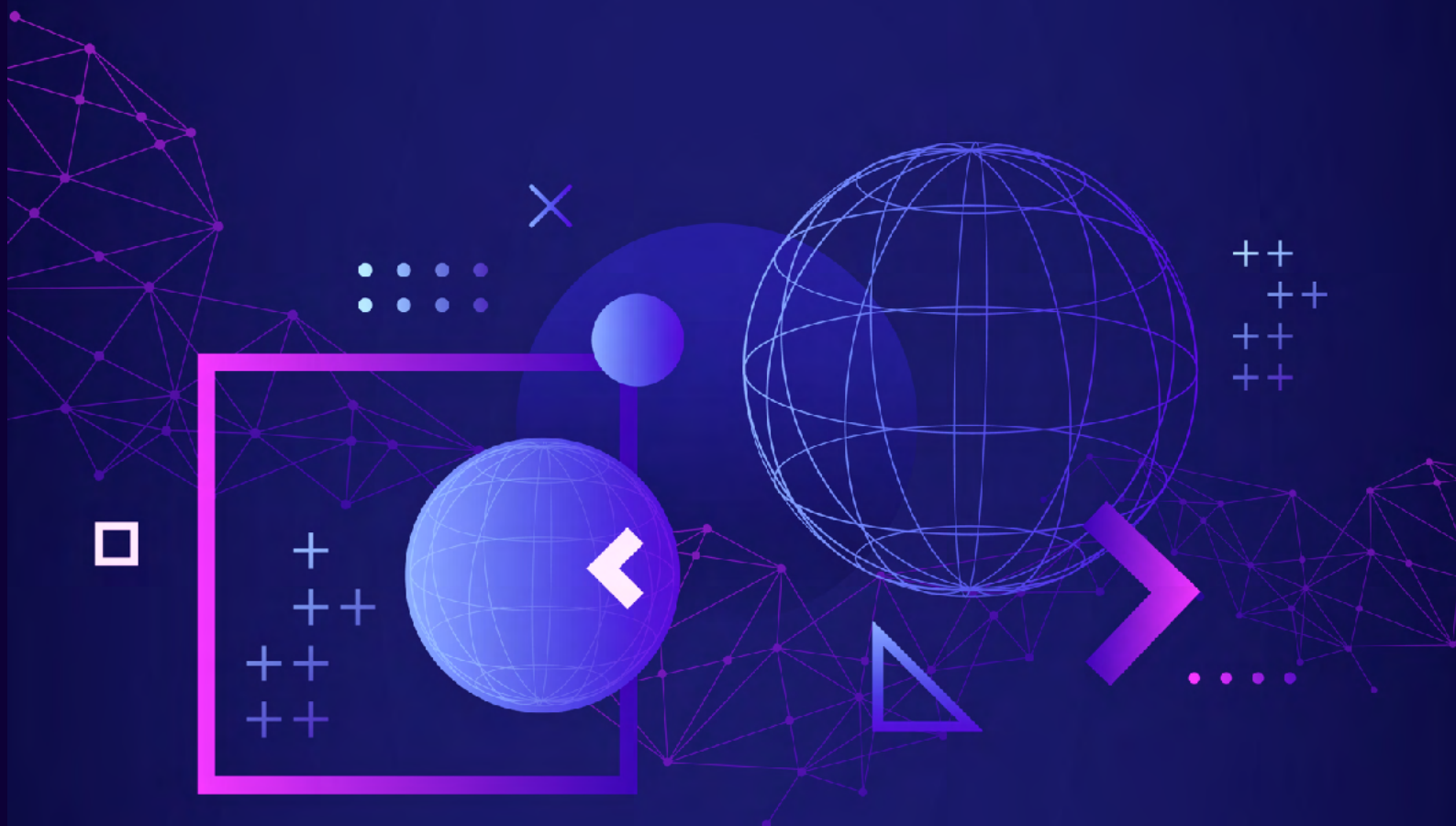


Unlocking the Web3 Potential

India's Journey from a Talent
Exporter to a Product
Powerhouse





FOREWORD



Dr. Srinath Sridharan

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The acceleration of Web3 businesses, its socio-cultural interfaces and commercial engagements globally, marks a juncture that extends beyond coding as a skill set, unlocking opportunities for socio-economic & geopolitical transformation.

This thought-leadership report delves into the impact Web3 could have in the 21st century and India's expected role in shaping its trajectory globally, highlighting the nation's unique position to harness the full potential of this emergent sector.

Web3, with its core tenets of decentralisation, data security, and ownership, is poised to contribute significantly to the global GDP by 2030. As we explore the multifaceted potential commercial applications of Web3, from Decentralised Finance (De-Fi) to Non-Fungible Tokens (NFTs), it becomes evident that India, once on the periphery of Web1 and Web2, is now at the forefront of the Web3 revolution.

With both Web 1 & 2, India did not have the necessary presence globally or the capital might to participate in its governance.

Consequently we have seen that large tech giants of those Web-eras are mostly the Western ones; obviously with implications of the narratives across social media, technology and commercial costs, social cost of technology, geopolitical strains and pricing-power constraints.

India's current socio-economic, demographical and political influence, coupled with a burgeoning pool of young, dynamic talent, positions the country as a Web3 frontrunner.

The report underscores India's current standing as a leader in grassroots adoption, with a thriving Web3 sector comprising over 900 firms and claiming 11% of the global Web3 developer pool in 2022.

However, challenges persist, echoing past missed opportunities. Despite policy vehemence, businesses migrating away from India due to taxation issues and regulatory ambiguities is a hard one. The report advocates for a recalibration of the tax framework to foster compliance and ensure India remains a global player in the Web3 revolution.

The recommendations outlined in this report underscore the importance of a coordinated global approach, comprehensive domestic legislation, awareness building, and fostering ease of doing business. By embracing these initiatives, India can not only position itself as a Web3 leader but also transform from a talent exporter to a product-driven powerhouse.

Embracing and empowering Indian talent and entrepreneurship across Web3 is not merely a choice; it could be part of catalysing national technological prowess and progress with owning IPs that can power the global technology users.

As the world levers more of the transformative potential of Web3 technologies, Indian policy-makers stand at a crucial crossroads. The abundance of young, tech-savvy minds coupled with India's growing influence on the global stage presents an unparalleled opportunity to shape the future of decentralised technologies. Steering policy development to propel Indian talent and entrepreneurship forward is not just an evolution; it's the path to being a tech-nation and having global relevance in web3 era, and being mover-and-shaper of technological innovations globally.

India's proactive participation in spearheading Web3 globally holds the potential to transform this technological evolution into an inclusive force for good. Through thoughtful policies and collaborations, India can foster an environment where Web3 becomes a tool for empowerment, enabling all citizens to participate in the digital economy, and make it a more humane and equitable digital space. It is not a chance or a slogan, but a need.



FOREWORD



Shri Rakesh Maheshwari

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The emergence of Web3 is poised to transform digital governance as we know it. India, with its rich legacy in science, technology, and innovation, along with a vast developer pool and a forward-looking outlook towards the adoption of new technologies has the opportunity to become a global leader in the Web3 space.

The Web3 sector is complex, and ever-evolving and includes blockchain, smart contracts, virtual digital assets, and NFTs, which have been growing in popularity due to their broad applications across several sectors, and new segments opening up to the benefits of Web3 and blockchain technology. Web3 has also been a major topic of discussion over the past several months, given India's Presidency of the G20, which saw the publication of the IMF-FSB synthesis paper on Crypto.

The Ministry of Electronics and Information Technology (MEITY) has recognised the transformative

potential of Web3 and taken proactive steps to nurture its growth in India. This includes the release of the National Strategy on Blockchain in 2021 which laid out the broad contours of how blockchain technology can be leveraged across different sectors and aimed at creating trusted digital platforms through shared Blockchain infrastructure, promoting research and development, innovation, technology and application development. The ongoing consultation process for seeking inputs of the contours of the proposed DIA has also emphasised on accelerating the growth of innovation and technology ecosystem including new technologies such as Web3.

