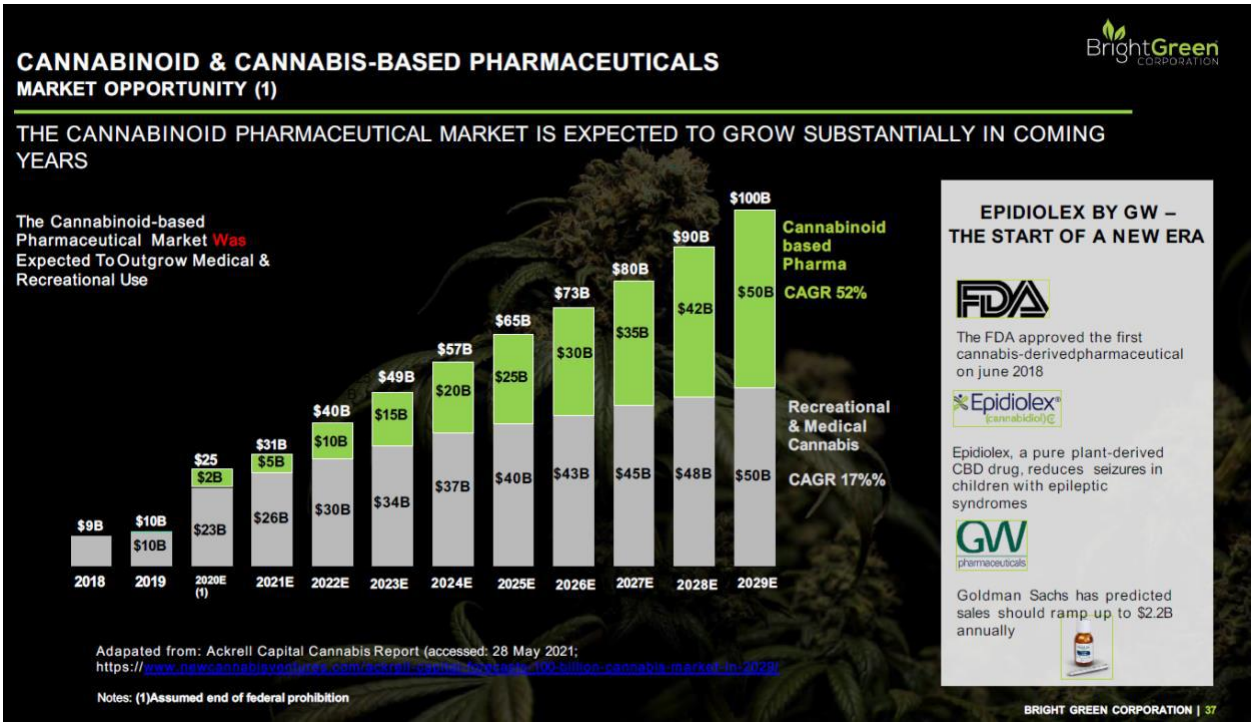


If the total average sales from prescriptions for qualifying conditions is $44.2 billion and there has been an 11% decline in favor of a medical cannabis replacement for prescription medication, this calculates to a potential $4.86 billion medicinal cannabis market for qualifying conditions.



Cannabinoid & Cannabis-based Pharmaceuticals

The following slides outline the NCE's determination of market potential for cannabinoid and cannabis-based pharmaceuticals:



CANNABINOID & CANNABIS-BASED PHARMACEUTICALS: MARKET OPPORTUNITY (2)

- **THE DEVELOPMENT OF CANNABINOID MEDICINES OFFERS THE POTENTIAL FOR HIGH RETURN ON INVESTMENT**
- **GW Pharma acquired by Jazz Pharmaceuticals for US $7.2 Billion**
  - Epidiolex (DS, LGS & TSC indication – orphan epilepsy indications
  - Sativex (not approved in the USA; approved in Europe)
- **Cannabinoids ARE approvable as medicines by FDA & Other International Regulators**
  - Marinol®, Nabilone®, Epidiolex®, Sativex®; Syndros®
- **Cannabinoid Market Size is potentially very large**

1)Pharmaceuticals (Global cannabis pharmaceuticals market was worth US $67 million in 2019 expected to grow at a compound annual growth rate (CAGR) of 76.8% from 2020 to 2027[1])
  - Human & Veterinary

