

## **Table of Contents**

Abstract	03
Introduction	04
Problem	4-5
Objective	05
Market Scope	06
Proposed Solution	06
How are We different	07
nitial Development and Partnership Strategy	80
Technology and Tools	8-11
Operational Details or Process Flow	12-13
SwBIN Concept	13-14
Swachh Dapp Interface	14-15
Decentralised Advertisement	15-16
Rural Welfare Program	16
Philanthropy	17
Revenue Sources	17-18
Token Structure	18
Funding Goals	18
Token Economy	18
Value Appreciation	19
Token Utility	19-20
Projected Use of Contributions	20
Crisis Management	21
Fund Security and Token Dump	21
Roadmap	22
Challenges	23
Conclusion	23
Team	24
Advisors	25
Trusted Partners	26
Stakeholder Companies/Organisation	27
Disclaimer and full disclosure	28
Contact Us	





In this paper we offer a complete overview of the Swachhcoin Foundation whose aim is to transform waste inputs into useful outputs of high economic value, like but not limited to energy, fertilizers, power generating gases, etc. in the most efficient way possible by leveraging some of the most advanced, coming of age technologies. Listed below are some of the terminologies used in this paper for the technologies/models developed exclusively for and by Swachhcoin Foundation.



**SwATEL** (Swachh Adaptive Intelligence): Refers to the customized application of Adaptive Intelligence technology to increase the efficiency in operations, specifically in the processing of the waste to produce the desired output by making equipments 'intelligent'.



**SwATA (Swachh Big data):** Refers to the customized application of Big Data to enable integration of advanced methods during transportation, collection, and distribution of various inputs and outputs as well as automated machinery decision based on past experience.



**SwIOT (Swachh Internet of Things):** Refers to the customized application of Internet of Things to enable complete remote accessibility, control and connectivity of indoor and outdoor waste processing equipment and thus enable dramatic increase in efficiency.



**SwBIN (Swachh Bins):** Refers to the customized waste collection bins designed by Swachhcoin having various features like but not limited to, automatic opening and closing lid, linked user identity database, reward distribution, integrated waste separation, LED advertisement panel etc.

## SWAPP

SwAPP (Swachh Decentralised Application): Refers to the platform independent user interface having features like, account creation or signups, integrated Swachh wallet, token credit system, unique user identification, waste to token rate chart, nearest SwBIN site location integrated with google maps, real-time Collection truck location tracking, real-time SwBIN waste level status and collection schedule etc. to give users convenient, effortless waste disposal experience.





## Introduction

Swachhcoin is a unique blockchain-powered attempt at micromanaging wastes from households and industries and efficiently converting them into useful products. These products, at the end of the process, will be of higher economic value. Swachh Ecosystem is essentially a DAO (Decentralised Autonomous Organisation), governed autonomously on the basis of pre defined instructions in the form of smart contract. There are various smart contracts in a DAO. Initially, we intend to delve into the realm of, but not limited to green-energy, fertilisers and power generating gases as of now. But given the rapid progress of fundamental research on efficient product conversion, we look forward to adapt and better the existing working technology. Managing resources is not a simple task and given the terrible state of waste resources management in most countries, Swachhcoin will help model an ideal system. For a foolproof system, effective decentralisation and robust micromanagement are the underpinning. This is where the blockchains technology and several sub-programs offered by Swachhcoin comes into picture. Our will is to create a truly sustainable, clean community development around the world while improving the economic conditions of all individuals professionally associated with the industry in any capacity along with the domestic households.



#### **Problem**

The problems related to global waste management are uncountable. Some of them are:

**Excessive Generation** Generation of wastes has been an acute problem for a long time now. Quoting the World Bank report, The United States is single handedly responsible for generating 250 million tons of wastes annually. Evidently it has the highest per-capita waste generation amounting to about 4.6 pounds per day. Considering these figures, an average citizen in the United States disposes 1,200 pounds of wastes a year. These discarded wastes could be potential compost material and be kept out of landfills. Since the 60's, the quantities of wastes generated have tripled leaving us with a bigger burden. Day in day out, the USA throws as much wastes as to fill around 60,000 garbage trucks. The severity of the problem seems acute when we extrapolate the data from the USA to the rest of the world. Quoting the report again, the per-capita waste disposal is expected to rise up to 1.5 kilograms per day by 2025. Considering today's average of 1.2 kilograms per day, this is a significant 25% increase.

**Landfill Issue** Leachate and emissions of the harmful greenhouse gases are frequently associated with Landfills. A closer look at the qualitative contents of the wastes produced reveals that most materials that end up as wastes contain toxic materials. Gradually these toxic substances precipitate and leach out of the soil, eventually entering the groundwater and rendering them hazardous and unfit for consumption for years to come. The organic materials, compacted as a result of this, are covered down without being exposed to soil. This affects the natural aerobic process of decomposition by inhibiting oxygen through the covering of organic substances. This contributes to the production of inflammable, unwanted and harmful greenhouse house gases like Methane which are lethal to living organisms.

**Toxicity Waste** Tons of toxic wastes produced each year, amounting to around 440 million tons, gives us a sneak-peek into a much bigger problem. An average American produces about 3200 pounds of hazardous wastes. These include all sorts of materials - liquids, solids, contained gases, sludge, discarded commercial products like pesticides and cleaning fluids and byproducts of manufacturing processes. Uranium seems to be a rather common toxic pollutant with the United States having billions of gallons of it's groundwater polluted by it. Studies in the US have revealed presence of 63.5 million tons of radioactive material, of which Uranium derived from spent nuclear fuel being the most prominent, buried in landfills, trenches and unlined tanks.



**Organised mismanagement** Ever since waste-management has evolved into a profit making venture, people who opined in favour of safe and effective waste-management techniques have been outmatched by new industries waiting to invest in this business. Every industry, inclusive of the waste-management sector, has been a victim of organized corruption - either controlled by certain individuals or through systematic looting. These corporations have no regard for environmental impacts and do not seem to understand the severity of the issue.

**Lots of Plastics** Around 8 million metric tons of plastic ends up in the oceans every year which is equivalent to five grocery bags of plastic trash for every foot of coastline around the globe. Only 9 percent has been recycled. The vast majority - 79 percent - is accumulating in landfills or sloughing off in the natural environment as litter and at a point, much of it ends up in the oceans, the final sink.

Using World Bank data on 192 coastal countries, researchers estimated that China, the most populous nation, has the most mismanaged plastic waste per year and also generates the most plastic debris that end up in the ocean at 28 percent.

Mismanaged waste means the material is littered or not properly disposed off meaning there isn't a formally managed waste management system.