While Web3 is still in its nascent stages in the country, this report highlights how Web3 is changing the current innovation landscape, the sector's growing contribution to India's growth story and the way forward for its continued growth.

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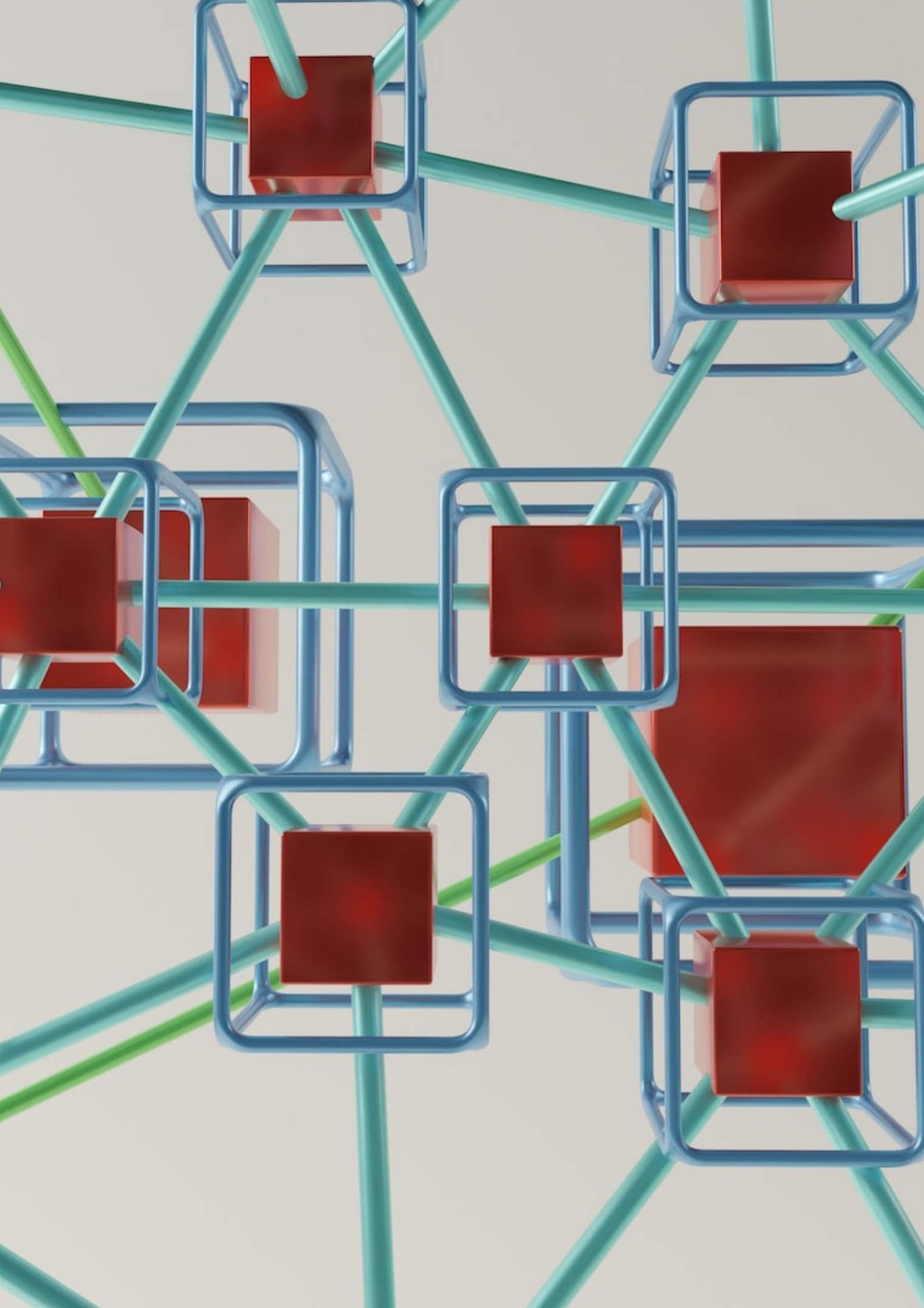
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PREFACE



Mr. Shravan Shetty

Managing Director,
 Primus Partners

As we witness the evolution of Web3, its potential for transformative growth becomes increasingly evident. Web3 is expected to contribute over \$1.1 trillion to India's GDP by 2032, reiterating this potential.

While there are several use cases across sectors, the Web3 narrative has been dominated by speculative trading and associated macro-economic and financial stability risks. Given this, this paper will highlight the diverse use cases around decentralisation, data security, traceability, and ownership, solving issues around data control, which, when concentrated in a few hands, can lead to misuse.

The paper will ultimately demonstrate that, as with any emerging technology, while there are inherent risks associated with Web3, these challenges can be managed, and the potential rewards are substantial. Further, this paper will also outline a path for India to become a Web3 leader, driving transformative change and making a significant contribution to economic growth.



EXECUTIVE SUMMARY

Harnessing the full potential of Web3 beyond trading

Web3, the next evolutionary phase of the internet, is characterised by decentralised protocols, blockchain technology, and smart contracts, facilitating data ownership, transparency and security. It is expected that Web3's contribution to the global GDP will reach 8% (\$13 trillion) by 2030, indicating its significant potential beyond speculative trading. Some of its use cases and applications are:



Decentralised Finance (De-Fi):

DeFi allows open access to financial services, reducing reliance on intermediaries. With a market size of USD 13.61 billion in 2022, expected to grow at a CAGR of 46% from 2023 to 2030, DeFi revolutionises finance globally.



Asset Tokenisation:

Asset tokenisation converts physical or digital assets into digital tokens, offering fractional ownership and liquidity, reducing the barriers to entry and immutability. Tokenisation's appeal is on the rise, with potential growth of over \$16 trillion by 2030 for tokenised global illiquid assets.



Non-Fungible Tokens (NFTs):

NFTs are unique digital assets, offering ownership and authenticity. They extend beyond art to include various digital assets.



Decentralised Apps (DApps):

DApps enhance security, data control, and transparency in various sectors like gaming, social media, and healthcare.



Decentralised Autonomous Organisations (DAOs):

DAOs promote transparency, inclusivity, and security in decision-making processes.



Digital Identity and Ownership:

Users can maintain ownership of digital identities securely, essential in gaming and other industries.



Metaverse

The metaverse exemplifies a compelling use case of Web3, leveraging decentralised technologies to create immersive, interconnected virtual experiences.

Web3 is reshaping how we interact with technology and data. Decentralisation, data security, and ownership are its core pillars, promising substantial benefits across sectors.

India's opportunity to lead is now; next three years will shape the growth trajectory

As the world recognises the potential of Web3, India's landscape also holds significant promise. According to Chainalysis, India leads in grassroots crypto adoption globally and ranks as the second-largest market in terms of raw transaction volumes in 2023, demonstrating a thriving Indian market.

India boasts over 900 firms operating within the Web3 sector. In 2022, India claimed 11% of the global Web3 developer pool, positioning it as the third-largest talent pool worldwide. Forecasts anticipate the sector to contribute a substantial

\$1.1 trillion to India's GDP over the next decade, by 2032.

The country stands at the precipice of emerging as a Web3 frontrunner, driven by a flourishing startup ecosystem, a rich talent pool, widespread internet access, digitally savvy population, and growing enthusiasm for Web3 technologies. Capitalising on this opportunity necessitates committed efforts to create a supportive environment that continues to attract talent and investments.



Part of the Web3 challenge stems from a lack of understanding/misunderstanding

Web3's emergence has provoked both excitement and myths, hindering a comprehensive understanding of its potential. Dispelling these misconceptions is essential, and pilot projects involving collaboration with Central and State governments can serve as effective channels for this purpose.



Blockchain vs. Crypto

A common misconception is that blockchain is groundbreaking while crypto is a passing trend. However, digital assets enable participation in public blockchain, which then encompasses a wide range of applications and use cases.



