TABLE OF CONTENTS

1. Introduction .................................................................................................................. 3
2. Blockchain Corporation ............................................................................................. 3
3. Cannacor .................................................................................................................... 5
4. Cannacor Aquaponics Cultivation Plant ................................................................. 7
5. Certification ................................................................................................................ 13
6. The Medical Cannabis Industry .............................................................................. 17
7. Problems Identified in the Cannabis Industry ....................................................... 23
8. Blockchain-Based Benefits in Supply Chain Management .................................. 25
9. Supply Chain Management ...................................................................................... 28
10. Technology Stack .................................................................................................... 36
11. Cannacor Cryptocurrency ...................................................................................... 38
12. Tokenomics .............................................................................................................. 42
13. Roadmap .................................................................................................................. 49
14. Cannacor Team ....................................................................................................... 51
15. Blockchain Corporation Team ............................................................................... 53
16. Disclaimer ................................................................................................................. 57
17. References ................................................................................................................ 60
1. INTRODUCTION

CannaCor and Blockchain Corporation have engaged in a collaboration to position themselves to become global leaders in cannabis research, cultivation, processing and distribution, as well as the implementation of blockchain technologies for purposes of cannabis life cycle and supply chain management. They aspire to lead, legitimize and define the future of the industry by building the world’s most trusted blockchain-based cannabis company. This venture includes the establishment of a unique aquaponics cultivation and production facility in Lesotho to supply the global market.

This document provides details on the contribution of both parties to this venture including an Initial Coin Offering (ICO) and how this will impact on their operation.

A brief introduction to the medical cannabis industry is included providing information on the medical benefits of cannabis, the growth potential of the cannabis market and the legalization of the industry.

2. BLOCKCHAIN CORPORATION

The Blockchain Corporation team is committed to solving problems in the medical cannabis industry and focusing attention on implementing real-world solutions to ensure consistent crop growth of excellent quality and quantity. It aspires to streamline the cultivation life cycle of the cannabis crop and deliver pinpoint supply chain solutions to enhance product traceability.

Blockchain Corporation will do this by positioning itself as an early adopter and implementer of a combination of Blockchain and Hyperledger technologies to manage the medical cannabis production life cycle and supply chain. Key focus areas are cultivation life cycle management and supply chain management.
2.1 CULTIVATION LIFE CYCLE MANAGEMENT

The cannabis industry requires a technology infrastructure to support and improve the multistage cultivation process of cannabis. Blockchain Corporation has identified three major areas which need to be addressed.

▶ Process and cost analysis

A process will be implemented to track all nutrients and materials used for growing a cannabis crop to calculate the cost per gram by plant, batch and strain.

▶ Genealogy tracking and optimization

This system will help CannaCor keep a record of a strong, diverse genetic portfolio, which will track the genealogy of each plant and create new hybrids based on cultivators’ preferences.

▶ Product quality and consistency

Currently cultivators struggle to produce a harvest of consistent quantity and quality by following repeated processes. In order to improve this aspect of cultivation, our system will track a batch and capture all information pertaining to its genealogy, exact amount of water and nutrients used, the precise pH, temperature and humidity at each stage of the batch’s cultivation process.

2.2 SUPPLY CHAIN MANAGEMENT

Blockchain Corporation will create a network of processes that moves the product along from the suppliers of raw materials to the organizations which deal directly with users. The three major steps in the supply chain blockchain process are as follows:

▶ Decentralized data record

Blockchain technology provides the utmost transparency in the decentralized recording of data. It ensures the supply chain record is secure, transparent, verifiable and immutable.
▶ Packaging

By integrating blockchain technology into packaging, the CannaCor team and its affiliates (retailers, shop owners, etc.) will be able to track the precise real-world movement of their cannabis inventory on an individual shipment basis. When a product is scanned, no data needs to be entered. It is all covered by the back-end software, eliminating the need for training staff to operate the system.

▶ QR code scanning

The company will make use of tracking technology which can communicate with modern smartphones, making implementation of this system simple for producers, retailers and consumers alike.

3. CANNACOR

3.1 INTRODUCTION

CannaCor is a licensed producer of medical cannabis and cannabis by-products located in Lesotho, southern Africa. It is supported by a group of professional executives with extensive knowledge and understanding of the needs of the medical cannabis industry. Their economic activities are based on the recently approved production and export of cannabis and cannabis by-products which can be used for medicinal needs.

A proud pioneer, they aim to incorporate only the latest and best technologies and will become a medical cannabis producer to supply cannabis flower and extract products to tens of thousands of patients, physicians, pharmacies, hospitals, governments and researchers on a global scale.

They are constantly striving to improve their products and adhere to strict procedural and environmental protocols in order to maximize purity, quality and customer satisfaction.
3.2 VISION

The vision of CannaCor is to become a frontrunner of medical cannabis cultivation in Lesotho. Their focus is to implement sustainable production facilities and expand their lead with an aquaponics production plant while integrating all their management systems with a selection of blockchain technologies to ensure transparency, immutability and real-life tracking.

3.3 MISSION

CannaCor works with a group of experienced scientists, blockchain developers, pharmacists and engineers daily, with the goal of improving our company by researching and delivering environmentally sustainable high-quality cannabis products.

3.4 CANNACOR OPERATIONS

CannaCor operates within the Lesotho cannabis industry. Lesotho legalised the production of cannabis in September 2017 under the Drugs of Abuse Regulations, Act of 2018. Different classes of operating licences are granted to cultivate cannabis, export manufactured products, and conduct testing, etc.

CannaCor (Pty) Ltd is an incorporated company under the Companies Act of 2011 in the Kingdom of Lesotho and was registered on 16 November 2018 (Registration number 65263, (TIN number 200084029-4). The company is licensed as a prohibited drug operator. The licence is granted under Section 12 of the Drug Abuse Act of 2008 with licence number 02/D022/06-2019. CannaCor (Pty) Ltd is licensed to perform certain activities, as defined in the act, namely: the cultivation of cannabis; manufacture of cannabis products; supply and distribution of cannabis; storage of cannabis and/or the export, import and transit of cannabis products within, into and outside of Lesotho for medicinal purposes and/or scientific use and any other lawful use.

The Cannacor team will ensure that they are compliant with every aspect of the act and are certified by the following: ISO 9001, Good Agricultural and Collecting Practice (GACP), Good Manufacturing Practice (GMP) and Good Laboratory Practice (GLP).

CannaCor has obtained 50 000 m² of land in Berea, Lesotho, of which 30 000 m² is permitted for greenhouse or indoor cultivation of cannabis. The remainder of the land will be used for further expansion as demand grows.
A medical cannabis plant will be established to cultivate cannabis and produce products such as:

- Oils: Tetrahydrocannabinol (THC), Cannabidiol (CBD), Cannabinoids (CBN), Tetrahydrocannabinolic Acid (THCA) in various strengths and combinations
- Cannabis and oil capsules and various other products:

CannaCor intends to commence with the development of an aquaponics production facility for medical cannabis during the fourth quarter of 2019. An aquaponics production facility is a strategically important asset for CannaCor as most other European liberalized markets do not allow for local production and rely on imports. The company will be able to serve Canada, Europe and other global markets from this facility.

4. CANNACOR AQUAPONICS CULTIVATION PLANT

4.1 INTRODUCTION

Cannacor’s objective is to develop its own aquaponics cultivation and production facility for medical cannabis on the company’s premises in Lesotho. This will enable the company to meet a growing demand in a global market of scarce production capacity and become a recognized supplier to the global markets that have no or limited production capacity.

The Medicines Agency places great emphasis on compliance with quality standards and regulative requirements on the cultivation of cannabis plants without the use of pesticides. Therefore, CannaCor has carefully evaluated various cultivation possibilities.

The intention is to establish a facility where standardized, uniform and consistent products can be cultivated, without the use of pesticides, so that the content of the active ingredients is the same for each harvesting and processing stage. The development of the cultivation premises into a complete facility for the cultivation and production of medical cannabis is expected to commence in the fourth quarter of 2019.

The 50 000 m² of land acquired by CannaCor is situated in an agricultural area called Berea in Lesotho, Southern Africa, with access to electricity and water. The land is 45 minutes’ drive outside of Maseru. The area has already been transformed into agricultural land.
4.2 WHY CANNACOR HAS SELECTED LESOTHO FOR ITS PLANT

The emerging Lesotho medical cannabis industry has the potential to turn the country into a global powerhouse in the production and supply of the commodity both as raw and as finished medical cannabis products. Lesotho is blessed with natural conditions that favour the production of medical cannabis.

The pristine environment characterized by clean water and air, solar electricity production as well as its potential for high altitude cultivation is perfect for medical cannabis production. These conditions are necessary to control diseases and pests that afflict the cannabis crop. The favourable climatic conditions in Lesotho are perfect for producing medical cannabis.

FIGURE 1: LESOTHO ADMINISTRATIVE DISTRICTS
4.3 WHAT IS AQUAPONICS?