Swachhcoin aims to create a global, decentralised waste management ecosystem majorly comprising of industries and domestic households. Creation of such a network will enable deployment of an extensive infrastructure which will provide the necessary impetus for proper waste management. The planet that we live in is at every moment progressing towards an inevitable day when it will become inhabitable for human life. This is largely due to unjustified and uncontrolled exploitation of resources and irresponsible discard of used material without a properly implemented damage control policy in place. Swachhcoin is a mission to change the way people perceive waste by proving them that it is the greatest untapped resource available to mankind. Swachhcoin strives to implement a monetary incentivising mechanism where people are rewarded for proper waste management. This will over a period of time inculcate the habit of proper waste management amongst all. Apart from contributing for the betterment of the surrounding, this platform with the help of multiple advanced technologies makes the waste processing extremely profitable for the waste management industries, thus catalysing widespread adoption and network growth. A vast but disorganised waste management system currently prevailing does not have the ability to leverage advanced technologies that can potentially bring about a complete change in their revenue. Swachhcoin will help them bring about this change. On ground level, waste management sector directly and indirectly exploits the worker who work in the inhumane conditions on merge or almost no payroll in the absence of any employment contracts and worker protection. Swachhcoin will autonomously provide workers all of these things. Swachhcoin will also develop a philanthropic infrastructure in order to serve the less fortunate through its network-fee contribution. The funds accumulated through this will be fairly and transparently distributed autonomously, to uplift them and increase the living standards of the last person in the society.

The sum of all these activities will ultimately serve humanity and make this planet a better place to live in.' - Swachhcoin Foundation



## **Proposed Solution**

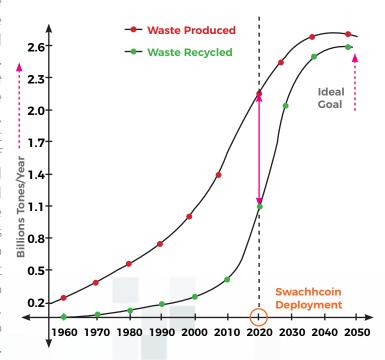
It is not a hidden fact that the global waste management problem we face cannot be tackled by a handful of people or organisations. The willingness and contribution of mass population is key in successfully achieving our objective. The best way to encourage people to properly manage their wastes will be to incentivize them monetarily for proper waste disposal and raise their awareness about the issue. This is the core of the proposed solution Swachhcoin offers. Also, it is scientifically proven fact that the amount of high-economic-value outputs that can be obtained from the accumulated wastes is tremendously reduced due to various types of waste being intermixed, thus degrading the unique property/individuality of the same. Swachhcoin will implement waste segregation at source in SwBINS to eliminate this problem. The traditionally running waste management industries have poor infrastructure and the archaic technologies available to them greatly limits their operational abilities. Swachhcoin will completely eliminate this problem and take the technological abilities of the company to the state of the art level, thus increasing their profits significantly. There will be additional revenue generated from deploying technologies such as Al, Big Data, IoT and Blockchain since they will increase operational efficiencies and productivity while also improving the output quality, thus the additional capital invested in upgradation is also justified. The cost of these additional investment will also be covered from ways that are currently absent in this sector such as revenue obtained from advertisement. Existing waste management companies will be provided with complete business plan, including a break even point, based on the past research and development along with active onsite survey. This process will help us cross over the adoption barrier.



#### **Market Scope**

According to report published by UN, the world population will increase from 7.6 billion today to 8.1 billion in 2025, with most growth in developing countries and more than half in Africa. Needless to say waste generation is going to be tremendous. The trends of some of the developed

countries indicate and establish that waste generated is directly proportional to the development levels of the region. With rapid development in various countries globally, the waste generated is bound to increase manifold. Swachhcoin's aims to make whole of waste management sector decentralized. autonomous and technically advanced so that the problem of too much waste and lack of resources such as energy and other potential goods of economic value that are produced upon processing waste materials can be minimised if not eliminated. Swachhcoin's domain of action relies in the area of gap between the total waste produced and the net waste treated or recycled. Currently the gap between the two is highly disproportionate. A constant and smart effort is required to decrease this gap between the two. Also, since the waste generation, in sync with the



increasing population is not expected to decrease anytime soon, there will always be the need to cope with it and thus an ever increasing need of such a platform.



## How are we different?

The platform offered by Swachhcoin is unique in number of ways. Currently there are other waste management platform but none of them are as broad and as technically advanced as Swachhcoin. Some of the features which makes us unique are:

Users are given monetary incentive to manage their waste ,whereas, traditionally people used to pay for their waste to be collected from their homes.

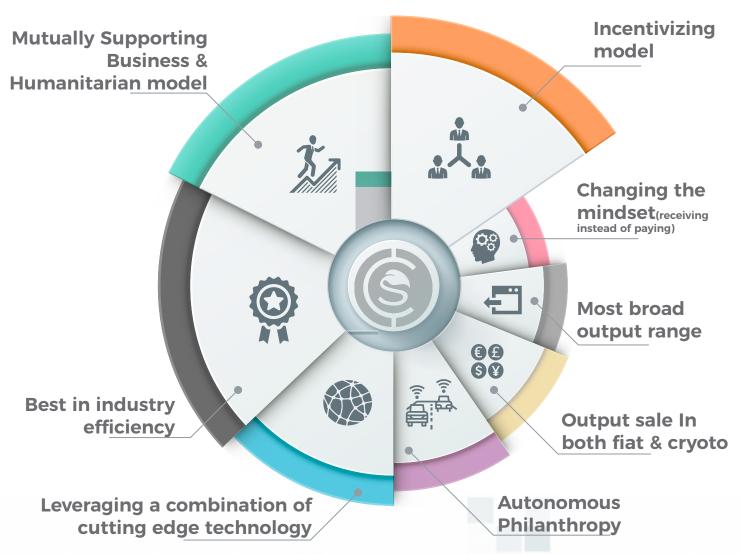
The range of outputs produced after processing the waste are over Twenty.

Leveraging not one, but four most advanced technologies i.e. Al, Big Data, IoT and Blockchain.

Freedom to sell and buy produced output in both Fiat and Tokens.

Apart from profit making business model, our platform has integrated autonomous philanthropy mechanism.

The above mentioned key featured makes this platform better than any other available and years of research, correct partnerships and development gives us edge over any developing platform in this domain.





# Initial Development & Partnership Strategy

In order to kickstart this project, and scale it to the aimed level, we understand that we need to build up a network of highly capable and influential partners who will catalyse this process. Swachhcoin is already working on it and has been successful thus far. We have finalised partnerships with number of organisation and are also in the final talks with more of them to come aboard. The names of our partners and collaborators will be strategically revealed as suggested by the team managing our ICO campaign. This process has also been made easy with the help of our parent organisation Community Tech Labs which has experience of launching a number of cryptocurrency and blockchain projects. Large scale expansion and platform adoption on a global scale opens up large scale manufacturing opportunities to manufacturers, particularly for the tools developed by Swachhcoin, namely, SwBIN. Various large scale manufacturers have been approached to setup plans in India and at other feasible location depending upon the organisation. We are also in talks with government entities to fulfill their waste management ambitions using the broad and robust technology developed by Swachhcoin.



#### **Technology and Tools**

The uniqueness of this project lies in the extensive use of cutting edge advanced technologies. At Swachhcoin we believe that a number of social problems that the world faces, if not all, can be solved by efficiently developing and deploying advanced technologies in the concerned field. Keeping this in mind, we have brought together few of the most innovative technologies of our times, together for the same cause of solving the immensely huge problem of waste management that we face throughout the world.