Risks vs. Benefits

Critics often debate that Web3 poses macroeconomic as well as financial risks, but wisely used, it can enhance stability by reducing fraud, increasing transparency, and streamlining financial processes.



Limited Use Cases

Web3 extends beyond trading and finance, potentially bolstering India's digital governance efforts, enhancing data security, transparency, and efficiency, and benefiting various industries.



Anonymity and Crime

Anonymity in blockchain and crypto doesn't inherently lead to criminal activities. It promotes privacy, crucial for data protection measures.

Taxation and EODB issues are driving Web3 businesses and users out of the country

While India's Web3 sector has seen significant growth, its **tax framework presents a few challenges**.

The Finance Act of 2022 introduced a 1% Tax Deducted at Source (TDS) on Virtual Digital Assets (VDAs) sales and a 30% income tax on VDA transfers. The high TDS rate has led to a shift of trade to foreign platforms and the grey market, rendering consumer protection efforts of compliant Indian platforms futile. There are also further restrictions on available deductions and treatment of losses, with no setoffs allowed against other VDA gains.

The tax framework also undermines the legitimacy of the VDA ecosystem, creating liquidity issues, and pushing businesses and users to tax-friendly shores. Countries like Singapore, Germany, Switzerland, UAE, and Hong Kong have adopted more favourable tax policies for Web3 and VDAs.

Taxation should support compliance and encourage participants in monitored transactions, rather than imposing punitive measures that drive them away. Hence, a recalibration of the tax framework is crucial for India to remain a global player in the Web3 revolution.

Similarly, **the availability of payment rails**, especially UPI, is crucial for Web3. However, access to UPI and banking rails, credit and debit cards, popular online payment methods in India, remains restricted within the VDA ecosystem. This has prompted users to opt for foreign platforms, potentially compromising payment security, leading to potential financial losses.

Finally, **registering a Web3 business** and opening a bank account in India remains challenging due to unclear rules and regulations. Specific guidelines for Web3 businesses and recognition under Startup India can provide legitimacy and credibility.



Regulation should precede taxation, hence G20-driven domestic legislation is crucial

In India, VDAs have been included in existing legislations such as the Prevention of Money Laundering Act (PMLA), CERT-IN Directions, Income Tax Act etc. These inclusions aim to protect consumers, enhance Virtual Asset Service Providers' (VASPs) compliance with KYC and cybersecurity standards, and monitor transactions to combat money laundering and terror financing.

While these developments have brought legitimacy to the Web3 and VDA ecosystem, it is still fragmented in its approach. India is yet to establish a comprehensive set of regulations governing the Web3 sector. The absence of clear regulatory guidelines presents a significant challenge for companies looking to establish themselves in India, highlighting the importance of creating a conducive environment.

India, through its G20 presidency, directed substantial attention towards establishing a coordinated path for addressing VDAs. A notable achievement was the publication of the IMF and FSB's synthesis paper on Crypto in September 2023 and inclusion of VDAs in the G20 New Delhi Leaders' Declaration.

As global consensus takes shape, India must advance its domestic policies, building on the year-long discussions. The time is now opportune for the country to exhibit the same dedication and leadership by implementing forward-thinking domestic legislation as per specific needs.



India's journey to Web3 leadership should therefore prioritise legislation, creating awareness and improving business environment

While Web1 and Web2 were predominantly Western developments, Web3 offers India a chance to excel in this phase. This shift can transform India from a talent exporter into a product-driven powerhouse. However, to seize this opportunity in Web3, now is the time to act. We therefore recommend for the following:

1 Coordinated Global Approach:

A global collaborative approach will offer India the blueprint to create its own domestic regulations for the Web3 sector. Given this, it is crucial for India to advocate for this within the G20, even beyond its tenure as the G20 president. Emphasis should be placed on the following:

- Global taxonomy for VDAs & linked services
- Minimum standards to prevent regulatory arbitrage
- Flexibility based on local circumstances
- Coordinated monitoring and enforcement

2 Comprehensive Domestic Legislation:

The impact of Web3 and its underlying technology will extend to every sector. Therefore, it is crucial to create a domestic legal framework that harnesses the potential of this innovation while addressing the risks. When formulating legislation, the essential factors to consider include:

- Adopt a principle and risk based approach
Ensure clarity in coverage and scope
- Identify the primary regulator
- Define licensing and registration requirements
- Prepare service-provider and VDA specific regulations
- Empower Self-Regulatory Organisations (SROs)
- Amend existing laws as needed

3 Awareness around Use Cases:

There is a pressing need to promote education and awareness about Web3 concepts, dispel misconceptions and highlight the practical applications of Web3. This can be achieved through the following:

- Organise hackathons and pilot killer use cases with Central & State governments
- Conduct awareness and education workshops
- Develop compendium of best practices and India-specific research reports

4 Facilitating Ease of Doing Business:

To prevent flight of capital, users, as well as of businesses, we must create a conducive business environment to not only bring back the companies, but also emerge as the preferred destination. These include the following:

- Implement a conducive taxation framework
- Provide access to banking and UPI rails
- Establish regulatory sandboxes
- Recognise Web3 as a separate vertical under Startup India
- Offer incentives and tax breaks
- Encourage investor engagement

In embracing these recommendations, India can position itself as a Web3 leader, leveraging its strengths, nurturing innovation, and creating an environment conducive to development of Web3. By doing so, India can chart a pioneering course in Web3.

01

Web3 Reshaping the Innovation Landscape



In today's innovation-driven landscape, Web3 empowers users through data ownership and control, facilitating interactivity and decentralisation. While Web1.0 was static, offering basic web pages, Web2.0 introduced dynamic content and user-generated interactions through social media and web applications. Web3, powered by blockchain and decentralised technologies, emphasises user sovereignty, privacy, and decentralised applications (DApps) running on distributed networks.

It is expected that Web3's contribution to the global GDP will reach 8% (\$13 trillion) by 2030. While VDAs like Bitcoin and Ethereum have drawn significant attention in recent years, the true potential of Web3 extends well beyond speculative trading.

1.1 Decentralisation

The concept of decentralisation in Web3 has ushered a transformative era, offering a range of benefits to users, content creators, and the digital landscape. By distributing control and power from centralised entities, Web3 promises enhanced security, transparency, and autonomy, while reshaping traditional business models and paving way for equitable digital experiences.

Key applications of decentralisation encompass the following areas:

A. Decentralised Finance (DeFi)



Building on the foundations laid by blockchains, VDAs, and smart contracts, DeFi allows open access to services such as saving, lending, borrowing, and exchange of VDAs. By leveraging blockchain technology to provide financial services without the need for intermediaries, DeFi allows for more direct control over one's assets.



With a **market size** of USD 13.61 billion in 2022, expected to grow at a CAGR of 46.0% from 2023 to 2030, decentralised finance (DeFi) is set to revolutionise the financial sector globally, showing its immense potential in India and the APAC region.

As DeFi platforms are built on open-source technology, developers can build **new financial products and services** that meet the specific needs of different groups of users, offering greater flexibility. The Insurance industry is a prime example of a sector where DeFi can make a huge difference in revamping and improving its existing processes.

Further, DeFi also holds immense potential in offering financial services to the **unbanked** and **underbanked** populations in the country, where traditional banks, despite progress, have been unable to make a significant difference. DeFi can help such borrowers secure loans through smart contracts, eliminating the need for intermediaries, and simplifying the process. DeFi can also play a critical role in helping MSMEs obtain access to credit.

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DeFi in India particularly stands as a beacon of financial innovation, enabling new business models through accessibility, tokenisation of assets, and programmable smart contracts. CeFi is acting as a bridge between traditional finance and DeFi, fostering a hybrid model known as CeDeFi, which melds institutional-grade custodianship with blockchain technology. Organisations within the regulated financial system are already adopting this CeDeFi.

TradFi companies should take strides in bridging CeFi and DeFi, with acquisitions aimed at rolling out full digital banks, thus bolstering the approach towards providing a new generation of cloud native platforms and banking solutions.