Aquaponics is a complex system that involves fish and plants. In short, fish produce waste that promotes plant growth and the plants clean the water before it is flushed back into fish tanks, and the whole process is repeated. The word aquaponics comes from a blend of the words ‘aquaculture’ and ‘hydroponics’, and whilst aquaponics shares certain attributes of both systems, it is a far more developed and unique system.

Aquaponic systems have three main components - fish, plants and microbes. The microbes are a commonly overlooked part of an aquaponic system, but it is the microbes that do the most important work in the nutrient cycle. Aquaponics uses no soil at all - but it can use an alternative growing medium such as clay pebbles, pumice stones, lava rock or gravel, or the plants can simply be grown in the nutrient rich waters coming from the fish tanks.
4.4 THE ADVANTAGES OF USING AQUAPONICS

▸ Sustainability

Aquaponics is a truly sustainable system for growing cannabis. Fish food manufactured specifically for aquaponics ensures the system is free of toxins and provides the fish with what they need to grow strong and healthy. All that is needed is fish food as well as additional nutrients for the topsoil layer to grow both healthy cannabis plants as well as fish for consumption.

▸ Growth rate

Aquaponics is a proven method for fast-growing plants. By allowing the roots to take in high levels of oxygen, they can absorb more nutrients and grow quickly.

▸ Water use

Estimates show that aquaponic systems use up to 90% less water than traditional systems by recirculating the water.

4.5 THE EXTRACTION PROCESS

CannaCor will implement the supercritical CO$_2$ extraction process to ensure that the product is free of unwanted particles and is of superior quality.

The supercritical CO$_2$ extraction process creates phase changes in carbon dioxide utilizing temperature and pressure. CO$_2$ is known as a “tuneable solvent” making it extremely versatile for creating a multitude of end products by controlling temperature and pressure. These phase changes create an environment that drops out differing weights of components in the plant material.

The unique design of the Hi-Flo Series system allows for separation and collection of these constituents during a single extraction. This enables collection of light essential oils separately from other desirable constituents and heavier lipids. Supercritical CO$_2$ fluid extraction (SCFE) methodology delivers a clean, unaltered, consistent yet flexible product.
The primary reason for using CO\textsubscript{2} is to create a pure clean quality of oil with little to no post-processing, unlike toxic solvents that may require many hours of purging the solvent trapped in the oil. In addition, multiple industries have proven that the highest efficiencies in commercial processing utilize CO\textsubscript{2}.

CO\textsubscript{2} is efficient, inexpensive and is a tuneable solvent. The ability to “tune” the extraction process cannot be overstated - especially with a system that will separate constituents during an extraction. CO\textsubscript{2} is also a sanitizing agent, prolonging shelf life. With the proper system and environment, it yields food and medical grade oils. CO\textsubscript{2} extraction is the cleanest and safest method for extracting plants such as hops, cannabis and a wide range of nutraceuticals and organic crops.
4.6 CANNACOR PRODUCTS

▶ Extracts

CannaCor extracts start with meticulously grown cannabis before undergoing a state-of-the-art cold extraction process designed to preserve delicate cannabinoid and terpene content and to deliver a pure, aromatic and effective product.

▶ Oils

Tetrahydrocannabinol (THC): THC is the primary psychoactive component of the cannabis plant, responsible for what is known as ‘getting high’. THC can ease moderate pain (analgesic) and is a neuroprotective which reduces neuroinflammation and stimulates neurogenesis.

Cannabidiol (CBD): CBD is a cannabis compound with a wide array of medical benefits, without making users feel ‘high’. In fact, CBD can counteract the psychoactive activity of THC. Recent research has found that CBD is highly effective as a treatment for a wide range of conditions, from arthritis and diabetes to cancer and depression.

▶ Dried cannabis

CannaCor will cultivate and produce a range of dried cannabis products which will be available as cured and trimmed whole cannabis flowers or precise blends of ground cannabis.
Oil capsules

Many prefer to take their dose of cannabinoids in the form of safe cannabis oil capsules. With cannabis oil capsules, one can get all the benefits of typical medical cannabis without the side effects of smoking.

Typically preferred by people who suffer from respiratory problems, young children and those who want to protect their health, these capsules are a safer, arguably better way, to get the required THC and CBD dose.

5. CERTIFICATION

5.1 GOOD MANUFACTURING PRACTICES (GMP) RELATED TO MEDICAL CANNABIS AND RELATED PRODUCTS

CannaCor will take all the steps required to build the cannabis production plant according to Good Manufacturing Practices (GMP). Quality, safety and efficacy requirements will be taken into consideration in the cultivation, harvesting and primary processing of cannabis plants intended for medicinal use or in the preparation of non-sterile medicinal cannabis products.

Medicinal cannabis includes:

- Cannabis
- Cannabis materials
- Cannabis preparations
- Finished cannabis products.
The cultivation method and primary processing of the cannabis plant determine the ultimate properties of the active pharmaceutical ingredients (APIs). It is important to note that starting materials of herbal origin have a complex composition and can be characterised to only a limited extent through chemical or biological analysis. Therefore, an effective quality assurance system in the steps leading up to the production of the API is needed in order to guarantee reproducible quality.

**Cannacor aims to ensure that the cannabis is produced:**

- hygienically to keep microbiological contamination to a minimum so as to mitigate the negative effects during cultivation, processing and storage.
- under conditions that ensure the therapeutic properties of the end-product are constant and reproducible.
- under conditions that ensure that the therapeutic properties of the end-product are constant and reproducible.

**The key benefits of GMP certification are to:**

- prove the organization's management capabilities in product quality and safety assurance
- enable employees to develop good production and operation habits
- reduce safety risk in product quality
- timeously detect production and management problems to reduce costs
- ensure better understanding of and compliance with the relevant laws and regulations
- enhance the company's international credibility and public image
- Increase customer’s long-term confidence in the enterprise.

For more information: [https://intlcert.com/gmp-for-Cannabis/](https://intlcert.com/gmp-for-Cannabis/)
5.2 ISO 9001 CERTIFICATION

ISO 9001 introduces a concept known as the process model. This means that CannaCor needs to define what the organisation does by developing process maps of the company's organisational activities, understanding how those processes interrelate and deciding who owns those processes.

Whether the company operates internationally or simply wants to expand locally, compliance with ISO 9001:2015 demonstrates that the company has a solid commitment to achieving quality. Compliance with ISO 9001 helps to improve overall performance by widening the scope of business opportunities, increasing market share and overall competitiveness. ISO 9001 certification is often a prerequisite when bidding for contracts.

Implementing a Quality Management System (QMS) will enable CannaCor to continuously improve the company’s processes, thus giving CannaCor the ability to improve day-to-day operations and exceed customers’ expectations and requirements.

The benefits of using an ISO 9001 QMS include:

▶ becoming a more consistent competitor
▶ meeting customer satisfaction needs
▶ increasing business opportunities by demonstrating compliance
▶ implementing more effective ways of working – saving time, money and resources
▶ less wastage
▶ motivating and engaging employees with efficient internal processes
▶ improving performance to reduce errors and increase the profit margin.
5.3. GOOD LABORATORY PRACTICE (GLP) CERTIFICATION

Good Laboratory Practice (GLP) is a set of principles intended to assure the quality and integrity of non-clinical laboratory studies that are intended to support research or marketing permits for products regulated by government agencies. The term GLP is most commonly associated with the pharmaceutical industry and the required non-clinical animal testing that must be performed prior to approval of new drug products. However, GLP applies to many other non-pharmaceutical agents such as colour additives, food additives, food contamination limits, food packaging and medical devices.

The primary benefit of following current GLP is the creation of a document trail providing traceability for all measurements. This leads to the creation of technically defendable scientific data, by which quality, reliability and trustworthiness can be assured.

Other benefits of GLP for both the laboratory and its customers include:
- Increased confidence in the reliability and trustworthiness of laboratory data
- Increased production of right first-time results
- Increased overall productivity
- Better laboratory reputation
- Reduced need for rework
- Reduced time spent on non-revenue earning investigations.

5.4 GOOD AGRICULTURAL AND COLLECTING PRACTICE (GACP) CERTIFICATION

Most of the safety, quality and traceability issues that arise from raw materials are due to a failure to ensure correct identity and/or product purity. For plants and plant products, botanical identity includes ensuring the correct species, correct variety or chemotype, correct plant part and correct processing. In other words, correct identity alone is not enough. Growers/collectors must ensure the raw material is not contaminated with other toxic botanicals. (e.g. burdock, comfrey or nettle contaminated with *Atropa Belladonna* - deadly nightshade; plantain contaminated with foxglove). Growers/collectors must also ensure the purity of raw materials. Product purity can be at risk from contamination with micro-organisms, heavy metals, pesticide residues, environmental toxins and adulterants.
The GACPs are based on Hazard Assessment Critical Control Points (HACCP) principles. HACCP forms the foundation of food safety programmes around the world. GACPs are really about ‘saying what you do’, ‘doing what you say you do’ and ‘verifying that you did what you said you were going to do’. Although GACPs do require the development of consistent ways of doing things (this does include formal record keeping), the real benefits for growers/collectors are traceability and safety assurances.