Inside the Swachhcoin ecosystem, there are three sub ecosystem actively working by exchanging data, analyzing them, generating report and making predictive and/or prescriptive actionable suggestions to each other in real time. They continue on to analyze the consequence of the suggested action and store it to take them into account for future analysis of similar kind. This highly iterative process of suggestion-action-analysis cycle over the period of time is designed to continuously lead to better autonomous operational suggestions, efficiency and productivity. This has been made possible by the use of some of the tools and technologies as described in this section.

**SwATA:** SwATA stands for Swachh Big data. It is the customised application of Big Data in the waste management industry, developed by Swachhcoin exclusively to catalyse optimization of frequent operations. Big data in general refers to collecting and storing large amount of data in order to extract useful information which enables smart and effective decision making in real time and future. The collected data maybe in various forms and sizes and from various sources.

SwATA collects, stores vast amount of data and suggests as well as initiates execution functions in areas related but not limited to route optimisation, maintenance schedules, report assessment etc. It is one of the four technological pillars upon which Swachhcoin stands. Various operations within Big Data domain will be directed towards extracting meaningful data out of what is known as data lake. The integration of blockchain along with Big Data solves a vital problem organisations working on Big Data encounter. The fundamental features of blockchain secure the Big Data in a way that makes it tamper proof, thus eliminating a major hurdle encountered while dealing with Big Data. The implemented infrastructure sorts the dark data out of data lake and processes it through a third party processors by leveraging NoSQL. The application of NoSQL gives a second layer support against processing unstructured inflowing data thus providing protection against any unintended or faulty prescriptive analysis. The process of data being fed into SwATA ecosystem, generation of analysis report along with initiation of actionable suggestion is done in real time.



The real time incoming data being collected through established data collection points processed by SwATA is highly structured due to the virtual data filters deployed at the collection points. The process of analytics by nature is of stream analytics. The analysis reports generated by SwATA will go through three layer process to generate the best possible outcome with maximum automation. The initial data generated from descriptive analysis will be fed into predictive analysis which will ultimately be used for making prescriptive analysis. Amongst the three different kinds of analysis done through Big Data, Swachhcoin will implement the most advanced and reliable of it, namely, Prescriptive Analysis. The operations carried out by SwATA are designed to be autonomous to the extent that the need for a data scientist will be minimal, if not absent.

On the bottomline, the multilayer advanced processing of filtered data, combined with enhanced immutable security provided by blockchain along with secondary support from the parallel sub ecosystems makes the SwATA ecosystem a key pillar of the Swachh Ecosystem.

**SwATEL:** SwATEL stands for Swachh Adaptive Intelligence. It is the customised application of Adaptive Intelligence in the waste management industry developed by Swachhcoin exclusively to make the machinery and equipments present inside the processing plants and outdoor SwBIN'S intelligent which enables communication and coordination between various parts of the facility. It has proven to be greatly efficiency boosting and saving capital in the long run. SwATEL is another sub-ecosystem in Swachh Ecosystem. It can precisely be describe as the brain of the entire ecosystem. Various kinds of data that have the underlying possibility of being processed in way that results in better operational results finds its way to SwATEL sub-ecosystem, where after being processed, a appropriate physical or digital action is initiated. Any and every such instruction is recorded on the open ledger blockchain which may be kept private or public, depending upon the organisations preference.

The basic idea behind using Al in Swachh Ecosystem is to develop a system that is able to take real time human brain like decisions based on learnings from past experience or in-house data. In technical terms, Al has two aspects, Deep Learning and Recurrent Neural Network-Based Prediction Models. In a practical sense, the system predicts accurate future movements of different types of entities based on system configuration by mining hidden information from historical transaction data and from deep behavioral records.

The main goal of deep learning is to learn multi-level features and to create more abstract high-level representations by combining low-level features to discover the distributed representation of the data. By building a multi-layered Neural Network to simulate human brain learning process, we hope to use the human brain's multi-layer abstraction mechanism to achieve the abstract expression of the real object or data, and to integrate the feature extraction and classifier into a learning framework. Deep learning structure feature is a multi-layer perceptrons with multiple hidden layers, forming more abstract high-level representation attribute categories or features by combining low-level features to find the data distributed feature representation. The approach adopted in forming multi level abstraction is a bottom up learning. The multi level learning is done automatically in the background without human intervention.

According to the learned network structure, the system maps the input sample data to different layers of features and classifies the output units of the top level by using a classifier or a matching algorithm. For low-level algorithms, such as neural networks with vector machines, single hidden layer, support, etc., in the presence of limited number of samples and computational elements, it is infeasible for low-level structures to effectively represent complex functions, and for complex classification problems, performance and the generalization ability of the needle has obvious deficiencies, especially when the target object has a wealth of meaning.



Deep learning through a network of interrelated simple neurons, non-linear function between input and output, the complexity of the function approximation of the observed sample fitting, and in the learning of the nature of the input sample extract represent robust infrastructure. In conclusion, SwATEL present a system to intelligently create a robust real time human like decision making to be used in waste management.

**SwIoT:** SwIoT stands for Swachh Internet of things. It is the customised application of Internet of things in the waste management industry developed by Swachhcoin. Integration of Internet of Things specifically enables remote control, modification and adaptation of machineries as per the requirements and instructions passed on by the controller. It is the leading sub-ecosystem in the Swachh Ecosystem. One can simply say that SwATA is the fuel of SwIoT and SwATEL is the brain of SwIoT. Together, they constitute what is known as Swachh Ecosystem.

The real time location of SwBIN will be fed to SwAPP through RF Geolocation. An API will feed the data to user thus easing the process of finding a SwBIN in an unknown location. In addition to this, SwIoT will act as the digital means of transportation for carrying out input and output signals at required location on the network. Secure data transmission is ensured by Blockchain technology along with AES, thus providing robust security. The data generated by the smart meter of SwBIN will be transmitted to initiate smart contract instruction to issue applicable reward through LoRaWAN. The node over blockchain concept has eradicated the issue of structure attenuation to a great extend. In the waste processing facility, extensive M2M information and feedback exchange will be done by energy efficient devices and at the same time transmit them to the internet via 6LoWPAN to enable remote access of real time data. This communication is designed to have 2 way transmission in case of initiating unplanned decision due to various possible factors. The system and software upgradation in SwBIN will be carried out by FOTA. In the initial release some of the core functions, despite entire hardware support may not be available due to under development software support. Hence, FOTA will allow swachhcoin to remotely perform system upgradation in sync with project development.

SwloT is the backbone of Swachh ecosystem. A number of MOTE present in the Swachh Ecosystem provide various quantitative and qualitative information in a form readable by the recipient.

**BLOCKCHAIN:** Blockchain, developed in 2008, is a distributed ledger which is a continuously growing records on what is termed as 'blocks' consisting of peer to peer transaction. The technology has been claimed by many to be the biggest invention in the digital world since that of world wide web. It has vast number of application throughout many industries. One of the major application being the advent of cryptocurrencies.

