

# **EXIP Browser Whitepaper**

February 06, 2020

# Abstract

The internet we know today is not free and open as it seems. Ever since the creation of domain names, two organizations are responsible for most of its control, IANA (Internet Assigned Numbers Authority) and ICANN (The Internet Corporation for Assigned Names and Numbers). These two organizations have the power to seize, revoke, dismiss, and permanently erase any domain from existence. Though these two organizations fall under a non-profit umbrella, they behave recklessly and provide unlawful assistance to governments. Domain names are now considered a part of critical infrastructure since it helps a country's internet to function seamlessly. Countries have poured billions of dollars in upgrading their military and other infrastructure to be "smart". What the EXIP browser aim's to do is provide independence from IANA and ICANN on the internet. Countries and their respective governments should own their domain names. NOT a non-profit corporation in the US, which aids the US government when needed. EXIP browser will enable users to access blockchain-based DNS technologies where everything progresses with a zero-trust policy, and no one will own the internet, only then can we build a genuinely free and open internet.



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# What is the internet?



The Internet is a global network of interconnected intelligent hardware and software systems that enables digitized time and space storage, retrieval. dissemination. and information and communication processing. From a sociological perspective, the Internet, as depicted in some popular accounts, is not associated with a global information system. The constituent Web systems are

protected by a sociological account of the Internet and are viewed as social phenomena. It also includes information and other material that people, organisations, and smart devices use the Internet to create, distribute, and receive. Finally, a sociological account involves the socially and historically organized structures and processes in which information and communication development, transmission, and reception are embedded.

## Technical Aspects of the Internet

## Administration

The ultimate responsibility for the control of upper-level Internet Protocol addresses or domain names lies with the Internet Assigned Numbers Authority (IANA), which assigns the direct administration of most functions to other bodies.

At global regional level, the main entities that provide allocation and registration services that support the global operations of the Internet are:

- RIPE NCC (Réseaux IP Européens Network Coordination Centre)
- ARIN (American Registry for Internet Numbers)
- APNIC (Asia Pacific Network Information Centre)



- LACNIC (Latin American and Caribbean IP address Regional Registry)
- AfriNIC (African Regional Registry for Internet Number Resources)

#### **Internet Operations**

Internet operations are organized globally through the Internet Engineering Planning Group (IEPG), an Internet operating group that aims to help Internet service providers communicate within the Global Internet. Organizations engaged in managing activities at global regional level include:

- American Registry for Internet Numbers
- Manages North America, a portion of the Caribbean and sub-equatorial Africa's Internet numbering resources.
- Asia Pacific Networking Group (APOPs)
- Promotes the Internet and network interconnectivity cooperation in the field of Asia Pacific.

#### Internet Security

A number of Computer Emergency Response Teams (CERTs) in eight countries and in a number of service provider operations and private networks greatly improve the safety of the Internet network. We are developed to track the network for security incidents on an ongoing basis, act as a database of data on such incidents and establish sensitive advisories.

The Forum of Incident Response and Security Teams coordinates the CERTs.

#### **Building its International Presence**

1. Alis Technologies

Founded in 1981, Alis Technologies Inc. develops standards with the IETF (Internet Engineering Task Force), the Unicode Consortium, W3C and LISA for Multilingual Information Management Solutions (MIMS).

 Internationalized Domain Names (IDN) Committee Working group to study making domain names available in character sets other than ASCII.



3. MINC (Multilingual Internet Names Consortium)

An international, non-profit, non-governmental organization. It focuses on promoting multilingualization of Internet names, including Internet domain names and keywords, internationalizing standards and protocols for Internet names, technical coordination and liaison with other international bodies.

- 4. CNNIC (China Network Information Center)
- KRNIC (Korea Network Information Center)
  Established the Internet address resource management system in Korea.
- TWNIC (Taiwan Network Information Center)
  The independent, impartial, non-profit organization responsible for domain name registration and allocation of IP addresses in Taiwan.
- 7. The Unicode Consortium

Responsible for defining actions and relationships among Unicode characters and providing implementers with technical information. In improving the definition and extending the character set, the Consortium cooperates with ISO.

#### Internet Connectivity

1. Network Startup Resource Center (NSRC)

Database on developments in international networking and Internet connectivity providers, focusing on countries in Asia, Africa, Latin America and the Caribbean, the Middle East, and Oceania. Country-by-country information is available and includes service providers, networking infrastructure, and other country-specific information.