6. THE MEDICAL CANNABIS INDUSTRY

6.1 INTRODUCTION

Medical Cannabis is the medical use of the *Cannabis sativa, Cannabis indica* and various other strains to relieve symptoms of diseases and treat their conditions. The cannabis plant was used for medicinal purposes for centuries throughout the world until the early 1900s. It contains more than 100 different chemicals called cannabinoids. Each one has a different effect on the body. Delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD) are the main chemicals used in medicine.

Medical cannabis is a category term for anything from dried cannabis flowers, cannabis oils, capsules and tablets to mouth spray. Common to all these product types is that they contain either parts of the cannabis plant, active substances from the plant or synthetic cannabinoids which are used to alleviate illness. The main active and commonly known cannabinoid compounds are tetrahydrocannabinol (THC) and cannabidiol (CBD). THC contains properties that can increase appetite and reduce nausea. CBD has a dampening effect on cramps. Thus, the combination of THC and CBD may potentially provide a remedy for patients suffering from pain, cramps and/or nausea and many other illnesses and diseases.

Medical cannabis may be best understood as the use of cannabis under ongoing medical supervision, with an established diagnosis of the target symptom-disease complex. Herbal cannabis is used in conjunction with, or in consideration of, other pharmacological and non-pharmacological approaches with the goal of reaching prespecified treatment outcomes.
The primary purpose of medical cannabis is symptom relief, improved function and overall quality of life. While cannabis has a long history of medical use as an analgesic (pain reliever) and antispasmodic agent, for much of the modern era there has been a general lack of awareness among scientists and physicians of its medical benefits. The discovery of the active ingredient THC in the 1960s, as well as the discovery of a system of endogenous cannabinoid receptors and ligands in the late 1980s and early 1990s, promoted enquiry into the therapeutic potential of cannabis and its extracts and derivatives. This work revealed that cannabis can provide relief from certain types of conditions, such as severe chronic pain and led to the development of various herbal medical cannabis products.

6.2 WHAT ARE THE MEDICAL BENEFITS FOR PATIENTS?

Cannabinoids in medical cannabis act on the endocannabinoid system, a natural signalling system in the human body. The endocannabinoid system has a regulatory and protective function in the body and regulates pain, inflammation, sleep, appetite and memory, among other things. The system consists of internal cannabinoids, the CB1 and CB2 receptors, along with substances that break them down.

Internal cannabinoids are cannabis-like substances that the body produces itself, which work on the endocannabinoid receptors. CB1 receptors are predominantly located in the brain and the central nervous system. The CB2 receptors are found in other parts of the body, connecting with the cells that are involved in our immune system.

When the receptors are activated by cannabinoids, they can influence appetite, blood pressure, blood flow to the brain, digestion, nausea, the immune system, inflammation, memory, mood, movement, pain, reproduction and stress.

Patients find that medical cannabis from cannabis plants works better than simple medications containing cannabinoids, where active substances are isolated. This difference can be explained as the interaction between the plant's many different substances which together provide a better efficacy. This effect is also known as the “entourage effect”.

The benefits and risks associated with medical cannabis use vary depending on many factors, including the amount of medical cannabis used and the concentration of cannabinoids in the product, the frequency of medical cannabis use, the patient’s age, the medical conditions being treated, previous experience with cannabis or cannabinoids and the use of other prescription or non-prescription drugs.
6.3 LEGALIZATION

The legality of cannabis for medical and recreational use varies per country, in terms of its possession, distribution and cultivation as well as how it can be consumed and the medical conditions for which it can be used.

These policies, in most countries, are regulated by the United Nations Single Convention on Narcotic Drugs that was ratified in 1961, along with the 1971 Convention on Psychotropic Substances and the 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.

The use of cannabis for recreational purposes is prohibited in most countries, however, many have adopted a policy of decriminalization to make simple possession a non-criminal offense.

Countries that have legalized the medical use of cannabis include Australia, Canada, Chile, Colombia, Croatia, Cyprus, Finland, Germany, Greece, Israel, Italy, Lesotho, Luxembourg, North Macedonia, Norway, the Netherlands, New Zealand, Peru, Poland, South Africa and Thailand.
Others have more restrictive laws that only allow the use of certain cannabis-derived pharmaceutical drugs. In the United States, 33 states and the District of Columbia have legalized the medical use of cannabis, but at the federal level its use remains prohibited for any purpose.

Lesotho legalised the production of cannabis in September 2017 under the Drugs of Abuse (Cannabis) Regulations, Act of 2018.

Source: https://lawprofessors.typepad.com/marijuana_law/2018/12/why-are-so-many-countries-now-saying-cannabis-is-ok.html

FIGURE 5: GLOBAL LEGALIZATION OF CANNABIS
LEGAL CANNABIS MARKETS ARE STILL A RELATIVELY NEW PHENOMENON AND THE MARKET IS NOWHERE NEAR ITS TOTAL SALES POTENTIAL. WORLDWIDE CONSUMER SPENDING ON LEGAL CANNABIS WAS EXPECTED TO REACH AN ESTIMATED $12.2 BILLION IN 2018, A SIGNIFICANT JUMP FROM $9.5 BILLION IN 2017, ACCORDING TO THE 2019 UPDATE OF THE STATE OF LEGAL CANNABIS MARKETS, 6TH EDITION (SOLMM) REPORT RELEASED BY ARCVIEW MARKET RESEARCH (ARCVIEW GROUP) AND BDS ANALYTICS. THE 28% WORLDWIDE GROWTH ESTIMATED FOR 2019 IS SLIGHTLY BEHIND THE GROWTH RATE FORECAST MADE IN THE ORIGINAL SOLMM REPORT RELEASED IN JUNE 2018, AS CANADA DELAYED THE LAUNCH OF ITS PROGRAMME FROM JUNE TO OCTOBER 2018 AND CALIFORNIA’S EXTENSIVE TAX AND REGULATORY STRUCTURE HINDERED LEGAL OPERATORS IN THEIR COMPETITION WITH THE STATE’S ROBUST ILICIT TRADE. ARCVIEW GROUP NOW FORECASTS THAT SPENDING GROWTH WILL ACCELERATE IN 2019, JUMPING 38% TO $16.9 BILLION,

AND CONTINUING TO $31.3 BILLION IN 2022, GROWING AT 26.7% COMPOUND ANNUAL GROWTH RATE (CAGR) OVER THE FIVE-YEAR TIMEFRAME FROM 2017.

THE MAJOR FACTORS FOR THE GROWTH OF THE MEDICAL CANNABIS MARKET INCLUDE THE INCREASING NUMBER OF COUNTRIES LEGALIZING THE USE OF MEDICAL CANNABIS, TRENDS IN PRODUCING EDIBLE CANNABIS PRODUCTS AND FAVOURABLE ENVIRONMENTAL AND GOVERNMENT SUPPORT IN SELECTED COUNTRIES WHICH ARE EXPECTED TO EXPERIENCE A BOOST OVER THE FORECAST PERIOD.

THE LEGAL USE OF CANNABIS FOR MEDICAL AND RECREATIONAL PURPOSES CONTINUES TO GROW STEADILY EVERY YEAR, BUT IT VARIES ACROSS COUNTRIES, BASED ON THE POSSESSION, DISTRIBUTION, CULTIVATION AND MEDICAL INDICATIONS FOR ITS CONSUMPTION. THEREFORE, OVER THE FORECAST PERIOD, THE CHANGE IS EXPECTED TO BE SLOW, BUT MORE LEGAL CONSUMPTION OF CANNABIS IS EXPECTED IN THE DEVELOPING MARKET, WHICH IS EXPECTED TO LARGELY DRIVE THE MARKET.

CURRENTLY, THERE IS ALSO AN INCREASE IN THE USE OF CANNABIS AS A FUNCTIONAL FOOD, WITH PURPORTED HEALTH BENEFITS FAR OUTNUMBERING THOSE OF KALE, TURMERIC OR KOMBUCHA. WITH THE NEW GENERATION GROWING UP IN COUNTRIES WHERE CANNABIS IS LEGAL, NEW PRODUCTS ARE ENTERING THE MARKET, WHICH IS EXPECTED TO GROW RAPIDLY OVER THE FORECAST PERIOD.
The growth of the cannabis market is also attributed to factors such as the production of edible products containing cannabis in selected countries. Therefore, cannabis is expected to be included in the 2019 food trends, as the drug and its ingredients have gradually been making their way into the public market.

Doctors also prescribe medical cannabis to treat muscle spasms (caused by multiple sclerosis), nausea, poor appetite and weight loss caused by chronic illness, such as HIV, nerve pain and Crohn’s disease. Thus, with these increasing applications, there is a huge opportunity for growth in the distribution of cannabis for medicinal purposes.