Blockchain has the most extensive application in the Swachh ecosystem, where we aim to place 100% of the data and transaction records on the the open and distributed ledger. Swachhcoin aims to inherit all the core fundamental characteristic of blockchain into its ecosystem. Some of the core characteristics of blockchain that will be of pivotal importance to Swachhcoin are **DECENTRALISATION, SECURITY, DISTRIBUTED STORAGE, TRANSPARENCY, FAULT TOLERANCE, ELIMINATION OF MIDDLEMEN.** The data processed and stored on open ledger in Swachh Ecosystem will be divided into two parts. First one is the data such as transactional record which are stored for record keeping purposes and retrieved as and when required. The second kind of data is the data such as the machine log, prescriptive analytics report which are generally not used for managerial purposes by employee. The data of the former type will be stored on the open ledger in the presence of a user interface that allows storage and retrieval of data easy. The latter kind will have no user interface due to absence of such a need. All the transactions happening in a factories on Swachhcoin model will be on blockchain. This will ensure complete transparency, easy auditing and many more benefits.



**Ethereum:** Ethereum is a decentralized platform that runs smart contracts: Applications that run exactly as programmed without any possibility of downtime, censorship, fraud or third-party interference. These apps run on a custom built blockchain, an enormously powerful shared global infrastructure that can move value around and represent the ownership of property. This enables developers to create markets, store registries of debts or promises, move funds in accordance with instructions given long in the past (like a will or a futures contract) and many other things that have not been invented yet, all without a middleman or counterparty risk. Swachh tokens will be initially based on Ethereum Blockchain.

**Smart Contract:** Smart contracts are self-executing contracts with the terms of the agreement between, for e.g. buyer and seller being directly written into lines of code. The code and the agreements contained therein exist across a distributed, decentralized blockchain network. Smart contracts permit trusted transactions and agreements to be carried out among disparate, anonymous parties without the need for a central authority, legal system, or external enforcement mechanism. They render transactions traceable, transparent, and irreversible.

With the advent of Blockchain Technology, a number of innovative applications have evolved. One such application of Blockchain technology is Smart Contract. The unique fundamental characteristics of Blockchain Technology which are inherited by smart contract has led to the formation of an highly effective DAO. DAO, meaning Decentralised autonomous organisation, consist of a number of smart contract which coordinate with each other and as a whole, have the ability to take organisation wide decisions and initiate actions based on a preset rules. Smart contract essentially consist of 'codes' designed in a languages such as solidity based on the platform like ether,, which serve the purpose of giving instructions to smart contract for every possible scenario.

Swachhcoin will use an extensive infrastructure comprising of a number of Smart Contract, where organisation wide actions will be initiated and recorded in a transparent, traceable and irreversible manner. A special use case of such an organisation in Swachhcoin is the Autonomous Philanthropy, where based on community consensus, Swachhcoin funds for donation purposes are transferred to specific organisation in a fair and transparent way. This is possible only because of the implemented DAO infrastructure. The core fundamental properties of Blockchain makes it impossible to alter the 'codes' and hence 'rules' of smart contract after they have been deployed. Thus the actions of smart contract cannot be altered influence or tampered with. Nodes present on the blockchain serve as the medium of data storage over a distributed network. It allows ideal storage and retrieval of information in a secured and transparent way. Smart contracts will assist in providing From the point of waste processing facility, several such DAO based actions will be carried out to streamline the traditional siloed functioning of a industries currently running on obsolete infrastructure.



# Operational Details or Process Flow

**Waste Generation:** Individual households, depending upon the geographic location and economic conditions, on an average, broadly produce three types of waste with a combined weight of 5.479 kg's daily. In the first step of operations, the waste from households will be transferred to SwBIN by the person(s)/mechanism, already in place. This is usually done by the household members themselves. The monetary incentive encourages them to take the extra time out of their busy daily life. The process will be catalysed by SwAPP giving the contributors various features and facilities such as signup, finding nearest SwBIN site, tracking the waste level in SwBIN, register complaints, receive updates and much more.

**SwBIN:** The waste generated will be collected in SwBIN to be transported to the waste collection agencies. SwBIN will identify the contributor of waste via QR code mechanism, measure the quantity of waste, evaluate the quality and calculate the reward price to be paid to the contributor in the form of Swachh Tokens. The calculation of the reward will be done on the basis of various parameter. quality of waste also being one of them. The data will stored on open ledger blockchain and also communicated to the waste processing company. Additionally, SwBIN will also communicate to the waste processing company when the SwBIN are needed to be emptied and/or serviced, thus contributing in optimisation of transportation network. Another important factor here is that on the producer end, the different types of wastes are intermixed with each other which limits the number of products of high economic value that can be produced from them. This limitation will be highly reduced if not eliminated from the waste separation at source mechanism integrated in SwBIN. The bins where waste is stored from household can be small in size for number of houses from 1 upto 10 or so, and large for number of household upto 100. The geometry and available features may and is bound to vary as per the geographical and infrastructural needs. However, there will always be scope to reconfigure them without any significant physical changes to match the fully functional version of SwBIN. In order to serve the requirements related to specific geographical locations and enable easy adoption to the current practices in place, the waste collection vans will also be modified to mobile SwBIN in the locations where waste is collected door to door or at places where placing individual SwBIN may seem univiable. In this way, reward can be given to the domestic household directly without involvement of static SwBIN. Most importantly 79% cost of the SwBIN will be covered from advertisement companies for putting advertisements on LED panels of SwBIN through a fair and transparent and decentralised bidding process. Another important feature of Swachhcoin is that the deployed SwBIN will have wifi hotspot ability which, by providing high speed internet, will also attract people contrary to the traditional bins which create unhealthy environment and are repelling.

**Transportation:** The waste accumulated in the bins will be transported to the waste processing facilities through a major but effective and easy modification in the existing network. Once a waste processing plant upgrades to the Swachhcoin model, it will have all the coming of age advanced technologies customised by Swachhcoin to be used in waste processing industry at its disposal, one of them being SwATA (Swachh Big Data). SwATA specialises in providing enhanced real time customisation of route and keep the transportation team informed ahead of their schedules and probability of possible changes than can take place. The past data from data lake processed by SwATA will be fed into SwATEL via SwIoT to generate relatime suggestions, information of the location and ETA of next scheduled waste collection will also be communicated to the domestic user through SwAPP.unhealthy environment and are repelling.



**Upgradation in waste processing plant:** All the equipments present in the waste processing industry will go through an extensive upgradation so that the developed tools and technologies can be deployed with full functionality. The adoption of Swachhcoin platform will involve considerable investment depending upon the conditions of the facility in the present state. The entire upgradation process will be planned and implemented by Swachhcoin. Exclusive financial reports will be provided to the adopting company containing the information related to amount of investment done along with the break even point. Existing facilities may also chose the option of gadual upgradation so that their functionality is not affected for the short period of upgradation. Also the immediate capital requirement for the purpose can also be significantly reduced.