India and the APAC region are evidently at the cusp of a financial evolution, with DeFi as a pivotal force driving this change, fostering innovation, financial inclusion, and a seamless bridge between the traditional and decentralised financial systems.



Mr. Ashish Khandelwal



Founder,
ANQ

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B. Decentralised Apps (DApps)



Decentralised applications (DApps) are catalysing a revolutionary shift across diverse sectors and industries. They prioritise security by distributing data and functions across blockchain networks, eliminating single points of failure, and reducing the vulnerability to cyberattacks. Transactions are transparently recorded on public ledgers, fostering trust, and reducing reliance on central authorities.

DApps grant users **greater autonomy**, enabling them to take control of their data and assets without intermediaries. Additionally, they resist censorship, making them invaluable in regions where internet controls are stringent. They often leverage blockchain tokens for various functions, while their open-source nature encourages collaboration and innovation within the developer community. Furthermore, some DApps are designed to seamlessly interact with one another, creating a versatile ecosystem of applications and services.

This combination of characteristics positions DApps as a transformative force in sectors such as **gaming, social media, supply chain management, healthcare, real estate, education, and more.**

DApps also aim to **decentralise social media platforms**, giving users control over their data and content. Projects like Mastodon and Solid are building decentralised alternatives to platforms like Twitter and Facebook, where users can share content and interact without the risk of centralised data ownership and censorship. Decentralisation apps in healthcare can ensure the security and privacy of medical records. Patients have control over their health data, granting access only to authorised entities.

C. Decentralised Autonomous Organisations (DAOs)



Decentralised Autonomous Organisations are built on the principle of **decentralised decision-making**, where participants, often token holders, collectively decide on the organisation's actions and policies. The benefits of DAOs are multifaceted. They promote transparency, as all decisions and transactions are recorded on the blockchain for public scrutiny. Moreover, they eliminate the need for intermediaries, reducing bureaucracy and associated costs.

DAOs also foster inclusivity by allowing anyone with tokens to participate in governance, making them a powerful tool for democratising decision-making in various sectors. Additionally, they enhance **security through smart contracts** and cryptographic principles, minimising the risk of fraud and manipulation. As the potential applications of DAOs continue to expand, they represent a promising mechanism for reshaping governance, finance, and various industries by empowering decentralised and community-driven decision-making.



1.2 Ownership

In an evolving digital world, ownership and control over assets, data, and identities has become crucial. Web3 empowers users with authentic digital ownership, underpinned by blockchain technology, reducing reliance on intermediaries. Web3's global accessibility lowers barriers to entry, reaching users and creators worldwide.

Some other use cases of this feature are as follows:

A. Non-Fungible Tokens (NFTs)



Non-fungible tokens (NFTs) have emerged as a transformative force, bringing a new level of ownership, and value to the digital world. NFTs are unique digital assets built on blockchain technology and represent **ownership and authenticity** of a specific item. The word "non-fungible" means something is one-of-a-kind, and NFTs are just that – unique and cannot be copied or swapped for something else. For instance, Bitcoin is not an NFT because it can be exchanged for another Bitcoin.

There is a common misconception that NFTs solely pertain to items like Bored Ape NFTs or digital images. While it's understandable to view NFTs as digital representations within an art marketplace, they offer distinct advantages that make the process of creating NFTs particularly appealing. NFTs are frequently **associated with a range of digital assets**, including but not limited to images (in JPEG format), event tickets, video and audio clips, official documentation, and various types of digital services. NFT platforms like **OpenSea and Rarible** enable creators to sell their digital works directly to collectors, bypassing traditional art galleries or auction houses.

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Web3, with its foundation in blockchain, is a democratic and distributive force - by design. Digital artists were amongst the first to realise this and have led the web3 adoption charge. Soon, even traditional artists from every corner of India have joined the growing community of web3 artists, and have experienced firsthand the benefits of adopting web3, specifically NFTs - which unlocks digital ownership.

Using NFTs, artists have reached global audiences, sold artworks in previously closed markets, and have even invented new forms of art. NFTs allows artists to use novel tools like smart contracts, which greatly increases the value of artworks and has birthed new monetisation strategies unavailable in web2. On-chain royalties is one such strategy, returning power to the artists, regard-less of the form of art or the physical location of the artist.”



Mr. Angad B. Sodhi



Founder,
Colours of India

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B. Digital Identity and Ownership



Individuals can maintain ownership of their digital identities, which can be **verified without compromising personal information**. The Sovrin Foundation provides a decentralised identity platform, allowing users to own and control their online identities securely. In the gaming industry, Web3 enables true ownership of in-game assets. Gamers can buy, sell, and trade digital items securely.

Several companies have embraced these principles inherent to Web3 technology into their operations,

ushering in a new era of decentralised innovation. A few examples of this transformative trend include Steemit, a blockchain-based social network where content creators and curators are rewarded with tokens and maintain ownership of their content; Axie Infinity, a blockchain-based game where players own, breed, and trade digital creatures represented as NFTs; and OpenSea, which enables the ownership, buying, selling, and development of virtual real estate in virtual worlds like Decentraland and Somnium Space.



1.3 Data Security and Traceability

Another critical advantage of Web3 is the enhanced focus on data security. By employing blockchain technology and cryptographic methods, Web3 ensures the protection of data privacy and integrity. This has practical applications in sectors such as healthcare, finance, and legal documentation.

Some of the benefits and use cases are as follows:

A. Data Privacy



Web3 empowers individuals to control their personal data. Users can choose what information to share, with whom, and for what purpose. This mitigates privacy concerns and prevents data misuse.

B. Immutable Records



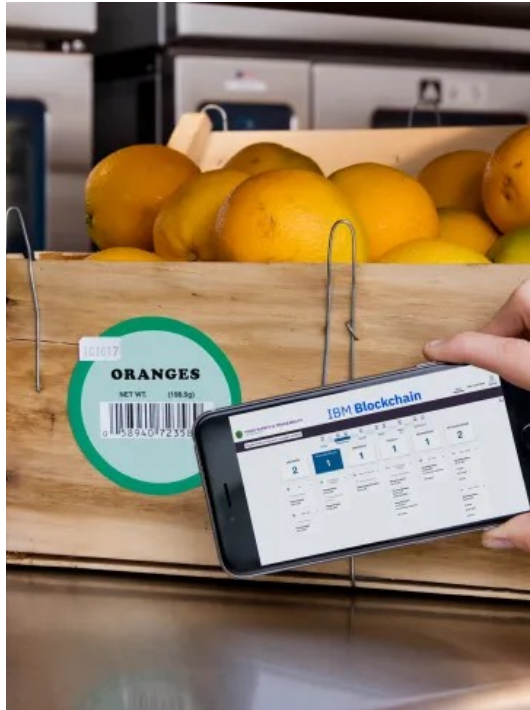
Blockchain technology ensures the immutability of data, making it tamper-proof and trustworthy. This is vital in legal and financial sectors, where record accuracy is of paramount importance.

C. Security



The use of blockchain technology for issuing security tokens provides a higher level of security and reduces the risk of fraudulent activities.





Several companies have been exploring and implementing data security and traceability aspects of Web3 to enhance their operations and provide innovative solutions. Within the domain of supply chain management, IBM's Food Trust platform, for instance, harnesses blockchain technology to bolster the traceability of food products, enabling participants in the supply chain to enhance transparency and mitigate fraud.

Walmart has partnered with Hyperledger Fabric, to elevate traceability in its supply chain, using blockchain to validate product movement and authenticity. For high-value items like diamonds and luxury goods, Everledger employs blockchain technology to trace their provenance and create digital records, significantly reducing the risk of fraud and counterfeiting in the supply chain. These applications illustrate how blockchain technology is revolutionising supply chain management across diverse industries.

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The influence of Web3 on data security and traceability is transformative. It grants individuals and businesses the authority to take charge of their data, fostering transparency and trustworthiness. This not only safeguards critical information but also establishes the foundation for a more secure and dependable digital environment, playing a pivotal role in India's digital growth.