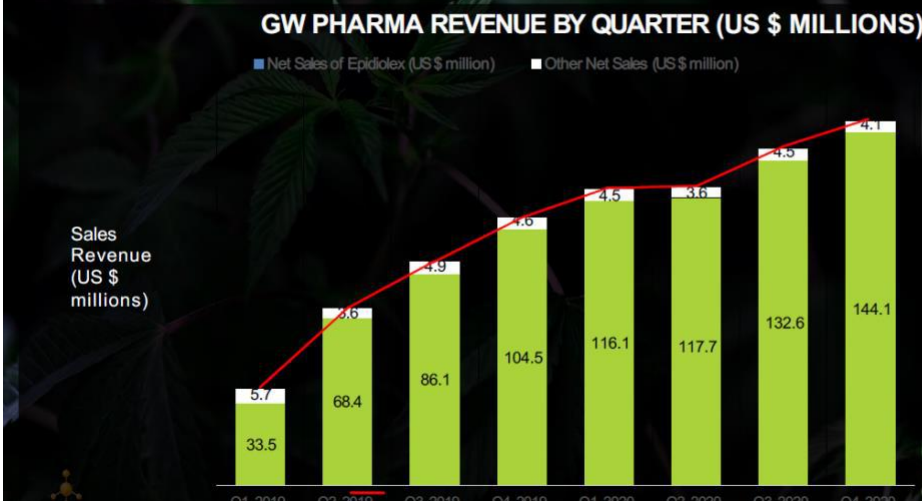
2) Food Ingredients / Dietary Supplements (Novel Food approval in Europe)
  - **Ingredients and products may be sold with appropriate approval**
  - **CBD market (Europe)**
    - **In 2020, the estimated annual spending on CBD in the EU was €8.3 billion (USD$9.75 billion), projecting to reach €13.6 billion (USD$15.98 billion) by 2025 (a 10.4% CAGR)[2]**

3) Cosmetic ingredients
  - Ingredients may be sold with appropriate approval
- Exploitation of the sector comes down to:
  - Regulatory approval
  - Cost of Goods
  - IP protection

1. https://www.grandviewresearch.com/industry-analysis/cannabis-pharmaceuticals-market
2. https://medicinalgenie.com/cannabis-insights/europe-cbd-market/

CANNABINOID & CANNABIS-BASED PHARMACEUTICALS: MARKET OPPORTUNITY (3)

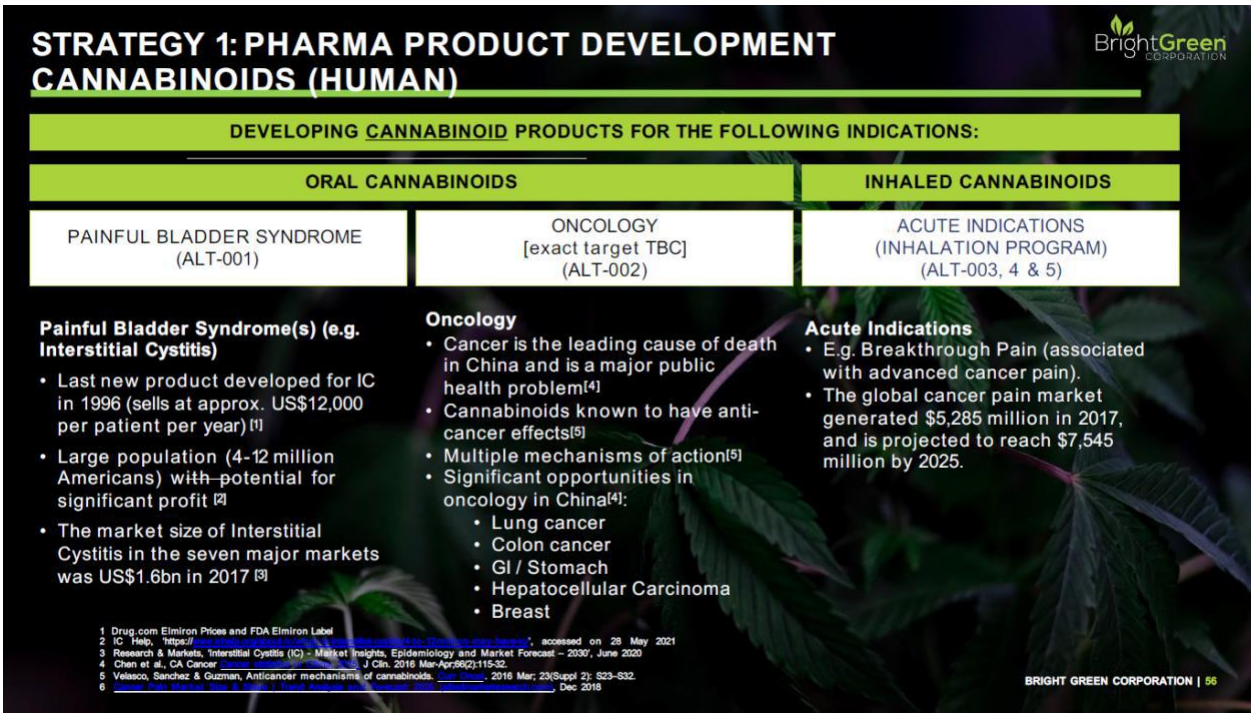
THE CANNABINOID PHARMACEUTICALS MARKET – DOMINATED BY A SINGLE PLAYER (GW), US $600M SALES DURING COVID19 PANDEMIC