**Truck Arrival:** The process of waste collection trucks arrival into the processing facility will be made completely automated and paperless thus saving valuable time spent in paperwork, weighing etc. Since all the data generated during the collection process is simultaneously recorded on an open ledger, thus there is no need to perform post process segregated checks. All the data that was previously noted and recorded by performing various checks will be generated by system upon entry of the truck in the waste collection facility.

In Plant Processing: The processing facility will completely overhauled. Although part of the factory will vary from plant to plant since various factors and constraints have to be kept in mind for an existing facility, but in an ideal case, our aim will be to enforce the following tried and tested efficiency boosting practices followed in various industries such as Just In Time, SCRUM, Six Sigma, TQM, etc. Apart from the above mentioned processes, the key and most unique feature will be that the entire processing equipments will be paired and brought in sync with Al, Big Data, IoT and Blockchain as described in the previous section. This arrangement in a waste processing industry will possibly be a never before phonomena and will benefit is an endless number of ways. The equipments will function in the most efficient way possible and produce high quality outputs from the waste inputs.

**OUTPUTS:** After complete processing of the waste in the plant, various outputs of high economic value will be produced to be sold to customer. Some of the outputs that will be produced are, Electricity, biogas, fertilizer, glass plastic, paper, compost, glass iron mercury, non ferrous metal, plastic pellets, timber, steel, substrate, stainless steel, solvent, precious metal, calcium sulphate binders, metal salt, recycled aggregate etc. The produced outputs have wide utility across sectors. These outputs will be sold to the buyer, in return of the equivalent amount of tokens. Buyers can be other manufacturing industries/factories or retail buyers, as maybe the case.



### **SwBIN - Swachh Bins**

SwBIN is the single most advanced device that could transform the visual world around us. When it comes to waste management, the most important aspect of it is the proper and maximum collection of the generated waste along with storage, and a significantly large part of this role is the responsibility of Swachh Bins (SwBIN) to autonomously sustain the ecosystem and at the same time retain its core fundamental governing and working principles.

SwBIN stands for Swachh Bin. It is the flagship tool of Swachhcoin which boasts some of the most revolutionary features that a large portion of traditional waste management industry could have not adopted for a long time.



#### Some of the most groundbreaking features of SwBIN are:

- Unique User Identification
- Dapp Support
- Enabled IoT support
- · Automatic opening and closing lid
- LED Advertisement Panels
- Waste sorting at source
- Waste compression

- Reward calculator
- Free WIFI
- LoRaWAN and RFID Enabled
- Low Manufacturing Cost
- Low Maintenance
- Long lasting battery life

Through Swachhcoin, we aim to completely change the general trend and perception of archaic design of waste collection bins being followed without any progressive development for centuries. In addition to being old and obsolete, they are also perceived to be filthy and polluting the nearby surrounding. On the contrary, Swachh Bin will boast a neat and tidy surrounding. The wifi facility will also attract users to connect to SwBIN on placed like Bus Stand, Railway Stations, and number of other public places. The technical routine maintenance of SwBIN will be carried out by Swachhcoin whereas the daily non technical maintenance by the Waste processing company. One of the unique and revolutionary feature of SwBIN is the decentralised advertisement. More about this is covered in the subsequent section.



#### **SWAPP - Swachh DApp**

Swachh Decentralised Application is a platform independent user interface to enable the community users interact with various platform exclusive features and participate in various campaign. The decentralised application will be built on ethereum blockchain. SwAPP is a combination of user friendly front end along with implemented smart contract which work on a predefined set of rules, guidelines and a 100% predictable model under a given set of circumstance and constraints. SwAPP is the one of the main requirement for a user to be able to actively take part and be associated with the community. The primary objective of DAapp creation is to build a user interface to ease the process of disposing off waste for domestic household contributor. Another important fundamental objective of DApp is to aware the community users about the possibility of waste around them and bring about a changes in their routine activities and influence the way people perceive waste in a positive manner. The same can be done in various ways by introducing users to, facts, articles, news, etc about the impact waste is creating on the environment.

#### The SwAPP will have all the basic fundamental characteristics of a DApp, namely:

Open Source: The source code of SwAPP will be available on Swachhcoin github repository.

**Decentralized:** SwAPP will leverage the Blockchain technologies and Smart Contracts built on top of Ethereum Blockchain.

Incentive: Community users will receive rewards for specified purpose.

Algorithm/Protocol: The SwAPP follows a predefined set of rules and protocol, all of which are open be be viewed and reviewed by all.



#### Some of the features that user community will be able to exercise with the help of SwAPP are:

- 1. Integrated Swachh Wallet, to ease sending receiving and storing Swachh Tokens
- 2. Platform Signup, to ease the process of new users joining the community.
- 3. Real time Reward chart and token price, to estimate the current and possible future value of holder's portfolio.
- 4. Availing decentralised advertisement feature, for content advertiser, who can be anyone including companies and individuals.
- 5. Nearest SwBIN locator, to ease the process of reaching out to SwBIN in new location and track the global and local presence of the same.
- 6. Swachhcoin Blog, access to latest announcement and updates from Swachhcoin and its team.
- 7. Community Feed, to find out the latest happenings in the community, know and influence the opinion of other community users, etc.
- 8. Donate to preferred organisation, for the causes and to the organisations listed on SwAPP. Community users can also raise a proposal for new collaborations and talks initiation.
- 9. Receive and hold reward for disposing waste in in real time.
- 10. Participate and Vote for various community and project related decision.

Apart from the above mentioned set of features available on SwAPP, Swachhcoin will continue to work towards making it a robust consumer end user interface for any and every possible positive activity towards better waste management. New features will be added in the future versions of the whitepaper as we progress along the development.

The list of provided features are not final and binding. Many other features may be added along with the development of project and also, some of the features may be removed for reasons, like but not limited to technological changes, conflict of interest, community demand etc. Nevertheless an implemented DAO will take community opinion and majority authorisation in account before any fundamental change is implemented.



#### **Decentralised Advertisement**

One of the revolutionary feature of SwBIN is the decentralised advertisement panels on SwBIN. Swachhcoin supports decentralised advertisement on physical objects, particularly SwBIN. The globally deployed SwBIN will have the LED advertisement panels on which any and every Swachh Tokens holder can use his tokens to pay for advertisement services.

21st Century has seen a massive boom in digital marketing. According to conservative estimates, the market cap of digital marketing hovers in multi hundred billion dollar, if not trillion. However, most of this marketing share has been concentrated in various social media and dedicated marketing website. Some of the worlds biggest companies like Facebook, Google, have most of their revenue coming in from digital marketing. There is no doubt that digital marketing today has massive use case and its market cap is only expected to shoot up in the coming days.