- Connectivity Table from University of Wisconsin's FTP server Lists organizations with or without access to the international network. View countries (with ISO two letter country code (ISO 3166)) that have:
  - a. international IP Internet links
  - b. domestic UUCP sites which are connected to the Global Multiprotocol Open Internet, and
  - c. domestic FIDONET sites which are connected to the Global Multiprotocol Open Internet.
  - d. Connectivity Maps
- 3. Internet Hosts Map

As of January 1999, it has revealed millions of Internet hosts around the world.



# What is Domain?

The name system for the Internet is DNS[rfc1035]. DNS is running a multi-layer model at the moment. Operating systems are typically exposed to a stub resolver. There are no recursive features in a stub resolver and can only submit simple DNS message queries to remote name servers. They are meant to be recursive servers pointed. Recursive servers perform complete DNS iteration on behalf of stub resolvers by going through the nameserver of the zone before obtaining an answer. The name database for a region is called an authoritative server. Authoritative servers can support their own records, but they can also send referrals to child zones.



# How domains are currently purchased?

A number of different companies (known as "registrars") that compete with each other can register domain names. A list of these companies appears on this site in the Registrar Directory. You will be told by the registrar you choose to include different contact information and technical information making up the registration. The registrar will then hold the contact information records and upload the technical information to a central directory known as the "registry," which provides other computers on the Web with the data needed to send you email or locate your website. You will also be required to enter into a registration agreement with the registrar setting out the terms and conditions under which your registration will be approved and retained.

There are now several different top-level domains (TLDs) where you can sign domain names.

# How is the Domain Hierarchy maintained?

Recursive servers are usually open and run by Internet service providers or other organizations such as Google, Cloudflare, or OpenDNS.

Recursive DNS resolvers, such as the Public DNS[google] from Google, are currently hitting a variety of root servers[root] run by different organizations. Such kernel servers are protected by the root zone. The root zone is the set of top-level domains (TLDs). The information required to overcome such TLDs is stored in a root zone file branch ICANN[icann] distributed and maintained by IANA[iana]. ICANN is currently acting as a gatekeeper as to which domains are permitted to enter a root zone archive.

According to ICANN, a country's Internet domain name does not belong to that country- nor to anyone.

Plaintiffs who successfully sued Iran, Syria, and North Korea as terrorist backers want to seize the ccTLDs (country code top-level domains) of the three countries as part of their financial judgments. The Internet Corporation for Assigned Names and Numbers, which oversees the Internet, says they can't do that because ccTLDs aren't even property.

After the complainants sent papers to ICANN demanding the transfer of the domains, the body said it sympathized with their underlying allegations, but on Tuesday it filed a motion to quash the attempted seizure.

A ccTLD is the two-letter code at the end of a country-specific Internet address, like .us for the United States or .cn for China. There are over 280 of them all requiring directors, organizational contacts and professional contacts residing in the countries they represent. In this case, the domains are .ir for Iran and .sy for Syria, plus the equivalents for each Arabic script, and.kp for North Korea.



# What are the advantages and disadvantages of this structure?

## Advantages

- 1. Generally speaking, DNS is the world's only program that can help you browse the internet. With the internet becoming an integral part of society, maintaining DNS servers has become increasingly important. The internet would not exist without them.
- 2. No need to memorize IP addresses-DNS servers provide a clever solution to convert domain or sub-domain names to IP addresses. Imagine how the IP addresses of Twitter, Facebook, Google or any other page you usually visit on a daily basis will feel memorized. It would definitely be bad. The software also makes it easy to categorize and index data for search engines.
- 3. Security enhancement-DNS servers are a key component for your home or work connections security. Normally, DNS servers configured for security purposes ensure that attempts to penetrate your database system are thwarted prior to entering your computers. It is important to note, however, that the word used is being improved. It means you will need to put in place other security measures to protect your information, especially if it's a large organization with loads of sensitive data.
- DNS servers provide fast internet connections-People and organisations using DNS servers will benefit from high connection speeds which are a key feature of some of these servers.
- 5. There are also primary and secondary links to DNS servers. This allows you to have internet uptime even if the maintenance of one of the servers is down.

## Disadvantages

- One of the key drawbacks of the DNS is that only ICANN, a non-profit organization with origins bound to one country, can manage the database. It contradicts the idea of net neutrality, and over the past three decades it point has been widely propagated.
- 2. Usually, DNS queries do not contain any information about the clients that initiated it. This is one of the reasons that hackers have been popular with DNS. This is because the



server side only sees the IP address from which the request came and which hackers can sometimes exploit.