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**The Explosive Growth of Legal Adult Use and Medical Marijuana Markets**

![Graph showing the explosive growth of legal adult use and medical marijuana markets](https://womensCannabischamberofcommerce.com/arcview/)

Source: [https://womensCannabischamberofcommerce.com/arcview/](https://womensCannabischamberofcommerce.com/arcview/)

**FIGURE 6: THE EXPLOSIVE GROWTH OF LEGAL ADULT USE AND MEDICAL MARIJUANA MARKETS**
7. PROBLEMS IDENTIFIED IN THE CANNABIS INDUSTRY

The Blockchain Corporation team has done extensive research in the cannabis industry and has identified several problems that cultivators and consumers face. The team has selected a few very important factors and the aim is to eradicate these problems and create a sustainable environment not only in the industry, but also for the benefit of CannaCor.

7.1 BLACK MARKET PRODUCTS AND ILLEGAL CANNABIS GROWERS

A major challenge faced by pharmaceutical companies is to reduce the number of counterfeit products entering the market. Companies that attach anti-counterfeit labels on their goods provide customers with confirmation that the product is exactly what it claims to be.

Despite legalizing cannabis in various countries in the past few years, there is still a thriving black market that includes cannabis growers and sellers. According to research from New Frontier Data, as much as 80% of cannabis sold in California comes from the illegal black market.

It is estimated that the state’s illicit cannabis market is worth $3.7 billion, more than four times the size of the legal market. There are similar patterns wherever cannabis is legalized. In Canada, where cannabis has been legalized for all uses, the black market is expected to account for 71% of all sales in 2019. In Massachusetts, an estimated 75% of cannabis sales will be on the black market this year.

7.2 REJECTION BY CERTAIN MAJOR BANKS OF ANY TYPE OF ASSOCIATION WITH THE CANNABIS INDUSTRY

A significant problem in the industry is that most medical cannabis dispensaries are barred from depositing or withdrawing from top banking institutions and thus have to rely on cash-in-hand operations, which is incredibly difficult considering the amount of money handled daily. Accounting becomes strenuous when large amounts of money are involved. Additionally, cash transactions hinder the trust a customer places on cash suppliers.
7.3 RECORD MANIPULATIONS

Suppliers often manipulate their product quality and quantities, pushing for higher prices while offering low product quality. This causes great concern as the end buyer will never be certain of the product life cycle, how the product was grown, what the actual product is and how the product was packaged and handled.

7.4 CULTIVATION LIFE CYCLE MANAGEMENT: SEED-TO-SALE TRACKING SOFTWARE

As a key requirement in the cannabis regulatory models, seed-to-sale tracking refers to the process of tracking plants and their by-products from initial planting through to the plant sales. Track-and-trace is another term used for the process but refers to the tracking within one link of the cannabis supply chain.

Most cannabis software solutions today are built primarily around regulations to help cultivators’ compliance with government rules. This causes frustration due to the thousands of dollars spent on software that is not easy to use and provides limited value.

The cannabis industry requires a technology infrastructure to support and improve the multistage cultivation process of cannabis.

The main areas in the cannabis industry that need attention are:

➤ Process and cost analysis

The process will trace all nutrients and materials used for growing cannabis plants in order to calculate the cost per gram by plant, batch and strain.

➤ Genealogy tracking and optimization

This will help cultivators keep a record of a strong diverse genetic portfolio to facilitate tracking of the genealogy of each plant and the creation of new hybrids based on cultivators’ preferences.

➤ Product quality and consistency

A significant problem that cultivators face is producing a harvest of consistent quantity and quality by following repeated processes. By using a reliable system to track a batch and capture all information regarding the genealogy, exact amount of water nutrients used, the precise pH, temperature and humidity at each stage of the process can greatly improve consistency.
8. BLOCKCHAIN-BASED BENEFITS IN SUPPLY CHAIN MANAGEMENT

8.1 WHAT IS BLOCKCHAIN?

A blockchain, originally block chain, is a growing list of records, called blocks, that are linked using cryptography. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data (generally represented as a Merkle tree).

By design, a blockchain is resistant to modification of the data. It is “an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way”. For use as a distributed ledger, a blockchain is typically managed by a peer-to-peer network collectively adhering to a protocol for internode communication and validating new blocks.

FIGURE 7: HOW BLOCKCHAIN WORKS
Once recorded, the data in any given block cannot be altered retroactively without alteration of all subsequent blocks, which requires consensus of the network majority. Although blockchain records are not unalterable, blockchains may be considered secure by design and exemplify a distributed computing system with high Byzantine fault tolerance. A blockchain therefore provides a decentralized consensus.

**8.2 COST REDUCTION**

A survey conducted by the American Productivity and Quality Centre (APQC) and the Digital Supply Chain Institute (DSCI) of supply chain workers reveals that more than one-third of people think that reduction of costs is the topmost benefit of blockchain in supply chain management. This is because of the real-time product tracking offered. With blockchain, extra costs can be reduced while maintaining the security of the transactions. Also, the intermediaries in the supply chain are eliminated. This reduces the risk of fraud and duplicity of products and enhances accurate record-keeping and savings.

**8.3 DEVELOPING CONFIDENCE**

With multiple participants in the complex supply chain, building trust in the system is essential for smooth operations. For instance, the integrity of the records should be such that when a participant in the supply chain passes the information to the next level participant, the receiver should be able to rely on the information without a doubt. Also, the regulatory authorities and stakeholders must have confidence in the information and records. The blockchain is characterized by immutable record-keeping which prevents the information from being tampered with on all levels.

**8.4 ENHANCING TRACEABILITY**

The most common use of blockchain in supply chains is to improve traceability. It will enable CannaCor to quickly track “unsafe” products back to their source and determine where they have been distributed. This can prevent illness and save lives, as well as reduce the cost of product recalls. The information collected and the stakeholder groups involved vary based on the needs of the groups in each initiative.
8.5 INCREASING REVENUES

Blockchain has the potential to become the basis of new operating models, but its initial impact will be in driving operational efficiencies. Costs can be reduced in existing processes by removing intermediaries or eliminating the administrative effort of record-keeping and transaction reconciliation. This can shift the flow of value by capturing lost revenues and creating new revenues for blockchain service providers.

8.6 ENHANCING TRANSPARENCY

The potential for transparency, both internally and externally, can provide CannaCor with the opportunity to:

▶ replace certain back-office functions
▶ provide unprecedented cohesion to internal cultivation procedures
▶ show an account of consensus with an audit trail of transactions that have been cryptographically encoded
▶ create real-time settlement
▶ strengthen risk management for both CannaCor and their clients.

8.7 INVENTORY MANAGEMENT

By seeing everything in real-time, it is much easier for the employees to manage excess inventory, clear stock, manage stock-outs and help reduce employee errors. The inaccuracies can easily be calculated, reducing costs and maximizing revenue, which is what a potential business always strives to achieve. Lower costs also serve as a competitive advantage. Therefore, CannaCor will always be more efficient than its competitors.

8.8 SHIPMENT EMERGENCE TRACKING

Due to the large volume of transactions and many elements in the supply chains, even companies with a very advanced workforce lose track of transactions. These inefficiencies attract additional overhead costs and sometimes loss of customer data. This may cause unpleasant customer relations and brand name dilution. Blockchain-based supply chain management provides provenance tracking and record-keeping which makes information retrieval very easy with embedded sensors and RFID tags. The product history can be traced from the origin to the present situation at any point in time. Furthermore, such accuracy in provenance tracking can be utilized to detect and prevent fraud even in complex supply chains.
9. SUPPLY CHAIN MANAGEMENT

Supply chain management is the handling of the entire production flow of the CannaCor products, starting from seed planting all the way to delivering the final product to the consumer. To accomplish this task, CannaCor will create a network of processes that moves the product along from the suppliers of raw materials to the organizations which deal directly with users.

![Diagram of CannaCor Supply Chain Management]

**FIGURE 8: CANNACOR SUPPLY CHAIN MANAGEMENT**
9.1 THREE MAJOR STEPS IN THE SUPPLY CHAIN BLOCKCHAIN PROCESS

▶ The blockchain

The blockchain provides the utmost transparency in the decentralized recording of data. The Blockchain Corporation uses blockchain technology to ensure the supply chain record of the platform is secure, transparent, verifiable and immutable.

▶ Packaging

By integrating blockchain technology into the packaging, the CannaCor team and its affiliates (retailers, shop owners, etc.) will be able to track the precise real-world movement of the cannabis inventory on an individual shipment basis. When a product is scanned, no data needs to be entered. It is all covered by the back-end software, eliminating the need for training staff to operate the system.

▶ QR Code scanning

Blockchain Corporation will make use of tracking technology which can communicate with most modern smartphones, making implementation of our platform simple for producers, retailers and consumers alike.

Blockchain Corporation has identified six components to develop and establish support processes to monitor information throughout the supply chain and ensure compliance with all regulations. The six components are strategic planning, regulatory and compliance management, procurement and logistics, cultivation life cycle management, inventory and storage management and invoicing and shipping. Details about each component below.