Swachhcoin has however, opened new horizons when it comes to marketing a product or services. This in fact is beginning of a new era. The LED panels on SwBIN will have the feature of decentralised advertisement. Any Swachh Token holder can use his tokens to pay for the content to be advertised on SwBIN at a location of his choice. The two primary requirements for someone to use this services are Swachh Tokens and SwAPP. A user needs to login to his SwAPP account and upload the content that they need to advertise. After this, they can either choose any location of their choice or answer a set of dynamic question so that Swachhcoin itself finds the best fit for them. The prices of advertisement will primarily be based on dynamic, transparent and autonomous bidding process. Some of the simplified examples of choosing an advertisement on SwBIN are:



## On SwBIN(s) at a specific location, for e.g. SwBIN at NEW DELHI RAILWAY STATION outside Exit Gate Number 3.

On general location(s) in a specific region, for e.g. SwBINs at Bus Stands in the state of CALIFORNIA.

These examples are super simplified based on only one parameter. After rapid SwBIN deployment, users will have wide choices and the algorithm developed to do so will be highly smart and complex. Under practical conditions, this particular service is actually dependent on number of SwBIN deployed and also depends upon the diversity and economic conditions of the region that SwBIN is deployed in. This will improve over a period of time with rapid industry deployment. As much as Swachhcoin aims and wants to keep the decentralised marketing process completely autonomous and neutral, but, based on the past cases of this feature being misused by various individual and organisation on portals such as Facebook Ads, Google Ads, where these tools were used by individuals and organisation to somehow damage, spread hate, and con the honest community, we have taken a decision that the contents of the advertisements will be needed to be approved by Swachhcoin. To be more specific, although a particular SwBIN will be deployed by the waste processing company, the contents that will be advertised on SwBIN will have to go through the moderation process handled by Swachhcoin. The T&C and policies can be found in the SwAPP

## Rural Welfare Program

Today, when we discuss about the problem of waste management and architect a system to overcome them, the entire system is designed keeping in mind only the urban population without realising that there are 3.4 billion people worldwide living in rural areas. Swachhcoin is a broad waste management platform not only in the sense of taking variety of inputs and creating a variety of outputs of high economic value from it, but also because it plans to be a platform for every section of the society, in every geographic location worldwide, weather be it rural or urban. There are a number of challenges in applying the designed waste management platform in rural areas, be it social, economic and technological. These challenges repel the business organisation from working in the rural region since they eye to tap the opportunity of generating more and more revenue whenever possible. Swachhcoin understands that waste is generated everywhere. Weather it is urban area or rural area. It is true that the rural area does not generate as much waste as the urban area and also that most of the rural areas do not face an imminent issue of waste management, but it is a hard fact that if adequate steps are not taken, then they will reach that point somewhere down the line. Another important fact here is that there is tremendous scope of development and improving the quality of life of people in rural areas. Swachhcoin will work for both the above mentioned issues.

The outline of the process is as mentioned below:

We plan to setup a waste storage facility, initially in a few villages and increase this number over time. Villagers will be encouraged to store their waste in the waste storage facility. The stored waste may sit in the waste storage facility for a period of upto 3 days without compromising with the quality of the output that can be extracted from the waste. The waste will be collected from the waste storage facility from time to time and in return, village will receive monetary reward in the form of Rural Welfare Funds based on the calculations done by SwBIN reward calculator. The reward will be used in development of village as a whole.

NOTE: Rural welfare program is an innovative program which will benefit a large audience but is not a philanthropic work or charity. The same is supported by the funds generated from collecting the waste from the particular region.



## Philanthropy

The ability to generate revenue greater than the current working models in the industry gives us the ability and responsibility to work for the betterment of the less fortunate people in the society, particularly associated with the waste management industry. The blockchain technology integrated in our system makes it completely transparent. It eliminates the possibility of funds not being distributed to the person/organisation it is intended to, which is definitely not the case with the existing traditional model, including of the governments throughout the world. We will engage in our philanthropic work in the following ways:

- 1. Of all the contributions received in our crowdsale, 0.3% of the total funds will be donated to various organisation. Their details will be updated on this page and the same can be verified on the blockchain.
- 2. A 1.5 % of the rewards distributed to the households will be allocated to Swachhcoin Foundation and will be used for philanthropic causes and covering day to day expenses of Swachhcoin Foundation
- 3. 4% of the tokens paid for advertisement on SwBIN will be allocated to Swachhcoin Foundation and will be used for philanthropic causes and covering day to day expenses of Swachhcoin Foundation

The governance policies of Swachh Philanthropic Donations will be available on SwAPP.

NOTE: Rural welfare program is an innovative program which will benefit a large audience but is not a philanthropic work or charity. The same is supported by the funds generated from collecting the waste from the particular region.



#### **Revenue Sources**

Swachhcoin will have two major and constant sources of revenue starting from first platform deployment. Swachhcoin will receive 1.5 % of the total reward distributed by the waste processing industry to the domestic household generator or perhaps to any waste disposer. Additionally, Swachhcoin will also receive 4% of the total amount paid by any token holder for advertising contents of SwBIN. Over a period of time, with widespread adoption, Swachhcoin will introduce other sources of revenue.

This May include:

- 1. Platform adoption fee.
- 2. Royalty for the use of patented technology.
- 3. Tender acquiring charges for large scale manufacturers of tools.
- 4. Lending Swachh network and its computing power.
- 5. Advertising Revenue generated from "Free wifi on SwBIN".

In the process of determining the time and form of implementing these sources of revenue, the user community will have a fair share of role to play, and will have highly influential voting rights.

Before any of the above or apart from these, any other sources of revenue are introduced into the platform, the same will have to go through the entire cycle of taking into account, opinion of community users democratically as well as opinion of each member of board for taking into account the expert opinion from the industry experts. Also, the suggestive implementation report will be re-evaluated based on preset criteria to determine if the time has come to introduce the source of revenue or not. The prime objective of such preset criteria's is to verify and ascertain that no significant changes in the working of platform is done without taking all the steps to ensure it does not hamper our growth and expansion. Swachhcoin aims to become profitable by the end of Q3 2022. Swachhcoin believes that the widespread adoption of platform will need better financial scope of profitability and that too as soon as possible and the same will be taken care of, enabled and catalysed by Swachhcoin.



### **& Token Structure**





69% Crowdsale



9%



8% Swachh Vault



**7%** Advisors. Partners



4%

Bounty

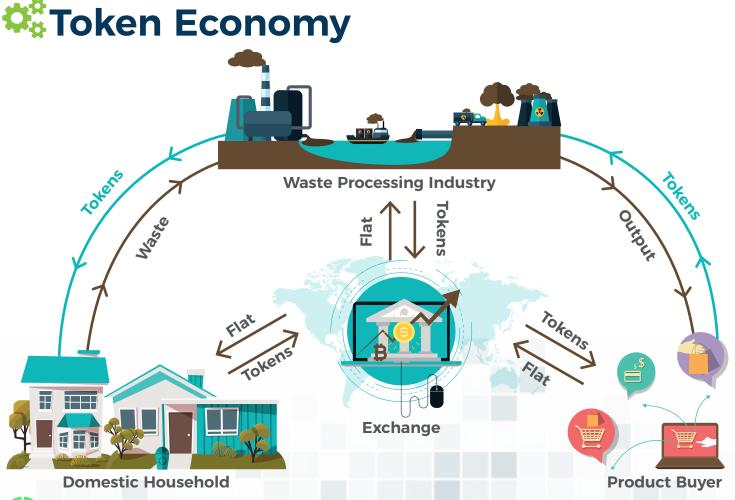


3%

Philanthropy



In order to build this platform and scale it to the planned level, as per our estimate, we do not require more than 18 Million USD. Hence, the hard cap for the token sale will be 18 Million USD. Also if we are not successful in raising 18 Million USD, we will still be efficiently able to launch this project by raising a minimum of 5 Million. Hence the soft cap for the token sale will be 5 Million USD. In case we do not reach our soft cap, board meeting will be organised to discuss if the project can be launched with the raised amount. If the raised amount is not enough to launch the project, all the contributions will be returned to the investors within a period of 7 days after the end of token sale.