Mr. Abhay Singh
Co-founder and CEO
DappLooker

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1.4 Asset Tokenisation

Asset tokenisation, or Tokenisation, refers to the process of converting a real world physical or digital asset into a digital token which represents the asset, either completely or fractionally, on a blockchain. The value of the chosen asset is evaluated based on the prevailing market conditions. The utility of the technology is almost universal as most existing assets, tangible, or intangible, can be converted into digital tokens.

A. Benefits

Over the past few years, tokenisation has emerged as one of the most attractive aspects of Web3, as a technical showcase and investment avenue due to the unique advantages it offers.



Fractionalisation:

This means splitting up the ownership of an asset into smaller parts, or tokens, which can be independently bought, managed, and sold. Fractionalisation facilitates greater liquidity and translates into a more efficient and convenient market where trading is nearly instantaneous.



Immutable and Transparent:

Since the entire process of tokenisation happens on-chain, it is immutable and transparent. Once information is stored on the blockchain, it cannot be altered and is verifiably accurate. Any changes in ownership are stored and, based on the smart-contract logic used for tokenisation.



Reducing Barriers to Entry:

Tokenisation reduces barriers of entry to traditionally capital-intensive markets. As consumers no longer have to finance the entire purchase themselves, their access to such markets increases.



Accuracy and Reliability:

The automation enabled by smart contracts also reduces dependence on human effort and turnaround time and increases accuracy and reliability.

B. The Rise of Tokenisation

It is thus little wonder that the appeal of tokenisation has slowly increased over time. Interest in the market is at an all-time high as experts are predicting big things for the future. According to a report by BCG, the valuation of tokenised global illiquid assets alone could grow to over \$16 trillion by 2030. A survey conducted by EY Parthenon found that 37% of Institutional Investors and 61% of HNIs plan to invest in tokenised assets by 2024.

In India, while the market for asset tokenisation is still emerging, there is still enough evidence to demonstrate the potential. In May 2023, Small Industries Development Bank of India announced the completion of its pilot project exploring tokenisation undertaken in collaboration with Infosys. The project is still in its infancy but has the potential to contribute significantly to the Indian economy. The Telangana government is also working with industry players to develop a set of uniform principles for asset tokenisation in the state. These principles will become progressively more important as more and more applications for the technology emerge in the country.

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Today, tokenisation of Real-World Assets (RWA) is reshaping business models for both asset holders and prospective buyers. This helps unlock latent value for retail investors by enabling participation in asset classes that were previously accessible only to those with large capital resources. This extends to projects like large-scale real estate developments, bonds, industrial projects, and more, allowing retail investors to participate and reap returns traditionally reserved for significant private equity or institutional investors. The positive impact of increased retail investor participation on the Indian stock market serves as a compelling example.

RWA tech requires digitisation of multi-party trust, instilling confidence among all stakeholders, including regulators, asset holders, and investors, while minimising concerns related to fraud. Blockchain is the best available tech today to digitise multi-

party trust, and we are seeing an initial adoption of block-chain in RWA.

RWA has the potential to unlock a lot of value locked in unrealised assets. The key to unlocking this potential lies in providing regulatory clarity and establishing the appropriate frameworks. With the right support, RWA has the potential to significantly contribute to a country 's GDP.”



Mr. Ankush Tiwari

 Founder,
Zblocks

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Web3 is therefore not merely a buzzword or a financial instrument; it represents a fundamental shift in how we interact with technology and data. Decentralisation, data security, and ownership are at the core of this paradigm shift, promising substantial benefits across diverse sectors. With careful management of challenges and proactive efforts, India and the world can harness the potential of Web3 to create a brighter digital future.

02

How can Web3 Contribute to India's Growth Story



2.1 Numbers Highlighting Potential

Web3 has taken off in the Indian context as India is home to over 900 firms in the Web3 sector. Five of these have achieved unicorn status as of 2023. Various publications by different stakeholders highlight the country's potential to lead the Web3 wave on a global level through the next decade.

A. Web3 Adoption and Market Size



According to Chainalysis' recently published Crypto Adoption Index for 2023, India is ranked first in global grassroots crypto adoption and among the top five in the use of centralised and decentralised exchanges, lending protocols, and token smart contracts. With a raw estimated transaction value of \$269 billion between Jul '22 to Jun '23, India has become the second-largest crypto market in the world, beating out several wealthier nations. Estimates suggest that India has been the #1 global adopter of DeFi in terms of value received on-chain, adjusted for PPP.

B. Workforce and Funding



As of 2022, 60% percent of Indian Web3 startups have been registered outside but they continue to hire tech-force in India. As of 2022, 11% of global Web3 developer pool is in India, which constitutes the 3rd biggest talent pool in the world. This includes ~75,000 tech talent in the blockchain industry which is expected to grow by over 120% in the next 1-2 years. Since 2018, India has witnessed a 138% jump in Blockchain related jobs. Moreover, Web3 startups in India raised ~\$1.3 billion in funding over the two years ending April 2022.

C. Economic Potential



The sector is expected to grow at a CAGR of over 40% and contribute \$1.1 trillion to India's GDP over the next 10 years by 2032. The retail sector, accounting for 37%, and the financial services sector, contributing 15%, are expected to be the primary drivers of Web3 and Metaverse adoption. The creator economy is expected to surpass 100 Mn users by the end of 2023.



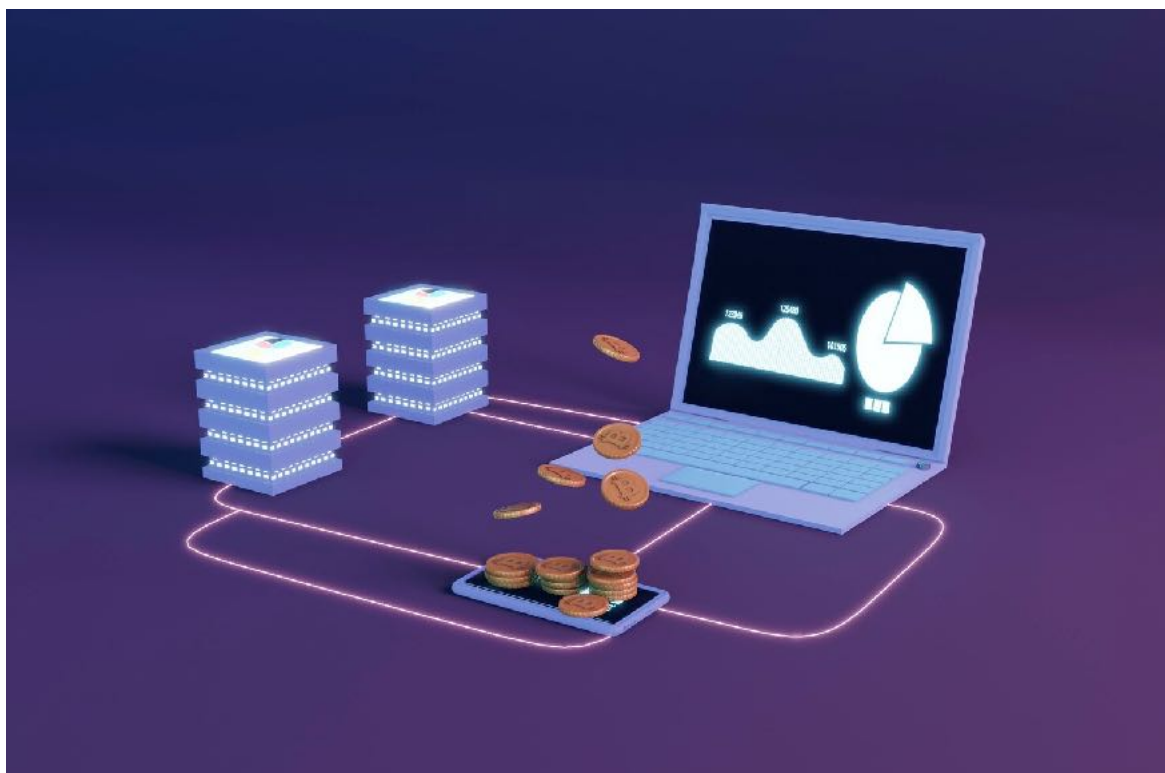
“

Web3's potential is immense, and its diverse applications are evident through various use cases across sectors such as education, healthcare, finance and more. Homegrown businesses have spearheaded the Web3 ecosystem in India and put the country on the global map. With its talent, the country can supply solutions and services, while its young demographic and digital savvy population also generates significant demand. India's trajectory from this point onward is undoubtedly upward, positioning it favourably to lead the way in the next phase of Web3.”