9.2 STRATEGIC PLANNING

This is necessary to plan and manage all the resources required to meet customer demand for the products. The supply chain process needs to be designed to determine which metrics to use in order to ensure the supply chain is efficient, effective, delivers value to customers and meets enterprise goals. The strategic planning processes include finance, human resources, IT, facilities management, portfolio management, product design, sales and quality assurance.
9.3 REGULATORY AND COMPLIANCE MANAGEMENT

Adult use and medical legalization have resulted in an increased role concerning law enforcement and government regulation in the cannabis industry. Regulators require detailed information regarding a medical cannabis cultivator’s business: where the product comes from, the results of any testing that has been done, the specified amount produced, and distribution. Blockchain Corporation aims to incorporate cannabis compliance technology to keep up to date with any changes. Our aim is to establish support processes to monitor information throughout the supply chain and ensure compliance with all regulations as follows:

9.3.1 Record-keeping and reporting

A condition stipulated in the cannabis cultivation licence is that there have to be record-keeping procedures in place to record the amounts of cannabis that, during the period of the licence, the applicant cultivates and obtains; produces and stores; supplies to the holder of a manufacturing licence and destroys or disposes of. Blockchain Corp will ensure that information created, sent and received in the course of conducting business is appropriately recorded for the purposes of:

- compliance with obligations under licence conditions pertaining to the Act and Regulations
- corporate memory and repeatable decision-making
- ensuring the integrity of information assets
- facilitating business continuity as employees change over time
- responding to auditing or inspectorate requirements, which may include unannounced inspections
- meeting the security arrangements required to record access to cannabis and cannabis cultivation, production or manufacturing sites. The level of detail to be recorded will need to factor in the complexity of the issue being addressed and any regulatory requirements that apply to the record.

9.3.2 Reporting stock and forecasts

CannaCor is to provide information relating to the size of a cannabis crop, the number of plants and the amount of cannabis or cannabis resin produced or intended to be produced. As part of the conditions of the licence, CannaCor will be required to provide information necessary to support the Department of Health.
9.3.3 Reporting incidents

It is important that CannaCor has arrangements in place to ensure that the authorities are notified of actual and suspected events involving:

▶ a security breach or unauthorized access to a cannabis site
▶ a theft or loss of cannabis
▶ a discrepancy in quantity of cannabis
▶ a serious incident involving cannabis.

9.4 PROCUREMENT AND LOGISTICS

CannaCor will source suppliers to provide the cannabis seeds and any other materials needed to cultivate cannabis, followed by the establishment of specific processes to monitor and manage supplier relationships. Key processes include ordering, receiving, managing inventory and authorizing supplier payments. The processes involved are:

▶ identification of suppliers
▶ negotiation of price
▶ the signing of agreements (Smart contract)
▶ payment schedules
▶ procedures for logistics and receiving orders

9.5 THE MANAGEMENT OF THE CULTIVATION LIFE CYCLE

The Blockchain Corporation’s blockchain and applications will be used to coordinate the activities required to accept raw materials, manufacture the product, test for quality, package for shipping and schedule for delivery. Our aim is to measure and capture the quality of our products, production output and worker productivity to ensure the enterprise creates products that meet quality standards.

This suggests implementing internet of things (IOT) devices such as integrating temperature and humidity sensors on a Raspberry Pi device that sends records and directs the information automatically, analyses the information through a machine learning system, and potentially picks up patterns between cultivating conditions and yield; be it higher THC content or simply more product.
The same IoT devices can be set to check for certain thresholds and to send alerts or activate other automated sensors. For instance, when humidity is too low, a sprinkler system is activated, or if the humidity is too high the ventilation system kicks in. This is a proactive monitoring solution which can identify a problem in real time. The cultivation life cycle will be carefully monitored, and important information will be captured at various stages in the cannabis plant's life cycle.

FIGURE 9: THE CANNABIS CULTIVATION CYCLE
9.5.1 SEED GERMINATION: 10-14 DAYS

Information to be captured:
- supplier details and licence
- Smart contract
- strain information
- genome laboratory results
- quantity purchased
- quantity planted – date and time.

9.5.2 PLANT GROWTH AND FLOWERING: 8-14 WEEKS

Information to be captured:
- temperature management
- humidity
- light management
- precise PH
- nutrients used
- problems and maintenance.

9.5.3 HARVESTING AND TRIMMING: 5 DAYS

Information to be captured:
- quantity harvested – date and time
- waste disposed - quantity
- storage records.
9.5.4 EXTRACTION: 5 DAYS

Information to be captured:
- quantity of product allocated for extraction
- date and time of extraction process implementation
- extraction process captured
- amount of oil extracted
- date and time of extraction process completion - storage record.

9.5.5 LAB ANALYSIS 5 DAYS

Information to be captured:
- date and time products were analysed and inspected
- detailed laboratory results recorded
- pharmacist and laboratory technician information recorded.

9.5.6 PACKAGING

Information to be captured
- product quantity to be packaged
- QR labelling
- product boxed
- box labelling
- product captured to inventory
- product recorded and stored in bonded warehouse or vault.

9.5.7 SECURE STORAGE

Information to be captured
- products received
- storage records updated.
9.6 INVENTORY AND STORAGE MANAGEMENT

Storage and inventory control processes include the activities related to holding material and the processes of counting and transacting the material as it is moved through the warehouse. A component of supply chain management, inventory management, supervises the flow of goods from manufacturers to warehouses and from these facilities to a point of sale. A key function of inventory management is to keep a detailed record of each new or returned product as it enters or leaves a warehouse or point of sale. Information to be captured includes:

- recording new stock on inventory – quantity of each product
- managing the FIFO (First-In-First-Out) system
- allocating stock to retailers and recording product returns.

9.7 INVOICING AND SHIPPING

Invoicing and shipping consist of the coordination of customer orders, scheduling delivery, dispatching loads, invoicing customers and receiving payments. A network or process will be created to return defective, excess or unwanted products. Invoicing and shipping will include:

- receipt of purchase order and allocation of stock
- generation of invoices
- receipt of payments in escrow
- allocation and shipping of products to clients
- capturing bill of lading
- recording of shipping agents
- the process of tracking and tracing the products by means of QR code scanning from pickup to delivery at all distribution points.
10. TECHNOLOGY STACK

10.1 HYPERLEDGER FABRIC

Hyperledger Fabric is a platform for distributed ledger solutions underpinned by a modular architecture delivering high degrees of confidentiality, resilience, flexibility and scalability. It is designed to support pluggable implementations of different components and accommodate the complexity and intricacies that exist across the economic ecosystem.

One of its key features is that it is private and permissioned. Rather than an open permissionless system that allows unknown identities to participate in the network (requiring protocols such as "proof of work" to validate transactions and secure the network), the members of a Hyperledger Fabric network enrol through a trusted Membership Service Provider (MSP).
10.1.1 WHY HYPERLEDGER FABRIC?

Blockchain Corporation believes that by using all the beneficial aspects of Hyperledger Fabric, the tracking process will not only be transparent but will have all the qualities to make it the best technology for tracking.

Hyperledger is the most apt fit for operations due to the flexibility offered. Moving away from anonymity to complete transparency and easy tracking is ideal for this project. The whole process is divided into different phases:

▶ Phase 1 - Production life cycle management

Through the use of Hyperledger blockchain we can be sure of transparency in tracking and tracing the cannabis plant. The whole production life cycle will begin with feeding data to the blockchain. The first phase of the process will cover production to packaging.

▶ Phase 2 - Supply chain management

Once the packaged goods are ready to be shipped to the end users (in this case, the retailers), they move further through QR code scans and other quality checks. All this will be updated in the Hyperledger as soon as the process takes place. The final part of this phase is when the packaged goods reach the respective retailers for further usage.

10.2 SMART CONTRACTS

Hyperledger Fabric Smart contracts are written in chain code and are invoked by an application external to the blockchain when that application needs to interact with the ledger. In most cases, chain code interacts only with the database component of the ledger, the world state (querying it, for example), and not the transaction log. Chain code can be implemented in several programming languages. Currently, Go and Node are supported.

10.3 PRIVACY

Depending on the needs of a network, participants in a Business-to-Business (B2B) network might be extremely sensitive about how much information they share. For other networks, privacy is not a top concern. Hyperledger Fabric supports networks where privacy (using channels) is a key operational requirement as well as networks that are comparatively open.
10.4 CONSENSUS

Transactions must be written to the ledger in the order in which they occur, even though they might be between different sets of participants within the network. For this to happen, the order of transactions must be established, and a method must be put in place to reject bad transactions that have been inserted into the ledger in error or maliciously.

This is a thoroughly researched area of computer science, and there are many ways to achieve it, each with different trade-offs. For example, Practical Byzantine Fault Tolerance (PBFT) can provide a mechanism for file replicas to communicate with each other to keep each copy consistent, even in the event of corruption. Alternatively, in Bitcoin, ordering happens through a process called Mining where competing computers race to solve a cryptographic puzzle which defines the order upon which all processes are subsequently built.

Hyperledger Fabric has been designed to allow network starters to choose a consensus mechanism which best represents the relationships that exist between participants. As with privacy, there is a spectrum of needs, from networks that are highly structured in their relationships to those that are more peer-to-peer.