Furthermore, the NCE anticipates significant demand for its pharmaceutical products to be developed through its future Alterola division, as there is significant momentum in U.S. clinical trials for cannabinoid-based pharmaceutical products as outlined below:

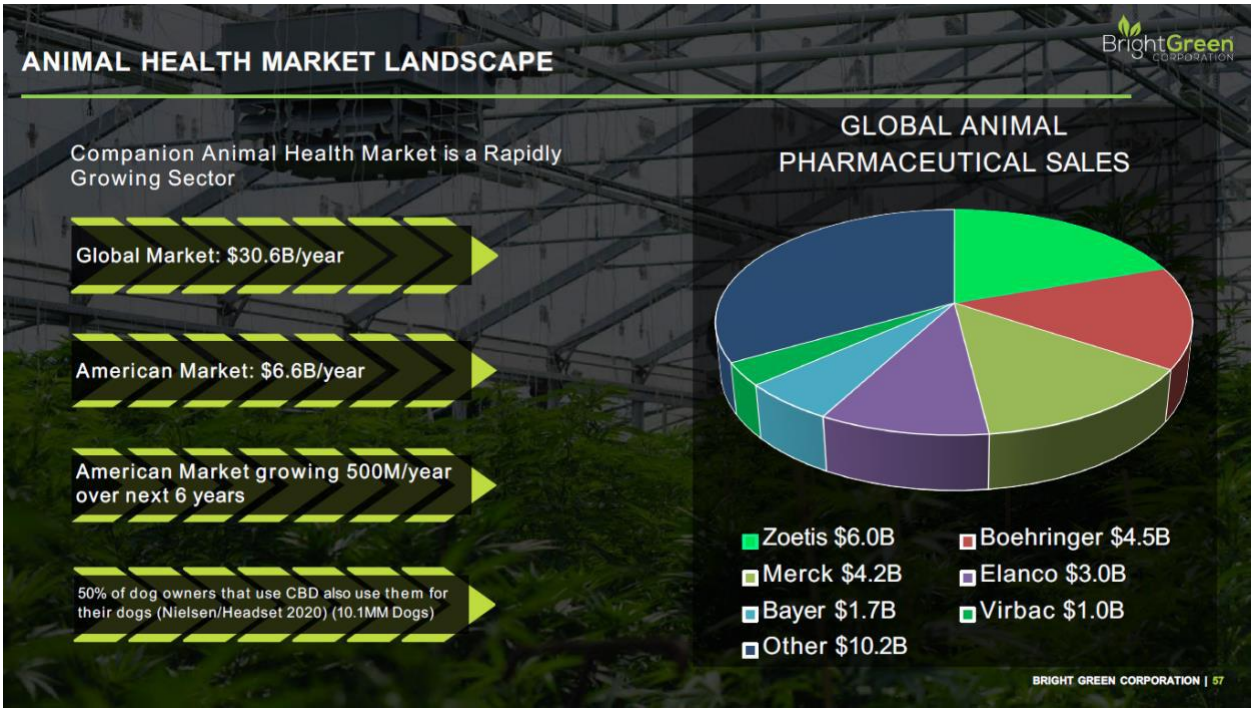
Human Health Market

The following slides outline the landscape of the human health markets specific to the indications being targeted for product development of the future Alterola division of the NCE:



Animal Health Market

The following slides outline the landscape of the animal health market, which will be a key target market for products to be development by the future Alterola division of the NCE:


ANIMAL HEALTH MARKET LANDSCAPE
BrightGreen CORPORATION
Companion Animal Health Market is a Rapidly Growing Sector
Global Market: $30.6B/year
American Market: $6.6B/year
American Market growing 500M/year over next 6 years
50% of dog owners that use CBD also use them for their dogs (Nielsen/Headset 2020) (10.1MM Dogs)
GLOBAL ANIMAL PHARMACEUTICAL SALES
Zoetis $6.0B
Boehringer $4.5B
Merck $4.2B
Elanco $3.0B
Bayer $1.7B
Virbac $1.0B
Other $10.2B
BRIGHT GREEN CORPORATION | 57

7.4 Competitors

Competitors

The NCE has indicated that the Project will have no direct competitors as the NCE is in a unique position to capitalize on its business plan through the exclusive ownership of key assets including the licenses, patents, and capital assets to commence production licensed both by the state and the federal government for the medicinal plant market, which can be used for both research and commercial applications. Furthermore, management believes there are high barriers to entry to achieve these licenses by competitors. Moreover, the awarding authorities have high standards for selection criteria, and companies already growing cannabis in the U.S. are not eligible for apply for these licenses.

Competitive Advantage

The NCE has identified the following competitive advantages over other existing U.S. cannabis growers:

1) The NCE will be able to ship cannabis across state lines and internationally – DEA registration will provide the NCE with market leverage not accessible to other companies growing cannabis in the U.S. While numerous states and U.S. territories have legalized medical cannabis and 18 states and the District of Columbia and Northern Mariana have legalized cannabis or adult use, the sale of cannabis remains federally illegal. Federal and all states' laws prohibit moving any cannabis over state lines. Such legal impediments prevent participants in the state-legal but federally-illegal programs from interstate shipping and selling. traditional U.S. commercial financing sources
2) The NCE has been granted patents for medical therapies
3) The NCE is able to raise capital on the U.S. public markets – The ability of the NCE to legally cultivate and sell cannabis at the federal level is a key competitive advantage the NCE holds that will allow unique access to both revenue and capital markets with federal and state legal approval.
4) The NCE can and will participate in Federal programs including capital, interstate commerce, import and export.

7.5 Marketing Strategy

<u>Products/Services</u>

Product marketing will focus on high-quality cannabis and derivatives.

<u>Price</u>

The NCE anticipates product pricing ranging from $4.05 - $3.50/gram.

Promotion

In order to effectively launch and create significant penetration to the market, the NCE will utilize the following strategies:

- **Print Media**
- **Website & Blogging** - Blogging will not only help to organically establish the NCE's presence in the industry, but will also promote awareness, is a great tool for lead generation, can enable the NCE to position itself as an influencer in the industry, and is crucial for boosting search engine optimization ("SEO").
- **Email Marketing** – Email gives the NCE a direct line to their consumers and is an excellent way to generate leads. 73% of millennials still would rather communicate business affairs via email and 28% of customers say they prefer to receive promotional content via email more than once a week.
- **Digital Advertising** – Digital Advertising of Cannabis related products is a challenge given its legal status; therefore, the NCE will direct its digital advertising to industry-specific options. Platforms such as TrafficRoots and Mantis provide a global network of advertising options to cannabis businesses in multiple formats and are a much more effective use of resources.
- **Social Media** – Social Media is another area for businesses operating in the cannabis industry to navigate as these platforms prohibit advertising of industry specific products. They don't, however, prohibit the creation of organic content. As a result, strategically establishing the NCE's presence on various social media platforms is an effective marketing strategy for any cannabis business.
- **Traditional Sales Techniques** – The NCE's offering will be very industry specific; therefore, traditional methods used to establish relationships with potential customers will, at least initially, be a priority activity.

  Using pre-established industry contacts from across the executive management team through the NCE's sales channel will provide a healthy sales pipeline and facilitate the NCE establishing its brand, products, and future research.

  The NCE will have access to, through its own programs or those acquired from Alterola, a world class suite of Cannabinoid products which provide a multi sectoral and multi-channel route to revenue. The NCE will utilize its experience and this unique position to market its value proposition and generate revenues whilst simultaneously developing the pharmaceutical products which will receive authorization through the FDA.