3. DNS servers are based on the slave-master relationship concept. This ensures that if the master server is broken or corrupted in any way, the web page or database hosting on the server will be difficult to access. Hackers have also taken advantage of this. We have been able to find ways of phishing data by attacking the database machine and allowing redirects to other sites.



# How have other countries overcome this issue?

## China

The publishing and use of online material is limited by Internet censorship in the People's Republic of China. By 2019, China's government had imposed over 60 online restrictions and implemented them through regional branches of state-owned ISPs, businesses and organizations.



Chinese Internet censorship is more severe and advanced than that in any other country in the world, according to CNN. The Chinese government is restricting the website's content and regulating individuals ' Internet access. In China, major internet platforms and messaging services have developed elaborate mechanisms for self-censorship as required by the Chinese government. Thousands of police content teams were recruited by others and invested in strong AI algorithms.

The news coverage prevents most contentious incidents, making it impossible for many Chinese citizens to hear about their government's actions. These interventions inspired the regime's nickname, "China's Great Firewall." DNS spoofing, blocking access to IP addresses, examining and filtering URLs, inspecting packets, and resetting connections are techniques used to block websites and pages.

Amnesty International notes that China has "the largest recorded number of imprisoned journalists and cyber-dissidents in the world" and Paris-based Reporters Without Borders stated in 2010 and 2012 that "China is the world's biggest prison for netizens." Commonly alleged user offenses include communicating with groups abroad, signing online petitions, and calling for government reform. After a series of large anti-pollution and anti-corruption demonstrations, the government has stepped up its efforts to neutralize reporting and criticism that is critical of the regime.



Many of these protests have been organized or supported using instant messaging applications, chat rooms, and text messages. State media reported a 2 million-strong internet police force from China in 2013.

Carrie Gracie wrote that local Chinese companies like Baidu, Tencent, and Alibaba, some of the world's largest Internet companies, benefited from China's ban on international market rivals.

While censorship affects the nation as a whole, it does not affect China's special administrative regions like Hong Kong and Macau. These regions enjoy a high degree of autonomy as set out in local laws and the principle of "one country, two systems." However, it was reported that the central government authorities have closely monitored Internet use in these regions.

## Iran

Since 2005 the Iranian government has been developing a "national Internet" to tighten its control over content as well as increasing speed. The project, which is separate from the world wide web, will be completed by 2017. This network will be separated from the rest of the internet, specifically for domestic use. Creating such a network, similar to one used by



North Korea would prevent unwanted information from outside of Iran getting into the closed system, such as with an intranet network. Myanmar and Cuba also use similar systems. Iran has announced that all government ministries and state bodies will be available through the secure "national information network" (NIN).

The current Internet services will not be replaced as they are named by the National Information Network (NIN) or' National Internet' or' Clean Internet.' A number of non-governmental organizations are currently developing domestic search engines that can be used by people through the NIN to protect the privacy of Iranian internet users.

Iranian officials accused U.S.-based technology firms like Google, Twitter, and Microsoft of working in tandem with U.S. authorities to spy on Iranian online trends, search behaviour, social networking sites, and email.Following leaks from the NSA, these firms refuted these claims. As of 2013, 90% of all Internet traffic was diverted to non-country hosts. Iran said it set an online participation "world record" of 46 million using NIN during the 2016 national census.



Much has been written about how NIN helps the government with internet censorship and controls. While the presence of the NIN to date has not resulted in a long-term disconnection from the global Internet, the authorities have used it for this reason in the short term. In the midst of nationwide protests in late 2017 and early 2018, this was illustrated during the widespread deliberate disruptions to both mobile and networked Internet connections. Research by the Campaign for Human Rights in Iran (CHRI) found that IXPs had been ordered by the authorities to deliberately interrupt international traffic while maintaining national connections on the NIN.

The NIN plan plays a central role in improving and moving local consumers to digital networks. This included efforts to undermine net neutrality by demanding zero-rate regional services from domestic ISPs, essentially subsidizing the use of local Internet platforms by consumers. Such domestic outlets are subject to the authorities ' close monitoring, control and compliance powers. Pushing people to use these systems confirms the surveillance and control capabilities of the government and raises concerns about privacy protection. These platforms are required to apply Iranian law, including content-based restrictions set out in the Islamic Penal Code, the Press Laws, and the Law on Computer Crimes. Therefore, over-reliance on domestic platforms is likely to have a detrimental effect on the content diversity and pluralism on these platforms.