11. CANNACOR CRYPTOCURRENCY

11.1 INTRODUCTION

In collaboration with Blockchain Corporation, Cannacor will hold the first medical cannabis Initial Coin Offering (ICO) in southern Africa. The CannaCor cryptocurrency will operate on the Ethereum Blockchain, a fast, decentralized and immutable blockchain to enable secure cross-border transactions between Cannacor, suppliers and the general public.

The purpose of this document is to invite the public to participate in the joint Initial Coin Offering (ICO) of Blockchain Corporation and CannaCor. Funds will be raised in two rounds, namely pre-ICO and ICO.

**Funds raised throughout the ICO shall be used to:**

- develop a 30 000 m² aquaponics medical cannabis cultivation plant.
- develop the Blockchain Corporation's blockchain technology and its applications.
- create the CannaCor cryptocurrency.
11.2 COIN SALE DETAILS

The table below reflects the number of coins and price per coin during the ICO. Coins will be distributed to participants within 30 days after the successful conclusion of the ICO.

<table>
<thead>
<tr>
<th></th>
<th>Pre-ICO</th>
<th>ICO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coins</td>
<td>468 Million</td>
<td>720 Million</td>
</tr>
<tr>
<td>Price</td>
<td>$0.06 USD</td>
<td>$0.12 USD</td>
</tr>
</tbody>
</table>
| Duration      | Starts 11 Sept 2019
               | Ends 15 Dec 2019   |
|               | Starts 16 Dec 2020 |
|               | Ends 31 Mar 2020   |
| Target        | $28,080,000-00     | $82,240,000-00     |
| Soft Cap      | $1,500,000-00      |                    |
| Hard Cap      | $112,320,000-00    |                    |

TABLE 1: NUMBER OF COINS AND PRICE PER COIN DURING THE ICO

Important to note, the Soft Cap is the minimum amount of Funds Cannacor (Pty) Ltd and Blockchain Corp have to receive in this aforementioned ICO period failing which anything less than $1,5 million will be returned to the respective investors on completion of the ICO.

11.3 PRE-ICO AND ICO

An Initial Coin Offering (ICO) is the cryptocurrency equivalent to an Initial Public Offering (IPO) in the mainstream investment world. ICOs act as fundraisers of sorts. A company will look to create a new coin, application or service to launch an ICO. Interested participants buy into the offering, either with fiat currency or with pre-existing digital coins like Ethereum and Bitcoin. In exchange for their support, investors receive coins.
11.4 HOW DOES IT WORK?

- The CannaCor coin is created on the Ethereum network.
- The CannaCor cryptocurrency is sold to the public by means of ICO.
- Funds raised during the ICO will be used to build the cultivation facility and to develop the blockchain and its applications.
- Coins will be distributed to participants within 30 days after the ICO.
- Accepted currencies to buy the Cannacor Coin are Bitcoin (BTC), Ethereum (ETH) and Ripple (XRP).

![Image of digital currencies]

11.5 WHAT ARE THE BENEFITS FOR INVESTORS?

CannaCor will use 12% of the nett profit to buy back coins twice a year over a period of 10 years. 100% of the coins bought back will be burnt / destroyed. This will:

- maintain stable growth of the cryptocurrency
- decrease initial supply of the cryptocurrency
- create a stable store of value with low volatility
- increase the cryptocurrency value and achieve mass adoption of the coin in the cannabis industry.

We believe that the coin will perform exceptionally well in the future, providing investors with a stellar return on investment.
### 11.6 HOW DOES CANNACOR COMPARE TO COMPETITORS?

<table>
<thead>
<tr>
<th></th>
<th>CannaCor Coin</th>
<th>MCAN Coin</th>
<th>Pot Coin</th>
<th>Cannabis Coin</th>
<th>Paragon Coin</th>
<th>Hemp Coin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sector</strong></td>
<td>Cannabis Cultivation, Blockchain</td>
<td>Cannabis Cultivation</td>
<td>Crypto</td>
<td>Crypto</td>
<td>Software Blockchain</td>
<td>Crypto</td>
</tr>
<tr>
<td><strong>Payment solution</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Seed to sale tracking</strong></td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Supply chain solutions</strong></td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Cultivation compliance software integration</strong></td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Cannabis cultivation facility</strong></td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Cannabis cultivation licence</strong></td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Registered company</strong></td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>Investor benefit</strong></td>
<td>Buy Back &amp; Burn</td>
<td>Coins on Monthly Basis</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>IOT &amp; machine learning Integration</strong></td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

**TABLE 2: CANNACOR AND ITS COMPETITORS**
12. TOKENOMICS

The CannaCor coin is an ERC20 coin created on the Ethereum Blockchain. CannaCor decided to use Ethereum because it has already been adopted by the masses and allows the CannaCor coin to participate in mainstream activities. Ethereum is a fast, decentralized and immutable blockchain. CannaCor will strive to achieve mass adoption in the medical cannabis sector by offering solutions that address the issues pertaining to cross-border transactions. We aim to offer solutions for the lack of banking and payment services for legal cannabis businesses.

12.1 CANNACOR COIN FEATURES

▶ Stable value

The CannaCor coin has the potential to become a cryptocurrency with a stable value and low volatility, while retaining all the appealing features of other cryptocurrencies.

▶ Secure cross-border transactions

The CannaCor coin is an effective vehicle to ensure simple and secure transactions between CannaCor, suppliers and clients.

12.2 COIN DETAILS

The CannaCor coin is an ERC20 based on the Ethereum Blockchain. ERC20 is an official protocol for proposing improvements to the Ethereum (ETH) network and can be understood as a standard for coins that are created on the Ethereum blockchain.

The ERC20 coin standard makes it easier to exchange one ERC20 coin for another, and to integrate various ERC20 coins into platforms such as blockchain wallets and exchanges, and more.

Ethereum Request for Comments (ERC) is an official protocol for proposing improvements to the Ethereum (ETH) network. The number 20 used with ERC is the unique proposal ID number. The proposal ERC20 defines a set of rules which need to be met for a coin to be called an “ERC20 coin”. These rules apply to all ERC20 coins because the rules need to be followed in order for ERC20 coins to be able to interact with each other.
ERC20 optional rules:

- Coin name
- Symbol (e.g. REP)
- Decimal (how many decimal places a coin can be divided into - up to 18)

ERC20 mandatory rules:

- totalSupply (total supply of coins created)
- balanceOf (a function, that when used, shows the number of coins held in a given wallet)
- transfer (how many coins can be transferred from the total coin supply to a user wallet)
- transferFrom (a function that allows users to transfer coins to other users)
- approve (checks transactions against the total coin supply - prevents counterfeiting and fraud by verifying that transactions do not increase or decrease total coin supply)
- allowance (a function that checks individual wallets and cancels transactions if wallet funds are insufficient).
### 12.3 Coin Allocation

**Figure 12: Coin Allocation**

#### Table 3: Total Coin Supply

<table>
<thead>
<tr>
<th>Total Coin Supply</th>
<th>1 500 000 000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coin Sale</strong></td>
<td>78.00%</td>
</tr>
<tr>
<td><strong>CannaCor Team</strong></td>
<td>7.00%</td>
</tr>
<tr>
<td><strong>Blockchain Corp Team</strong></td>
<td>7.00%</td>
</tr>
<tr>
<td><strong>Strategic Partnerships &amp; Advisors</strong></td>
<td>5.00%</td>
</tr>
<tr>
<td><strong>Bounty &amp; Airdrop</strong></td>
<td>3.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coin Sale</th>
<th>1 170 000 000</th>
</tr>
</thead>
<tbody>
<tr>
<td>CannaCor Team</td>
<td>105 000 000</td>
</tr>
<tr>
<td>Blockchain Corp Team</td>
<td>105 000 000</td>
</tr>
<tr>
<td>Strategic Partnerships &amp; Advisors</td>
<td>75 000 000</td>
</tr>
<tr>
<td>Bounty &amp; Airdrop</td>
<td>45 000 000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1 500 000 000</td>
</tr>
</tbody>
</table>
12.4 FUNDS DISTRIBUTION