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Mr. Dilip Chenoy
Chairperson,
Bharat Web3 Association



2.2 States Driving Action

A. Telangana

The Telangana government has been actively promoting the development of Web3 technologies in the state to position Telangana as a hub for innovation and entrepreneurship in this space.



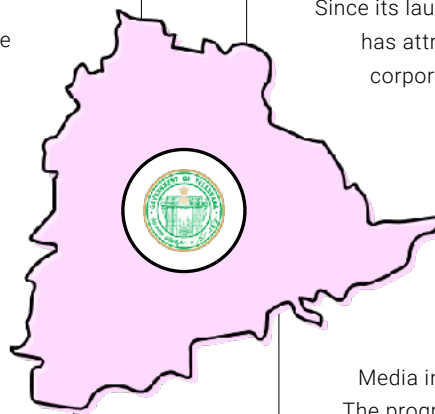
The Telangana Web3 Regulatory Sandbox was launched by the Telangana government in 2023 to promote innovation in the Web3 sector. The regulatory sandbox provides a controlled environment for startups and entrepreneurs to test new ideas and products in a real-world setting, while bringing regulatory clarity to various use cases.

In July 2023, the Telangana Govt. announced plans to launch its **Asset Tokenisation Standards Framework** aimed at providing a common set of rules and guidelines for the tokenisation of assets in India.



The Telangana Blockchain District was announced as the first ever blockchain district by the Telangana government in 2019 as a dedicated hub for blockchain startups. The district provides startups with access to funding, mentorship, and resources. Since its launch, the Telangana Blockchain District has attracted several blockchain startups and corporate partners, including Tech Mahindra, IBM, and Microsoft.

T-Block Accelerator is a startup accelerator program launched by the Telangana Government and Tech Mahindra in partnership with IBC Media in 2020 to support blockchain startups. The program provides selected startups access to funding, mentorship, and resources to help them grow and scale their businesses.



In addition to these initiatives, the government of Telangana has also implemented several **use cases** of Web3:



The Telangana government initiated a pilot project in collaboration with Tech Mahindra to implement a blockchain-based solution for land records management.



To develop blockchain solutions for carbon offsetting projects, the state has signed an MoU with Algorand.



Telangana was conferred with the Award of Excellence in State Category: Emerging Technologies for eGovernance at the 20th CSI SIG eGovernance Awards 2022. Telangana's blockchain project TChits also received an Award of Appreciation under the project category



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Telangana is committed to leading the way in Web3 innovation in India. We are creating an enabling environment for Web3 startups to thrive.

We have set up a regulatory sandbox in collaboration with the industry and the regulatory bodies to bring regulatory clarity to various use cases.

We are also working on developing the asset tokenisation standards framework that would benefit all stakeholders involved in the tokenised asset market by making the market more efficient, secure, and accessible. We believe that such initiatives would help foster the Web3 ecosystem in India.”



Mrs. Rama Devi Lanka



OSD, Information Technology, Electronics & Communications Department, and Director - Emerging Technologies, Govt. of Telangana

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B. Tamil Nadu

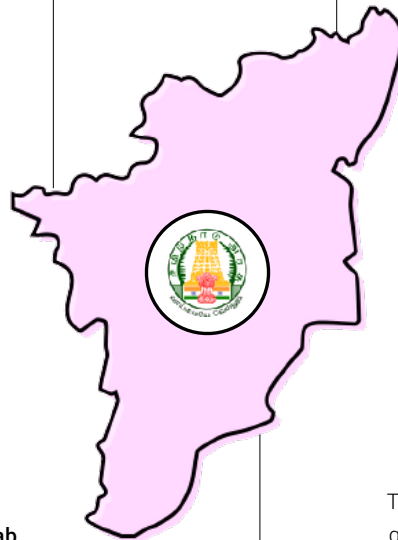
A thriving culture has been noticed across the broad spectrum of new-age technologies, including Metaverse, Web3, Blockchain, and others in Tamil Nadu. The report titled "Metaverse and web 3.0 opportunities in India – Nurturing Tamil Nadu's growth ambitions through next-gen technologies" has pointed out that all significant Information Technology (IT) companies in Tamil Nadu are **focusing on Metaverse** and Web3 technologies via metaverse design, development, testing, and support services along with XR, DLT, 5G, AI, IoT, quantum computing and blockchain.



The Government of Tamil Nadu has set up the **i-Tamil Nadu Technology (iTNT) Hub**, based out of Chennai, which aims to connect start-ups working in emerging and deep tech areas with an academic network of more than 570+ engineering colleges and engage them with researchers and industry partners to spur innovation.



The Tamil Nadu Cricket Association (TNCA) also announced a partnership with Giggrr Technologies Private Limited to create a Web3 digital platform for the cricket ecosystem of Tamil Nadu in June 2022.



Tamil Nadu got its first **virtual reality lab** - Meta Kalvi, for education on metaverse for government schools.



The state also has its artificial intelligence generated **NFT** called "Netru, Indru, Nalai". It was launched at the TechNext 2022 Web3 conference.



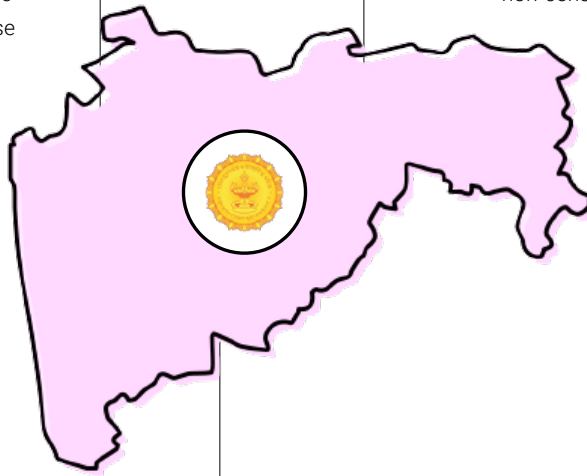
C. Maharashtra



Maharashtra's shift towards blockchain technology gained inspiration from Estonia's blockchain model in the public sector. Phase 1 began with the formulation of the **blockchain adoption strategy**. It assessed on-boarded startups and simultaneously identified use cases of blockchain which could potentially transform e-governance in the state. The state has already commenced with Phase 2.



The Government of Maharashtra, led by the Gadchiroli district administration (Etapalli Subdivision), has begun the revolutionary initiative of **issuing caste certificates** to its citizens, which are cryptographically anchored on the polygon POS blockchain via LegitDoc. This enables entities to instantly authenticate credentials with the help of non-censorable, publicly auditable data stored on-chain.



Maharashtra Government's Disaster Management Department has adopted blockchain technology, in partnership with **Print2Block**, to issue COVID-19 test certificates.



2.3 Managing Challenges and Unleashing Potential

India stands on the cusp of becoming a frontrunner in the realm of Web3, driven by the nation's flourishing **start-up ecosystem, technical talent pool, internet penetration, digital savvy population and growing interest** in blockchain and decentralised technologies. Web3 presents India with a unique opportunity to propel itself to the forefront and serve as a flagbearer for the next phase in the evolution of Web3.