## North Korea



Internet access in North Korea is available from Star Joint Venture Co., an Internet service provider, a joint venture between Post and Telecommunications Corporation of the North Korean government and Loxley Pacific, based in Thailand. On 21 December 2009, Star JV took control of the distribution of North Korea's Internet address. Until Star JV, Internet access was only accessible through a satellite

connection to Germany, or through direct connections to China Unicom for some government uses. Nearly all Internet traffic in North Korea is routed via China.

The 3G telecom network operated by Koryolink has allowed foreigners to access the Internet since February 2013.



The authorization to access the Internet remains strictly limited. Nevertheless, the IT industry has grown, and internet access within North Korea is gradually increasing. The Korean Central News Agency's website went online in October 2010, from a web server hosted in North Korea.

It is accessible globally on a North Korean IP address, marking the country's first known direct connection to the Internet. Around the same time, on 9 October, journalists visiting Pyongyang for the Workers' Party's 65th anniversary celebrations were given access to a press room with Internet connectivity. As of December 2014, 1,024 IP addresses in North Korea are known to exist, although David E. Sanger and Nicole Perlroth, journalists of The New York Times, believe that the actual number may be higher. The total number of Internet users is estimated at no more than a few thousand. High-ranking officials, members of non-governmental organizations (NGOs) and government ambassadors are claimed to be people who can access the Internet without limits. It was said that Kim Jong-il liked "surfing the net." The overall web traffic footprint of the nation was less than that of the Falkland Islands, according to Ofer Gayer, a security researcher at Incapsula. As of 2014, according to Joo Seong-ha, a journalist from The Dong-a Ilbo and a North Korean defector, the government's Kwangmyong intranet has been used to restrict the global Internet use of the general public, especially in hotels. The state, while available on most campuses, has "strictly monitored the use of the Internet." Most North Korean people may be unaware of the Internet's presence.

Because Apple Inc., Sony, and Microsoft are not permitted to sell their goods to North Korea, third-party companies have bought and marketed their products to customers. Very little is known about North Korea's electronics industry because of the government's policy of isolation.

In April 2016 onwards, North Korea started blocking Facebook, YouTube, Twitter and South Korean websites because of "its concern about the spread of online information."

On September 19, 2016, North Korea's nameserver containing information about all the ".kp" websites was misconfigured, allowing researchers to access and publish domain names and some of the site's file details, including zone information for.kp, co.kp, com.kp, edu.kp, gov.kp, net.kp, org.kp, and rep.kp, revealing that North Korea only has 28 Internet-facing websites.



Russian telecommunications company TransTeleCom set up a direct link to North Korea in September 2017. Chinese Unicom is no longer North Korea's sole provider of internet access.

# Solution

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So far we have see how IAANA and ICAAN controlling this whole domain names and how that's affecting the people, governments and countries. The root cause of this issue is the centralization. All these domain names are centralized to a single party and they are making all the decisions. Because of that countries like china, iran and north Korea went can created their own internet and domain names. But still the issue is not sorted as there are restriction for the other country people to access these sites and not all the countries have the capability to implement this solution.

The best way to make a centralized system to decentralize is by using blockchain technology. After the invention of blockchain there are many industries transformed to decentralization and this is the time for the domain names to be decentralized.

Decentralized domains are not a new topic for the blockchain community. Already ethereum created .ETH based sub domains as decentralized domains and that can be purchased as well. But here we are not looking to create any subdomains we are doing in a one step above by creating the main domains and make it decentralized.

so we came up with the solution called EXIP. EXIP platform will provide decentralized domains to the users through blockchain. Through EXIP users can purchase their decentralized domain names and they can host their websites or whatever they want to put out to the world. Along with this domain we are providing the decentralized EXIP browser as well. Through this browser users can perform all the functionalities same as the centralized browser along with that they can search and access the EXIP domains. Also all the browsing history and user related data will be anonymized. All the users in this browser will be identified through their EXIP public key. This will provide 100% decentralized browsing experience to the users.

In the below sections we will look how we are implementing this system and how the system flow will look.

# What is Blockchain?

Blockchain is a technology which will enable two untrusted individuals to transfer valuable assets in a trusted and secure manner without the involvement of a middle man. Blockchain is a decentralized system where each of the users are connected to each other like a peer to peer connection where there is no central point to control. Validity of the transactions will be controlled by the other nodes who are connected to the system (Miner). The first



major application of Blockchain technology was bitcoin which was released in 2009 by Satoshi Nakamoto. Bitcoin is a cryptocurrency and the blockchain is the technology that underpins it . Once a person makes a transaction and it gets validated, the transaction details will go into the hashing process and it will be stored as a new block. The new block will have the reference of the previous block. So, ideally it will make a chain by referencing the previous blocks. The main and most successful use case of Blockchain is cryptocurrencies and financial transactions.