FIGURE 13: FUNDS DISTRIBUTION
<table>
<thead>
<tr>
<th>Use of Funds</th>
<th>Company</th>
<th>%</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivation Plant Development</td>
<td>Cannacor</td>
<td>30.00%</td>
<td>$33 169 500.00</td>
</tr>
<tr>
<td>Technology &amp; Core Product Development</td>
<td>Blockchain Corp</td>
<td>30.00%</td>
<td>$33 169 500.00</td>
</tr>
<tr>
<td>Marketing &amp; Business Development</td>
<td></td>
<td>8.00%</td>
<td>$8 845 200.00</td>
</tr>
<tr>
<td>- ICO Marketing 3%</td>
<td></td>
<td></td>
<td>$3 316 950.00</td>
</tr>
<tr>
<td>- Cannacor 2.5%</td>
<td></td>
<td></td>
<td>$2 764 125.00</td>
</tr>
<tr>
<td>- Blockchain Corp 2.5%</td>
<td></td>
<td></td>
<td>$2 764 125.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>$8 845 200.00</strong></td>
</tr>
<tr>
<td>Administration &amp; Operational Cost</td>
<td></td>
<td>5.00%</td>
<td>$5 528 250.00</td>
</tr>
<tr>
<td>- Cannacor 2.5%</td>
<td></td>
<td></td>
<td>$2 764 125.00</td>
</tr>
<tr>
<td>- Blockchain Corp 2.5%</td>
<td></td>
<td></td>
<td>$2 764 125.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>$5 528 250.00</strong></td>
</tr>
<tr>
<td>Liquidity on Exchanges</td>
<td></td>
<td>12.00%</td>
<td>$13 267 800.00</td>
</tr>
<tr>
<td>- Funds kept on exchanges for liquidity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal</td>
<td></td>
<td>5.00%</td>
<td>$5 528 250.00</td>
</tr>
<tr>
<td>- ICO Legal 2%</td>
<td></td>
<td></td>
<td>$2 211 300.00</td>
</tr>
<tr>
<td>- Cannacor 1.5%</td>
<td></td>
<td></td>
<td>$1 658 475.00</td>
</tr>
<tr>
<td>- Blockchain Corp 1.5%</td>
<td></td>
<td></td>
<td>$1 658 475.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>$5 528 250.00</strong></td>
</tr>
<tr>
<td>Exchange Listing Fee</td>
<td></td>
<td>5.00%</td>
<td>$5 528 250.00</td>
</tr>
<tr>
<td>Commissions &amp; Fees</td>
<td></td>
<td>5.00%</td>
<td>$5 528 250.00</td>
</tr>
<tr>
<td>- Advisors 3%</td>
<td></td>
<td></td>
<td>$2 764 125.00</td>
</tr>
<tr>
<td>- Other 2%</td>
<td></td>
<td></td>
<td>$2 764 125.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>$5 528 250.00</strong></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.00%</td>
<td><strong>$110 565 000.00</strong></td>
</tr>
</tbody>
</table>
12.5 CANNACOR PROJECTED INCOME

| Land available for production: 3 hectares | 30 000m² |
| Cannabis oil output per square metre | 100 ml (0,1L) |
| Total estimated output per year | 6 000 L |
| Current estimated price per litre of cannabis oil | $6 000-00 |
| Cycles per annum | 2.5 |
| Estimated income per annum | $45 000 000 |

TABLE 5: PROJECTED INCOME - ASSUMPTIONS

![Figure 14: Estimated Income and Net Profit](image-url)
12.6 COIN BUYBACK AND BURN

- CannaCor (Pty) Ltd will allocate 12% of its NETT profit to buy back CannaCor coins twice a year over a period of 10 years.

- 100% of coins bought back will be burnt/destroyed immediately after buyback.

This will maintain stable growth of the CannaCor Cryptocurrency; decrease initial supply of the CannaCor cryptocurrency; and create a stable store of value with low volatility. The goal is to increase the cryptocurrency value and achieve mass adoption of the coin in the cannabis industry.

FIGURE 15: COIN BUY-BACK – USD VALUE
13. ROADMAP

4th QUARTER 2018

- Research and brainstorm sessions initiated to establish most viable solution to cultivate medical cannabis
- Current technologies researched to establish the CannaCor cryptocurrency
- Various blockchain technologies researched to manage the medical cannabis cultivation life cycle and supply chain management systems
- Strategic alliances formed with blockchain developers, cultivators and pioneers in the cannabis industry
- Company incorporated in Lesotho, southern Africa, to operate the following business activities:
  - growing of drug and pharmaceutical crops
  - wholesale and/or retail sale of pharmaceutical and medical goods.

1st QUARTER 2019

- 50 000 m² agricultural land acquired in Lesotho, southern Africa, for the cultivation of medical cannabis
- Environmental Impact Assessment (EIA) curated and submitted
- Licence application lodged with the Drug Control Authorities in Lesotho to obtain:
  - authorization for export and import of medical cannabis
  - authorization to produce medical cannabis products.

2nd QUARTER 2019

- Blockchain developer and ICO marketing team appointed
- Greenpaper development
- Design of cannabis cultivation plant.
3rd QUARTER 2019

▶ CannaCor medical cannabis cultivation licence approved
▶ New website design / landing page
▶ Wallets and user administration panel development
▶ Greenpaper updated and new corporate identity incorporated
▶ Pre-ICO round starts 11 September 2019 and ends 15 December 2019.

4th QUARTER 2019

▶ ICO launch 16 December 2019 and ends 31 March 2020
▶ Design of cultivation plant, testing laboratory and packaging plant finalised
▶ Construction of cultivation facility
▶ Blockchain and Hyperledger Fabric application development, incorporating QR code labelling, product traceability, drug authentication, production life cycle management and supply chain applications
▶ New wallets and website release.

1st QUARTER 2020

▶ CannaCor application BETA testing
▶ First cannabis crops planted
▶ Application integration of production cycles.

2nd QUARTER 2020

▶ First harvest, application integration of supply chain and first coin buy-back.
14. CANNACOR TEAM

Chief Executive Officer

Hugo van den Dool is a dual South African and British citizen. He is a qualified construction and facility manager with more than 30 years' experience in various sectors including commercial, retail and housing in the UK, UAE and South Africa. He also has extensive experience in utility scale renewable energy and has been involved in food retail. Hugo has a BSc in Construction Management and he is a member of the British Institute of Facilities Management; he is a CITB (UK) Construction Manager and an NHBC (UK) Defects Prevention Officer.

https://www.linkedin.com/in/hugo-v-81658398/

Chief Financial Officer

Mr Pieter-Jan Jansen van Rensburg is a qualified Chartered Accountant. As Chief Financial Officer (CFO), Pieter-Jan is responsible for all the company's financial functions including accounting, audit, treasury, corporate finance and investor relations. His career spans more than 25 years of varied experience in financial management, business leadership and corporate strategy. Pieter-Jan's qualification: BCom (CA) (SA).

https://www.linkedin.com/in/pieter-jan-van-rensburg-b4a531196/

Operations Director

Mr Pieter den Hartog has more than 30 years of experience in the business sector, which has provided him with invaluable experience in managing a growing company in a challenging and ever-evolving industry. As Operations Director, Pieter has overall responsibility for all major operational and functional areas within CannaCor. Pieter's qualification: BSc (QS) MBA.

https://www.linkedin.com/in/pieter-den-hartog-20307a7b/

Legal Adviser

Mr Tobie de Flamingh is the company's legal adviser. He provides timely legal advice on policy issues, develops consensus solutions for compliance and promotes and defends the organization's legal interests in numerous internal and external venues. Tobie's qualification: BLC.LLB. (He is an admitted attorney specialising in Commercial Law).

https://www.linkedin.com/in/tobias-de-flamingh-06510463/
**Technical Advisor**

Mr Jan Coetzer is a qualified mechanical engineer with more than 30 years’ experience in nuclear, defence, process plants, utilities (including renewables) and telecommunications. Jan started a diversified industrial engineering company and has successfully grown and managed the company for more than 20 years.

[https://www.linkedin.com/in/jan-coetzer-151b30/](https://www.linkedin.com/in/jan-coetzer-151b30/)

**Master Grower**

Mr Frik Booysen is a qualified electronic radar technician with 28 years’ experience in defence, commercial and retail construction, electrical system (AC/DC) design and implementation, cooling system design and implementation and GSM telecommunication refurbishment. Over the past two years, Frik has been involved in the design, construction and operation of CannaCor’s Aquaponics R&D facility where he has successfully cultivated various cannabis strains.

[https://www.linkedin.com/in/frik-booysen-754ab492/](https://www.linkedin.com/in/frik-booysen-754ab492/)

**Human resources**

Ms Refiloe Mphati is a proactive HR professional with wide array of skills that span HR development, HR planning, performance management system, employee relations and recruitment gained from years of experience with the Lesotho Public Service. He overcomes challenges through a tenacious, analytical and questioning approach - drawing on wide-ranging HR management expertise. He is an articulate and diplomatic communicator plus an effective team player with strong inter-personal skills. He consistently works to the highest professional standards and thrive when working as part of a cohesive team to deliver results that yield business benefits.