Swachhcoin aims to revolutionise waste management by creating a token that will be used to provide monetary incentive primarily to the domestic households. The waste processing industry will be at the core of fueling this economy.

- 1. Product buyer will be able to receive the goods and services produced by the waste processing industries at a cheaper price in tokens compared to the traditional fiat currency. This will create the demand for tokens which can be fulfilled from various exchanges.
- 2. Waste processing industries will use a part of the tokens received from the product buyer to award monetary incentive to the domestic households as well as sell the other part on the exchanges to meet their day to day operation and profitability.
- 3. Domestic households will be able to sell the rewards received for proper waste management on the exchanges as well as use them for various utility purposes offered by Swachhcoin.



## Value Appreciation

The value appreciation or depreciation of a cryptocurrency, just like any other commodity theoretically happens on the simple supply and demand model. The more the demand and lesser the supply, greater the prices and vice versa. More specifically, there should be a compelling reason for the mass audience to see their personal utility and monetary benefits for holding tokens once the platform is deployed. Swachhcoin model presents numerous such reasons.

The variety of outputs that will be produced after processing the waste material will be sold globally to various customers. Customers here will mainly consist of large scale industries who require raw material to further produce their own products. Waste processing industries will supply raw material to them in the form of our own output. Swachhcoin's breakthrough operational efficiencies will enable sale of outputs at a considerably cheaper price in tokens. Hence there is a huge potential demand among the industries since they will be able to procure their raw material at cheaper price through Swachh tokens. This is one of the case of huge token demand, hence potential value appreciation.

Swachhcoin will produce a huge decentralised advertisement platform where individual users will be able to display advertisement of their choice at a location of their convenience on the LED panel of SwBIN. The payment of displaying advertisement will be made through Swachh tokens following a transparent bidding process. This is another case of huge token demand and hence potential value appreciation.

Swachh Tokens, with rapid acceptance can also be used a payment system, particularly for trading the outputs obtained after waste processing globally. There are number of other token utility compelling users to seek and and thus create the "demand" in the limited supply



Swachh Tokens are 100% utility tokens and will remain that way. The Swachhcoin aims to provide as many utility and use cases as possible to the token holders. The utilities mainly comprises of that related to solving daily life problem and platform specific payment settlements.



Some of the major utility or use cases of Swachhcoin are:

- 1. Receiving reward for proper waste disposal.
- 2. Buying output(s) produced by waste processing industry.
- 3. Paying for availing decentralised advertisement services
- number of merchants at various geographic locations globally.
- chance of possible leakage and corruption. Donations can also be made for special causes at specific times, like in the event of a natural disaster, etc.
- including taking part in decisions related to top tier management.
- 7. Raise a proposal to add an organisation in the list of NGOs that receives philanthropic funding from Swachhcoin.

The utility and use cases of Swachh token will keep on increasing with time as we integrate and deploy the infrastructure with the existing and new partner organisation. The token is designed and planned to become the dominating payment settlement method in the waste management industry and at the same time, solving payment needs like that related to everyday domestic household needs like but not limited to grocery shopping, paying utility bills etc. These utilities may change over a period of time, particularly after the deployment of our own Blockchain network. The governance related to tokens are done solely based on the set of policies as outlined in Terms and Conditions of the Token Sale.



## Projected use of Contributions

After the end of token sale, the raised funds will be allocated as mentioned below

#### **Asset Allocation**

Platform and Model Plant Development: 70% Working Capital: 10% 5% Marketing: 10% Treasury: Blockchain Development: 5%

The above mentioned allocations have been finalised after proper research and evaluation and can be assumed to be followed under all circumstances. Any unlikely marginal deviations will be made public as per our transparency policy.





## **Crisis Management**

Crisis can happen in any organisation at any time for numerous reasons. Some can be foreseen and others not. There can also be numerous accountable and unaccountable factors that can contribute to the same. Some of these factor may or may not be in the control of the organisation in question. It takes years of understanding and planning to be prepared and able to cope up with the adversities arising from the same. The domain in which Swachhcoin works is relatively new and is more or less prone to these things as suggested by many industry experts.

Swachhcoin, in order to cope up with such an event has the following arrangements in place and will also keep working on the same to improve continuously

- 1. A treasury will be maintained out of which, 29% of the funds will be reserved in order to handle any such circumstances.
- 2. A team in the R&D department will be dedicated to work in this department continuously.
- 3. Swachhcoin will organise bug bounties from time to time to minimise, if not avoid the damage from the same.



### **Fund Security and Token Dump**

In times when a lot of projects keep coming on a daily basis, we understand it is our duty to develop a system that is as much trustworthy as possible. There have been selected cases of mass token dumps from the founding team as soon as the tokens are listed on exchanges which hampers the natural price growth. Also, there have been numerous successful theft attempts where a large portion of tokens get stolen and are ultimately dumped in the market. In these cases, the investors are the direct victim. In order to completely eliminate this problem, we will implement the following.

**1. Team Tokens Locked:** The tokens allocated for the teams will be locked in smart contract, thus completely eliminating the possibility of mass tokens dump. The tokens will be released according to the following schedule, in parts so that it does not hampers the market conditions

Percent of Tokens	Release Date
10	31st March 2019
10	31st August 2019
20	31st December 2019
30	30th April 2020
20	31st October 2020
10	31st March 2021

The above schedule can also be verified in our publicly available smart contract code.

- 2. The development funds will be kept in a multisig wallet. This means that each transaction will require authentication from multiple parties thus preventing any accidental security breach which can result in compromising the future of the project.
- 3. Any and every unallocated/unused tokens left after the token sale will be burned.