Distribution (Placement)

The manufacturing facility is a single, stand-alone operation; therefore, marketing will focus on the distribution of products to researchers across the United States and internationally as well as large pharmaceutical and distribution companies nationwide.

8.0 EMPLOYMENT

8.1 Targeted Employment Area

Under the EB-5 immigrant investor program, an alien can become eligible to obtain U.S. permanent resident status by investing either $1,050,000 or $800,000 USD in a new commercial enterprise in the U.S. To participate in the immigrant investor program through the investment of the lower $800,000 amount, the alien must invest his/her capital funds into a business that is principally doing business in a TEA.

Section 203(b)(5)(B) of the Immigration and Nationality Act defines a TEA as an area that, at the time of investment, is a **Rural Area ("RA")**, an area that is not within a Metropolitan Statistical Area ("MSA") and is outside of any city with population at least 20,000 per 8 CFR 204.6, or is a **High Unemployment Area ("HUA")**, an area that has experienced an unemployment rate that is at least 150 percent of the national average unemployment rate (USCIS, *About EB-5*). Based upon the 2021 national average unemployment rate of 5.3%, an area qualifies as a HUA when the average annual unemployment rate was at least 8.0% during the same period (Bureau of Labor Statistics).

The Subject Property is located at *1033 George Hanosh Boulevard, Grants, NM 87020.* ***Grants, NM qualifies as a Rural Area*** with a 2020 population of 9,163 and, according to the U.S. Office of Management and Budget ("OMB"), Cibola County is not located within an MSA (U.S. Census Bureau, *QuickFacts*; OMB). Therefore, ***the minimum EB-5 investment will be $800,000 per foreign investor***.

8.2 Job Creation

The economic impact analysis conducted by *Baker Tilly* finds that the Project will generate significant and positive economic benefits for the local, regional and U.S. economy. The total investment is estimated to be $538,600,000 and the EB-5 investment into the Project is expected to be $458,400,000 from 573 EB-5 investors. Of the total capital expenditure, EB-5 eligible costs for job creation analysis include $295,531,719* to be spent on construction and $83,000,000 to be spent on FF&E.

**Note: In order to be conservative, the economic analysis does not include water infrastructure improvement costs within its job creation analysis.*

EB-5 investment will require evidence of creating at least 5,730 jobs, of which only 5,157 may be created indirectly and 573 must be direct jobs.

According to the economic analysis, **the Project will create 7,164.7 permanent new jobs** comprising of direct, indirect, and induced jobs, of which 3,737.2 are model derived direct jobs. The following table summarizes total job creation by industry category (Baker Tilly):

JOB CREATION BY INDUSTRY		
Category	**NAICS**	**Jobs Created**
Nonresidential Building Construction	2362	3,258.4
FF&E Purchase and Installation	4238	242.9
Operations (Cannabis Manufacturing)	3254	3,663.4
TOTAL FOR PROJECT		**7,164.7**

Note: In order to be conservative, the economic analysis does not include Alterola profits within its job creation analysis.

Therefore, **each investor will be assigned 12.5 jobs** to meet the EB-5 capital raise of $458,400,000.

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EXHIBIT

Exhibit A: Investment Structure Documents

Exhibit A consists of the following documents:

- Exhibit A-1 – NCE Documents
- Exhibit A-2 – Regional Center Amendments and Approval Letters
- Exhibit A-3 – RC geographic Boundary Maps

Exhibit B: Development Details

Exhibit B consists of the following documents:

- Exhibit B-1 – Candelaria Real Estate Option Agreement
- Exhibit B-2 – Arvizu Real Estate Option Agreement
- Exhibit B-3 – Universal Fab Contract
- Exhibit B-4 – Nex Mexico Department of Agriculture Hemp License
- Exhibit B-5 – New Mexico Board of Pharmacy License
- Exhibit B-6 – DEA Memorandum of Agreement

Exhibit C: Bizminer 3254 Industry Financial Profile

Exhibit D: Industry Reports

Exhibit D consists of the following documents:

- Exhibit D-1 – IBISWorld Report OD4141
- Exhibit D-2 – IBISWorld Report OD3315
- Exhibit D-3 – IBISWorld Report 32541A
- Exhibit D-4 – IBISWorld Report 32541B
- Exhibit D-5 – IBISWorld Report 32541D