**Security Supervisor**

Mr Seabata Tutuoane has more than 17 years as a police officer and has got vast experience in security. He has been trained locally and internationally. He has been promoted to different positions within the Lesotho Mounted Police Service: senior level, managerial level and executive level. The last level being the Assistant Commissioner of Police. Having served as the Head of Criminal Investigation Division within L.M.P.S. Having investigated High Profile cases in Lesotho. He is an LLB holder and is admitted to practice as an Advocate in all Courts of Lesotho.
15. BLOCKCHAIN CORPORATION TEAM

Founder

Mr Gerhard Johnson is a blockchain enthusiast / digital marketer focused on business strategy and advanced solutions to increase product quality and quantities in various industries. He has experience in business development, creating blockchain solutions, driving new products to market and generating business through strategic planning, identifying target accounts, direct selling and administration of operational processes.

https://www.linkedin.com/in/gerhard-johnson/

Software Developer

Mr Logan Keartland is a solutionist (problem-solver), specialising in software solutions. Logan is a tech savvy person with a passion for positive change applying agile methodology. He is experienced in Fintech (banking solutions following strict compliance and regulations) as well as agricultural, manufacturing and logistics system business automation ensuring fast delivery and reduction of overheads.

https://www.linkedin.com/in/logan-keartland-8a741ba8/

Technical Advisor

Ankur Maheshwari is an entrepreneur and blockchain enthusiast with more than 15 years of experience in the software development space. He is a blockchain and cryptocurrency evangelist who believes that technology should be a tool to solve real-world problems. He brings a vast and proven track record of growing and leading businesses from the ground-up along with managing the development of multiple blockchain products and building software architectures focussing on scalability and security. His experience varies, starting with setting up of entire new engineering and product teams, to leading a geographically distributed and cross-functional teams. He is the founder and CEO of Deqode and Blaze Protocol. Deqode is a leading blockchain development company and Blaze is a new age multi-dimensional ledger which was initially designed as a robust platform for dApps.

https://deqode.com
https://www.linkedin.com/in/ankur-maheshwari-9ab2a215/
**Blockchain Advisor**

Latha Sharma is an accomplished executive with a 13+ year track record of successfully leading businesses to new markets, partnerships, and strategic acquisitions. She is the chief marketing officer of Deqode and VP public relations at Blaze Protocol. At Deqode, she helps clients to run customer-centric transformations and build their blockchain practice. Drawing on her years of experience in the crypto space, Latha has helped several companies in launching their ICOs, and transforming their ideas to market-ready products through consulting, brand-building and strategic alliances. Latha is passionate about making social impacts using technology and leads the company’s pro bono initiatives. https://deqode.com

[https://www.linkedin.com/in/lathasharma1482/](https://www.linkedin.com/in/lathasharma1482/)

**Software and Blockchain Advisor**

Sergey Sudakov is an early bitcoin adopter and a crypto currency enthusiast. He is the leader of numerous multimillion-dollar software development projects for companies such as Ford, IBM and at times he participated in a number of successful ICOs.

[https://www.linkedin.com/in/sergey-sudakov/](https://www.linkedin.com/in/sergey-sudakov/)

**Senior Marketing Advisor**

Pranav Arya is a marketing advisor to ICO projects with great potential, providing turnkey solutions, connecting them with all necessary support such as ICO consultants, marketing, branding and community managers, crypto funds, investors, crypto exchanges etc. He has a sound knowledge of marketing and analytics and implement various strategies to successfully conduct ICO marketing. He has been formulating strategies in the market and generated vast information regarding the marketing strategies and ways of successful execute marketing strategies.

[https://www.linkedin.com/in/pranavarya1/](https://www.linkedin.com/in/pranavarya1/)
**Marketing Advisor**

Deepanshu Bhatt is a growth advisor, a blockchain consultant and fundraiser for businesses disrupting industries around the world. As a leading advisor, he advises small business owners and start-ups on how to drive success while maintaining a balance in their lives. He has extensive experience in working with projects and assisting them with fundraising and Marketing.

A blockchain expert and enthusiast, Deepanshu has provided consultancy to many Blockchain projects. He envisions to establish a society of disruptive projects that are economically independent which would contribute to the advancement of communities with their innovation. He is passionate about what he does and has hands-on experience in providing value addition to businesses. Vast knowledge of the blockchain industry and an experience handling million-dollar projects.

As a project ambassador, he plays an influential role in the Blockchain ecosystem. Deepanshu possesses remarkable communication, presentation, and negotiation skills with a capacity to work strategically towards the dynamic growth of his clients. Deepanshu has set out on a mission to provide exceptional marketing strategies, fundraising opportunities, and consultancy to aid in the expansion and enhancement of start-ups and entrepreneurs.

[https://www.linkedin.com/in/deepanshubhatt/](https://www.linkedin.com/in/deepanshubhatt/)

**Logistics and Procurement Advisor**

Adeniji Ibrahim Ololade is a result-oriented manager with good working knowledge in all facets of Logistics, procurement, Management in general. A good Administrator with sound analytic balance, creative skill to develop strategic plans to support evolving customer needs. A good team leader, teacher, and team player who is able to adapt to changes in a very short time and work harmoniously with a team spirit in achieving the set organizational objectives, targets and goals.

[https://www.linkedin.com/in/adeniji-ibrahim-327240179/](https://www.linkedin.com/in/adeniji-ibrahim-327240179/)
**Community Manager**

Peter Cris Nabida is a social media community manager and Consultant who is passionate about helping businesses understand and leverage the power of social media to grow their online business presence. Through dedicated research and strategy implementation, he stays in-the-know for all thing's social media.

https://www.linkedin.com/in/peter-cris-nabida-41b9b9120/

**Cultivation Advisor**

Dr Willie Augustyn the CEO of Chemvak. Chemvak is an Engineering Company that specializes in customer specified botanical extraction technology, with the main focus on cannabis extraction. We further design and construct customer specified chemical and vacuum systems.

http://www.chemvakcc.com

https://www.linkedin.com/in/willie-augustyn-2862a422/
16. DISCLAIMER

This presentation is not, and is under no circumstances to be construed as a prospectus, advertisement or a public offering of securities of CannaCor (Pty) Ltd.

This presentation contains forward-looking statements within the meaning of applicable securities laws. All statements that are not historical facts including, without limitation, statements regarding future estimates, plans, programmes, forecasts, projections, objectives, assumptions, expectations or beliefs of future performance or statements regarding CannaCor’s plan to cultivate, and the timing and estimates of production for its facilities, are “forward-looking statements.”

Forward-looking statements can be identified by the use of words such as “plans” or “is expected”, or variations of such words and phrases or statements that certain actions, events or results are “to begin”, “ramping up to”, “imminent”, “set to” or “will” be taken, occur or be achieved. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be materially different from any future results, events or developments expressed or implied by such forward-looking statements.

Such risks and uncertainties include, amongst others, dependence on obtaining and maintaining regulatory approvals, including acquiring and renewing state, local or other licences and any inability to obtain all necessary governmental approval licences and permits to complete construction of its proposed facilities in a timely manner; engaging in activities which currently are illegal under the Kingdom of Lesotho federal law, regulatory or political change such as changes in applicable laws and regulations, due to inconsistent public opinion, perception of the medical-use and adult-use cannabis industry, bureaucratic delays or inefficiencies or any other reasons; any other factors or developments which may hinder market growth; CannaCor’ (Pty) Ltd. operating history and lack of historical profits; reliance on management; the effect of capital market conditions and other factors on capital availability; competition, including from more established or better financed competitors; and the need to secure and maintain corporate alliances and partnerships, including those with customers and suppliers.
These factors should be considered carefully, and readers are cautioned not to place undue reliance on such forward-looking statements. Although CannaCor has attempted to identify important risk factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other risk factors that cause actions, events or results to differ from those anticipated, estimated or intended.

There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in forward-looking statements. CannaCor assumes no obligation to update any forward-looking statements, even if new information becomes available as a result of future events, new information or for any other reason except as required by law.

The focus of CannaCor’s business is the cannabis industry. The production, distribution, sale and use of cannabis and its derivatives are still restricted by law in some jurisdictions in which CannaCor intends to operate. These laws and their enforcement are in flux and vary dramatically from one jurisdiction to another. The enforcement of these laws and its effect on CannaCor and its business, employees, directors and shareholders are uncertain and accordingly involves considerable risk.

This presentation contains information obtained by the company from third parties, including but not limited to market data. The company believes such information to be accurate but has not independently verified such information. To the extent such information is obtained from third party sources, there is a risk that the assumptions made, and conclusions drawn by the company based on such representations are not accurate. An investment in the company is speculative and involves substantial risk and is only suitable for investors who understand the potential consequences and can bear the risk of losing their entire investment.

CannaCor is in the early stages of development and has a limited operational history, making it difficult to accurately predict business operations. The company has limited resources and may run out of capital prior to becoming profitable. The company may fail, and investors may lose their entire investment.

An investment in the company may have tax consequences for the investor. The company assumes no responsibility for the tax consequences of any investment. Investors should confer with their own tax advisors regarding an investment in CannaCor.
The production, packaging, labelling, handling, distribution, importation, exportation, licensing, sale and storage of cannabis products are affected by extensive laws, governmental regulations, administrative determinations and similar constraints which are beyond the company’s control.

There can be no assurance that the company is or will be in compliance with all of these laws, regulations, determinations and other constraints. Failure to comply with these laws, regulations, determinations and other constraints or new laws, regulations, determinations or constraints could lead to the imposition of significant penalties or claims and could negatively impact the company’s business.

In addition, the adoption of new laws, regulations, determinations and other constraints or changes in the interpretation of such requirements may result in significant compliance costs. This may have a material adverse effect on CannaCor’s business, results of operations, cash flows and financial condition.

Figures are presented in United States Dollar (USD), unless otherwise noted.
17. REFERENCES

We have used the following sites for knowledge on the subject and inspiration:


https://www.trellisgrows.com/Cannabis-compliance/

https://www.goodworklabs.com/Blockchain-in-supply-chain-industry/


https://www.parsl.co/