# **EXIP** Token Structure

## **Token Distribution**



- 75% Total amount of tokens for sale 26,250,000 EXIP
- 10% Team and Advisors 3,500,000 EXIP
- 5% Community Dedication 1,750,000 EXIP
- 5% Reserved 1,750,000 EXIP
- 2.5% Air Drops 875,000 EXIP
- 2.5% Bounty 875,000 EXIP

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# NFTs

NFT's are called Non-Fungible Tokens. Fungibility is defined as an asset that can be exchanged for another of the same type and when no distinction can be made between the two: a 10 euros note can be exchanged for any other 10 euros note because they have the same value and are therefore fungible. It's the same in crypto space as well. One bittoken can be exchanged for another bittoken.

In the world of crypto assets, bittokens are also considered as fungible. However, it is possible thanks to blockchain explorers to know which addresses have had access to which bittoken in the past. "Tainted bittokens" are for example defined as those units of bittoken that are known to have been used in transactions involving illegal activities.

The concept of non-fungible tokens (NFTs) was invented by Dieter Shirley and proposed in September 2017. It is defined under the ERC721 standard.

Unlike ERC20 tokens, which are often used in token emissions during ICOs and are fungible like bittokens, ERC721 tokens have properties that make them unique and therefore non-fungible digital assets. Two NFTs from the same emission do not have the same attributes and are not equal. The analogy can be made with a collector's item in real life: it is unique and cannot be reproduced or exchanged otherwise it will lose its value.

From December 2017, NFTs become popular thanks to Cryptokitties. The cryptokitties are digital kittens, each of which is represented by a unique and non-replicable token. A new token is produced every 15 minutes, and the notion of reproduction allows the characteristics to be passed from one generation to the next. At the pic of their activity, on December 5, 2017, cryptokitties transactions amounted to 140,000 out of a total of 700,000 ethereum transactions, about 20% of the total traffic.

The most expensive cryptokitty has been sold for 600 ETH, or 172,625 USD at the time of sale.

The non-fungible.com site lists all the non-fungible tokens of the Ethereum blockchain and allows you to track the exchanges that take place between users. To date, the project that captures the most value is Decentraland.



# The Social Hub

The social hub is a social network that lets the users have a new experience when it comes to communication. The social hub utilises blockchain technology to decentralize the availability of the user's data to protect its credibility and avoids being tampered with. In doing so it provides the user with the power over their data.

#### **User Management and Features**

The social hub is sure to provide all the existing functionalities of existing social networks including the creation, sharing and modification of posts, comments, likes, pages, groups, conversations and many other properties of a social network in addition to its blockchain based security and recovery model. For the user's preferences their account can comprise of four levels like:-

- 1. KYC Verified Blockchain Account
- 2. KYC Pending Blockchain Account
- 3. KYC Verified Non-blockchain Account
- 4. KYC Pending Non-blockchain Account

Each account category or like we call it levels provide the user with a specific set of actions performable within the system.

### **Data Protection and Privacy**

The user's control over his data comes to play in case the user's data is tampered with due to a hack or other reasons, the user will be able to retrieve their entire usage history since the genesis of their blockchain account. The social hub's privacy and data protection policy has the following characteristics.

- The User has complete control over his data.
- Transparency and Immutability of all user actions.
- Users build their profile in blockchain.
- The user maintains privacy of private information.



• The user will be able to reset his data to its true state in case of any discrepancies.

### **Rewards and Perks**

The social hub has its perks, where a reward system provides the users with redeemable exip tokens depending on their referrals count and other rewarding activities in the system.

## **Resetting User Data**

This is a key feature and characteristic of the social hub where the user whenever does any action within the system like adding or modifying their personal information, doing any one of the system's actions like creating, editing and deleting a post, comment, page, group and event has their own transaction in the blockchain and in doing so protecting the data associated with each action.