Nevertheless, while a strong foundation has been laid, to fully harness this opportunity, the country must diligently work on creating a conducive environment that continues to attract both talent and investments. There is a pressing need to **promote education and awareness about Web3 concepts**. Encouraging research and development in the field, fostering innovation, and supporting start-ups through grants and incentives will play a pivotal role. Similarly, **building a robust regulatory framework** that strikes a balance between fostering innovation and ensuring consumer protection is paramount. The absence of specific business conveniences such as access to banking rails and UPI has rendered domestic businesses uncompetitive in the borderless market. The sector needs such **EODB conveniences** to maximise the output of the market.

With a strong foundation for the sector, a vision to digitally transform the country, sufficient demand and supply of resources, and an adaptive market that evolves as the ecosystem grows, India is poised to become a global leader of Web3 as the country moves closer to this goal every day.



03

Changing the Narrative



There has been a lot of excitement and conjecture surrounding the emergence of Web3. However, in addition to the excitement, several myths and misconceptions have impeded a complete understanding of the potential of this game-changing technology. It is imperative to dispel these misconceptions and highlight the practical applications of Web3.

3.1 Busting the Myths

A. Risks outweigh the Benefits



Critics often debate that the advent of Web3 poses risks to macro-economic and financial stability. However, in the process we often tend to underplay how blockchain and Web3 can improve these issues if used wisely. Web3 can help create a more stable economic climate by lowering the likelihood of fraud, fostering transparency, and guaranteeing the integrity of transactions. Further-more, financial procedures can be streamlined by blockchain's efficiency and cost reductions.

chain management, healthcare, legal contracts, and more, can benefit from the use of blockchain technology. Because of its immutability and decentralised structure, it is the perfect option for improving security and transparency across a range of businesses.

B. Use Case limited to Trading and Finance Applications



Blockchain has the potential to enhance India's digital governance (digi-gov) efforts by bolstering data security, transparency, and efficiency. With its immutable ledger, blockchain can help secure sensitive government data, protect against fraud, and streamline processes like identity verification and land registration. Moreover, it ensures transparency by enabling citizens to verify government transactions independently. Many industries, including supply

C. Anonymity leads to More Crime



Anonymity in blockchain and crypto does not necessarily lead to criminal activities. In fact, the underlying technology promotes privacy, crucial in the background of measures being taken for privacy and data protection.

As with any emerging technology, while there are inherent risks associated with Web3, these challenges can be managed, and the potential rewards are substantial. By harnessing the power of blockchain, India can usher in a new era of trustworthy and efficient digital governance, ultimately benefiting both the government and its citizens. Considering the above, there is a need for highlighting the various use cases. Centre and State can play a critical role in this.

3.2 Focusing on Use Cases beyond Trading

Web3 has the power to transform a wide range of businesses. Through working together on pilot projects with the Centre and State governments, we can successfully illustrate the usefulness and advantages of this technology. A few use cases where Web3 is already having an effect and can be further explored are as follows:

A. Supply Chain Management



Transparent and impenetrable supply chain management can be made possible via Web3. Blockchain can help ensure product quality and authenticity by tracking its origins and journey. Maintaining the integrity of supply chains for food, medications, and luxury products can be greatly aided by this.

B. Healthcare



By safely storing and exchanging patient data, blockchain in Web3 can completely transform the healthcare industry. Patients can manage who has access to their medical records, improving privacy and enabling them to take responsibility for their own health.



C. Education and Experience Certificates



Skill certificates and educational certificates can be added on blockchain to prevent fraud. Similarly, we can explore issuance of employee experience certificates on a chain which all participating entities can verify. This will help prevent fraud and save time and resources spent on background checks. The government is already doing something linked to DigiLocker with respect to skill and education certificates. This can be implemented on a blockchain to make it tamperproof.



D. Brands and Retail



Decentralised e-commerce platforms empower brands to establish direct connections with consumers, minimising dependence on intermediaries, and cultivating trust through transparent transactions on the blockchain. Further, the advent of NFTs is reshaping digital ownership and authenticity. Loyalty programs driven by blockchain technology guarantee secure and verifiable reward systems, ultimately elevating customer engagement to new heights.

E. Voting Systems



Web3-based voting systems that are decentralised, secure, and transparent can allay worries about electoral fraud and guarantee a more trustworthy democratic process. States of Karnataka and Bihar are already experimenting with this.

F. X to Earn



With the income models defined as 'X-to-Earn', users can monetise their time spent online via various avenues like play-to-earn (P2E), move-to-earn, stake-to-earn, learn-to-earn, create-to-earn, and participate-to-earn. This creates economic opportunities by assigning value to time spent.

Numerous other use cases and applications including the Metaverse, enterprise solutions, climate action, etc. are also worth noting. Similarly other sectors like telecommunication, energy, and automotive have been driving Web3 adoption.

In summary, the transition to Web3 is not exclusively about crypto, and when done right, it doesn't pose a threat to the stability of the financial system. To encourage broader adoption and responsible integration, collaborative pilot projects with government entities can demonstrate the real benefits of Web3 in a variety of sectors. These pilot projects are essential to bringing Web3's decentralised and transparent nature to life.

04

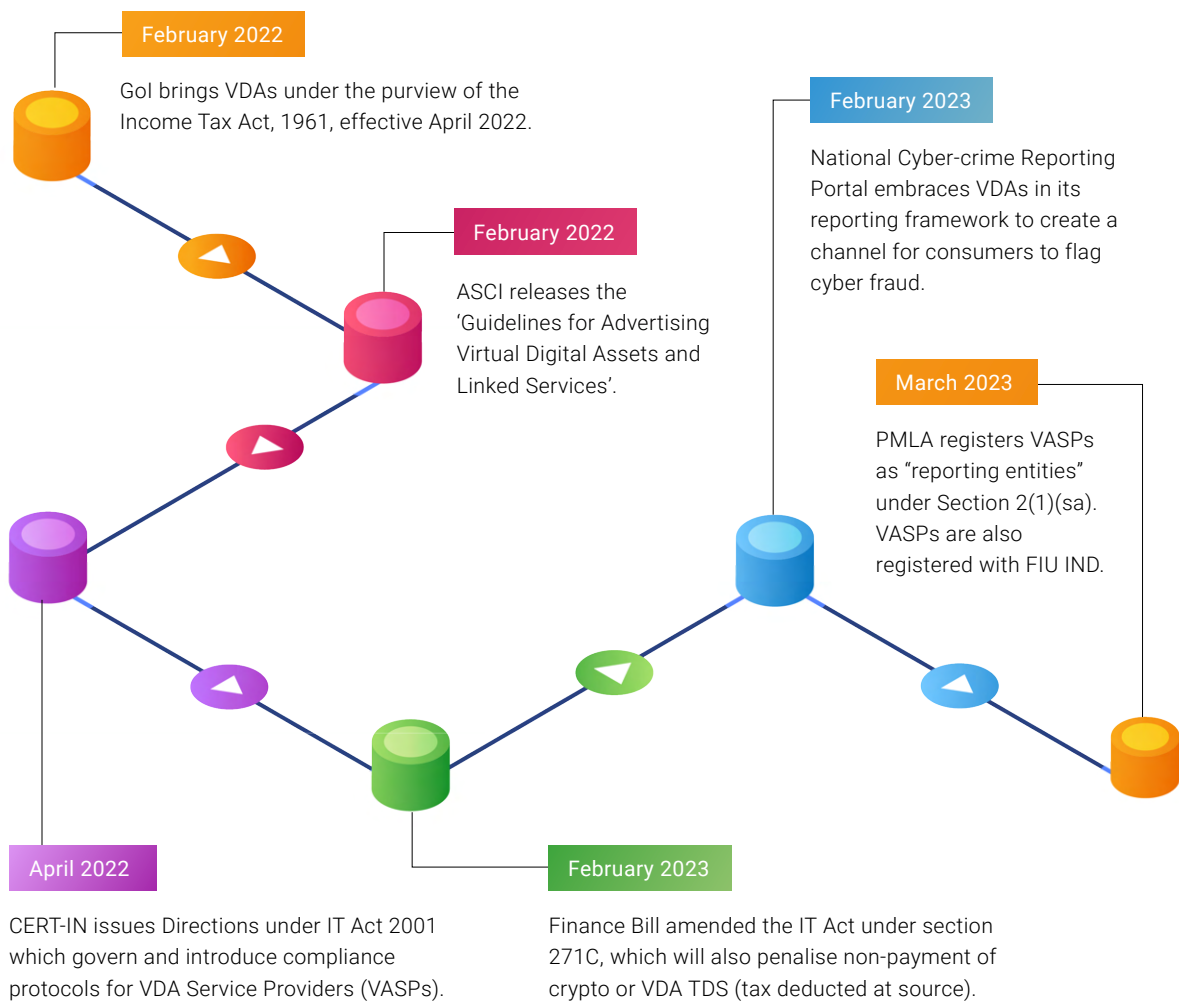
Transition from Fragmented to Comprehensive Domestic Legislation