## Roadmap

**Q2 2016** • Idea Conceptualisation

Organisation Formation, Technical Study and Survey Q3 2016

Q4 2016 Organisation Structuring, Market Survey and Brainstorming

Internet of Things, Adaptive Intelligence and Big Data Feasibility Research and Testing

Q2 2017 SWATA, SWATEL, SWATA and SWBIN Conceptualisation and Development

Platform Feasibility Test, Outcome Audit and Code revision Q3 2017

Q4 2017 Collaborations with Technical Advising Partners

ICO Announcement, ICO Campaign Targeting
Social Media, Blockchain Development

Q1 2018

Q2 2018 SWAPP First Look, Proof of Concept Test, Presale, Patent Process Initiation

Main ICO, Token Distribution, Market
Recognition and Expansion Strategy, Exchange
Listing, SwBIN MVP Reveal, Partnering with
Manufacturers, Industry Tie Ups

Swachh Centres Review Report and Model

Revision, Community Voting Campaign,
Reward Protocol Development

Platform Development, Finance Disclosure and Annual Report, Finance Protocol Development Q1 2019

for First Deployment

Q2 2019 Test Net Launch, Trial Verification, Overall System Integration, Alpha release

Prototype Pre Deployment Testing, Minimum
Viable Ecosystem Assembly Initiation, Iterative

Q3 2019

Revision Implementation and Verification,

Q4 2019 Final Design Reveal, First Platform Deployment in the Industry

Swachhcoin



Widespread adoption of the platform will be a challenge in the initial stage of the platform deployment. It will require a lot of collaborations and negotiations with number of private and government entities. Swachhcoin is aware of such hurdles that may come along in this particular phase of the project and is already working on it. Our team comprises of dedicated members to facilitate the dialogue with various established government and private entities in order to overcome this challenge.

The entire upgradation of an established traditionally running industry will require significant additional capital investment. For an organisation to invest such a capital requiring a complete overhaul can be a daunting task and a major hurdle. Swachhcoin will work out each and every aspect of this upgradation in order to facilitate this process in the most hassle free way possible. A complete business plan containing break even point will be provided to the collaborating organisation. Deployment of SwBIN will require additional cost since all the traditional waste collections bins will be needed to be replaced by technologically advanced swbins. This hurdle will be overcome through the revenue generated from commercial advertisement to be placed on SwBIN. Swachhcoin will collaborate with various organisations to fix a deal for this purpose before the deployment of the platform.

Additionally we are aware of the challenges which may come along in using the technology(s) mentioned in the paper as most of these have been developed recently and have not been tested as much as they should have been globally. The deployment also involves dependence on program which are open for updates from time to time. We are aware of this marginal possibility of hiccups resulting from these and will strategically work to avoid any adverse effect on our platform due to these changes.

Security and safekeeping of SwBIN has been a concern raised internally in the organisation. Depending upon the region where SwBIN has to be used, there will be minor modifications to suit the local cultural habits. Security issue will also be dealt more or less in the same way. A total of five safety features are being developed at this point which can be used individually or in combination depending on the prevailing local infrastructure available at the point of deployment.



#### Conclusion

Swachhcoin is an ambitious project with a disruptive vision, which, with sufficient scaling, has the certain ability to change and improve the world around us. This project aims to completely change the waste management industry by leveraging Adaptive Intelligence, Big Data, Internet of things, Blockchain Technology and Smart Contracts. Apart from the humanitarian causes which compels everyone to come forward in support, the project has been designed keeping the business model extremely profitable and viable for any and all industries coming forward to join the platform. This factor makes it easy to partner with new organisation who are looking to improve their business in order to develop a global footprint in the shortest possible time. The technologies used have proven to be far more efficient and productive than the traditional manufacturing practices currently in use in major part of this sector. The technologies employed not only benefits the industry in the above mentioned ways, but also makes them more organised, transparent and easily auditable amongst numerous other benefits.







Aditya Kumar



P. Chaturvedi



Alok Yadav



A. Vikram Singh



S. Sarat kumar



**Sunil Panwar** 



Naman Jain



K. Saiteja



D. Ranjan Gupta



Tarun Kumar



Akhil Sharma



S. Reddy Muthyala



A. Chaudhary



Vamsi Vardhan



Jeewan Joshi



Alok Kumar

## **Advisors**



**Chadd Politt** 



**Anders Larrson** 



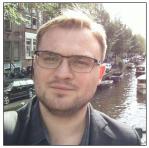
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Simon Cocking



R. Krawczyk



T. Alexandru



B. Fiedur



R. Slavchov



Sydney Ifergan



S. De Haes



James Long



Ashlin Burton



J. Porandla



G. Casagrande



J. V. Der Vos



K. Galano



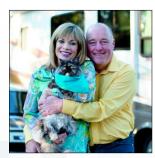
S. Brizendine



D. S. Karakitsos



Vijyabhas ES



A. Taylor





### **Trusted Partners**













COMMUNITY TECHLABS

















## Stakeholder Company/Organisations



Waste Processing Companies





NGOs working in Waste Management Sector



Blockchain Solutions Providers



**Municipal Corporations** 



Machine Learning Solution Providers



Big Data Processing and Storage Solution Providers



IoT manufactures and technology developers



Workers Union
Associated with
Waste management



#### **Disclaimer and Full Disclosure**

By trading tokens, you admit that you have the required lawful limit and authority to enter under a binding legal agreement moreover you have read and agreed to all the terms and conditions stated on the website and the Swachhcoin whitepaper. If you don't agree to the stated terms then you must not purchase any Swachh tokens. As the Sale Event is conducted electronically, any member might partake over it, provided that he is, at least, 18 years old (or over, as required by the laws that may be applicable to each Participant) and that he has authority to enter into a binding agreement in order to purchase tokens from this website. It may be each participant's obligation to go along with all relevant laws of participant's jurisdiction, including anyhow not restricted to bitcoin cryptocurrency regulations, tax and contracts laws. Sawchhcoin operators under holds no responsibility for your conduct, and will not withhold any taxes for you. We exhort that only the individual members with the necessary and pertinent experience and knowledge to manage cryptographic tokens, cryptocurrencies and/or blockchain based frameworks participate in this sale of tokens.

You are nevertheless encouraged to seek an independent lawful guidance before signing the "Token Sale Agreement". Members should understands that all sales will be final and not liable to refund or be redeemed unless explicitly stated in the "Token Sale Agreement". You understand and agree that tokens are not listed, authorized, issued or traded on any regulated market, and it is not intended to be considered as such. Despite the above terms, you understand and agree that it is your responsibility to ensure that you consent with the applicable laws regarding the purchase of tokens in your jurisdiction. Moreover, you represent that you are mindful of all the merits, risks and any restrictions associated with cryptographic tokens (particularly, with their purchase and use), cryptocurrencies and blockchain-based systems. In this sense, you explicitly recognize and understand that tokens, cryptocurrency, blockchain technology, and other associated and related technologies, are new and that they are outside of SwachhCoin control. You understand and agree that nothing here constitutes lawful exhortation or a suggestion or support Concerning illustration with wellness about motivation. All tentative purchasers should seek professional advice that is relative to the level of their purchase. Please remember that trading by its very nature is volatile in terms of buying, selling, holding, losses and gains. There are a few common sense rules: Never buy more than you can afford to lose. Buy from a legitimate source. Be aware of the idiosyncrasies of exchanges. Be aware of scammers. There are several pitfalls: Scammers may try to launch DAOs on their own behalf. Kindly send Ether only to the official addresses stated on the website at the time of token sale. Scammers may try to trade tokens in the time of the token creation at unreasonable costs















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