This data within the blockchain is encrypted by the users secret key to prevent the public from ever truly interpreting the data. This creates a sense of ownership of the data users data and enforces privacy. The dual storage method of data creates a parallel tree of data representing user actions with the data being stored in a database followed by the data being stored in the decentralised storage platform like IPFS in addition to the transaction containing databash for a proof of existence

As for when the database is tampered with and the user's data is compromised or if the user intends to validate and reset his entire data related to actions performed in the system. The reset process involves the user retrieving his data from the blockchain along with the encrypted IPFS data which is decrypted using the users private key, following this the decrypted data is placed back into the database leaving no trace of tampered data and will set the system to a specific flashpoint desired by the user.



# **Total System Flow**

As mentioned above each of the NFT's are identically unique. So, in this project we are using NFT's to identify the domain names. As each domain name is also unique. When a user buys a domain name using EXIP he will automatically receive an NFT as well. That NFT will be named as that domain name. So there won't be any two NFT's with the same name and all the domains will be identified uniquely and ownerships will be validated based on the NFT'S. whoever owns the NFT is the user of that domain. This will make the domain transfers easier and hassle free as the owner just needs to transfer the NFT to another public key.

As mentioned in the above chapter each NFT's are identically unique. This characteristic perfectly matches with the EXIP requirement. As we are providing decentralized domain names and those also need to be identically unique. In the EXIP platform each domain will be attached to an NFT. To do this process we are using stellar blockchain assets. In stellar we can create identically unique assets under one public key. Whenever the user wants to purchase a domain, they will ideally receive an NFT to their blockchain account. Which public key holds the NFT is the owner of that domain. This is the mechanism that we are using to validate the owners of the domains as well as get rid of fake accounts and fake domain holders. When a user wants to sell their domains or transfer the ownership of the domain, they just need to send the NFT from their blockchain account to the new owner's accounts.

Each domain in the EXIP platform can be purchased using EXIP tokens. And the annual fee of holding the NFT also will be charged using EXIP token. As EXIP tokens are also created through stellar, users can use the same account to hold their NFT as well as EXIP tokens.

There are some top-level domains that already exist in the centralized world and we have some restrictions to purchase those TLDs. Other than the TLD'S users are free to own any domain names that they want. Also, the owners identify will be anonymous on the EXIP platform. Because we are not requesting any user info while registering to our platform.



Roadmap





# The Team Shashi Meghawarna

## Founder

Shashi is the founder of Mobiglotech Blockchain Corp Pvt Ltd. He is a young entrepreneur who has held positions such as Senior Corporate Manager at top financial institutions. He has higher studies followed his in Information Technology at National Institute Of Business Management and in business studies and strategic planning at Brighton School Of Commerce In Singapore. He has also served as a key consultant for several large infrastructure projects in South Asia.





## Aven Peran

### **Community Manager**

Aven Perera holds a Bachelor of Science from California State University and Associate of Business from Moorpark College California. His visionary leadership and entrepreneurial capabilities have also led him to own and manage businesses both in the USA and Sri Lanka.

## Dinitha Munasingha

## **Air-Drops and Bounty Manage**

Dinitha is an undergraduate of BSc Engineering (Hons) at University of Moratuwa. He is an online entrepreneur with 7 years of experience and the founder of TaizerMinds Marketing & Sales Strategies group which manages many leading Online Stores mainly in UK/Australia and the USA for more than 4 years.





# Gayan Nanayakkara

## **HR & Administration**

Gayan has more than 11 years of experience in Human Capital Management. Prior to Founding Mosiac, he has worked as the Head of Human Resource at Envoy Holdings which is one of the elite corporations in Asia to provide HR solutions. Gayan holds a Masters in Labour Relations & Human Resources Management at the University of Colombo. He is specialized in improving

systems, processes and services for clients by using advanced analytics, technology & innovativeness.



## Samantha Ponnamperuma

#### **Investment and Bank Liaison**

An ex-banker, who holds almost 25 years of experience in local and foreign banking, mastered in segments such as retail banking, leasing & finance, credit and recoveries. His experience stems from his workplaces such as HNB, National Bank Of Abu Dhabi, Pan Asia Bank and Softlogic Finance in Managerial capacity.





## **Roshan Madawela**

### **Head Of Research & Development**

Founding Director of the RIU, Roshan heads operations in Sri Lanka, Maldives and UK. Roshan has led project teams and consulted on hundreds of projects internationally. Roshan also served as Consultant, Macro-Economics at the Asian Development Bank, World Bank, KPMG, PWC and the Commonwealth Secretariat in London. Roshan is the Founding Director of the Clean City Cycle Club and the Big Issue Sri Lanka. He is also Former Consultant at the Office of

the Advisor to the Prime Minister of Sri Lanka. He is the Former Editor at the PennWell Corporation in the UK.