4.1 India's Regulatory Timeline

India's VDA regulatory landscape has evolved considerably over the past few years. The change in regulations can be traced back to 2020, when the Supreme Court of India, on the Internet and Mobile Association of India v. Reserve Bank of India (W.P. (C) 528/2018), set aside the circular issued by the Reserve Bank of India barring banks and other financial institutions from facilitating transactions involving virtual digital assets.

Since then, VDAs have been brought under the purview of several regulations, which are as follows:



These regulatory developments were brought about primarily for the following:



Ensure **consumer protection** and prevent customers from falling prey to detrimental financial liabilities.



Strengthen compliance for VASPs with KYC standards, maintaining transaction records, and reporting of cyber security incidents.



Tracking and tracing of transactions with the primary objective of maintaining oversight over this space, and monitoring, and tracking and tracing of VDAs, helping to **combat money laundering and terror financing activities.**

While these developments have brought legitimacy to the Web3 and VDA ecosystem, it is still fragmented in its approach. India is yet to establish a comprehensive set of regulations governing the Web3 sector. The absence of clear regulatory guidelines presents a significant challenge for companies looking to establish themselves in India, highlighting the importance of creating a conducive environment.

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Regulatory clarity is critical to promote responsible innovation in the Web3 sector. A regulatory framework that can strike a balance between investor protection, innovation and safety and soundness of the financial system can unlock the potential of the Web3 economy while also mitigating risks. India's response to Web3 regulation will set the agenda for its approach to regulating emerging technologies.



Ms. Shehnaz Ahmed



**Senior Resident Fellow
and Lead - Fintech, Vidhi
Centre for Legal Policy**

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4.2 G20 Driving the Agenda Forward

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In the past nine months, vast efforts and energy have been channelled into debt and crypto agendas. India's G20 presidency expanded the crypto conversation beyond financial stability to consider its broader macroeconomic implications, especially for emerging markets and developing economies.

The G20 reached a consensus on these matters, guiding standard-setting bodies accordingly. Our presidency also hosted enriching seminars and discussions, deepening insights into crypto assets.

Shri Narendra Modi



Hon'ble Prime Minister of India
on 26th August, 2023

”

The borderless nature of VDAs necessitates global coordination on regulating these assets. India's G20 presidency provided a unique opportunity to set the agenda on collaboration of the global community to construct a comprehensive regulatory framework for the Web3 sector.



India has directed substantial attention towards establishing a coordinated path for addressing VDAs. This commitment is echoed at the highest levels of leadership, with Honourable Prime Minister Narendra Modi and Honourable Finance Minister Nirmala Sitharaman both emphasising this issue.

Additionally, to foster a unified approach, international organisations (IOs) and standard-setting bodies (SSBs), including the International Monetary Fund (IMF), Financial Stability Board (FSB), Financial Action Task Force (FATF), and the International Organization of Securities Commissions (IOSCO), have offered guidance through a series of recommendations and expert reports.

The publication of the synthesis paper on Crypto presented by the IMF and the FSB in September 2023 is a landmark achievement of India's G20 Presidency, which consistently echoed the importance of global cooperation to utilise the potential presented by the sector.

The Paper includes a roadmap that supports a co-ordinated and comprehensive policy and regulatory framework and contains policy recommendations and standards to help authorities address risks posed by crypto-asset activities.

The paper is also a critical first step towards implementing cross-border regulatory frameworks through coordinated global efforts.

As a global consensus takes shape, India must advance its domestic policies, building on the year-long discussions. The time is now opportune for the country to exhibit the same dedication and leadership by implementing forward-thinking domestic legislation as per specific needs.

“

Wide-spread availability of highly skilled talent, a thriving start-up ecosystem and rapid adoption of new-age technologies make India a hotbed for Web3 activity. Despite of the nascency of this technology and hazy regulatory clarity, there are several instances of how the evolving Web3 technology has been deployed in India to promote Ease of Living and Ease of Doing Business.

Globally, over the last couple of years, the dramatic rise in retail and institutional adoption of digital assets and Web3 has been met with equally dramatic calls for regulatory clarity and enforcement. Several leading economies including the European Union, the United Kingdom, Singapore, Japan, and the United Arab Emirates, are taking substantial regulatory steps to secure their role as leaders in Web3. Given the borderless nature of this technology, India rightly used its G20 Presidency to build consensus around a

policy roadmap that aims to mitigate risks and protect consumer interest.

While global templates are useful, every country will require appropriately tailored regulations to address local challenges. Meanwhile, the Web3 industry must come together, commit to work alongside the lawmakers to build a framework that doesn't stifle innovation, constantly delivers value to consumers and keeps bad actors at bay.”



Mr. Ramakrishna Venkatesh



Senior Vice President and Head – Public Policy, CoinSwitch

4.3 Case Study: European Union

Case Study A: Markets in Crypto Assets Regulation (MiCA)



The EU Markets in Crypto Assets regulation (MiCA), due to take effect in 2024, is one of the first major jurisdictions in the world to introduce comprehensive regulations for the sector. EU MiCA serves as a good example of a regulation that prioritises consumer protection while also promoting innovation in the sector.

Broad Objectives

- 1 Protecting the consumers that buy crypto assets or engage with crypto asset services.
- 2 Shutting the arbitrage loopholes arising from regulatory provisions and allowing companies to operate all across the European Union (EU) - without the need for different licenses and supervisors in every member states
- 3 Facilitate legal certainty for businesses with a clear rulebook for different services (token issuance, custody, exchange etc.), and attract more investment to the region, helping the European Union emerge as a global hub for Web3.
- 4 Provide Crypto providers with access to operate across the European Union, serving a market of 450 million people.





Asset Categorisation under MiCA



Crypto Asset:

Digital representation of a value or right, which may be transferred or stored electronically, using distributed ledger or similar technology.



Utility Token:

Sub type of crypto assets "which is only intended to provide access to a good or a service supplied by its issuer."



Asset Referenced Token:

Token referenced/pegged to a basket of currencies, commodities, crypto-assets or other single non fiat currency assets.



E-Money Token:

Token referencing its value to a single fiat currency

Exclusions



MiCA does not cover crypto-assets (or crypto-asset services) that are **securities** to prevent a duplication of frameworks since services around tokenised securities are covered by Market in Financial Instruments directive (MiFID)



MiCA does not cover **deposits** as defined in the EU deposit Guarantee Schemes directive



Finally, MiCA will only apply to **NFTs** (Non-Fungible Tokens) if they have characteristics that make it similar to one of the assets that MiCA applies to.

Given that the MiCA regulation is a great example of coming out with coordinated cross-border regulations, Indian regulators must aim to build upon the framework laid out in the Markets in Crypto Assets regulation (MiCA) when creating regulations for the domestic Web3 sector.

Case Study B: EU Regulatory Sandbox



To establish a pan-European framework for regulatory compliance for the sector, and promote innovations in blockchain technology solutions, the European Commission introduced the European Blockchain Regulatory Sandbox for innovative use cases involving Distributed Ledger Technologies (DLT).

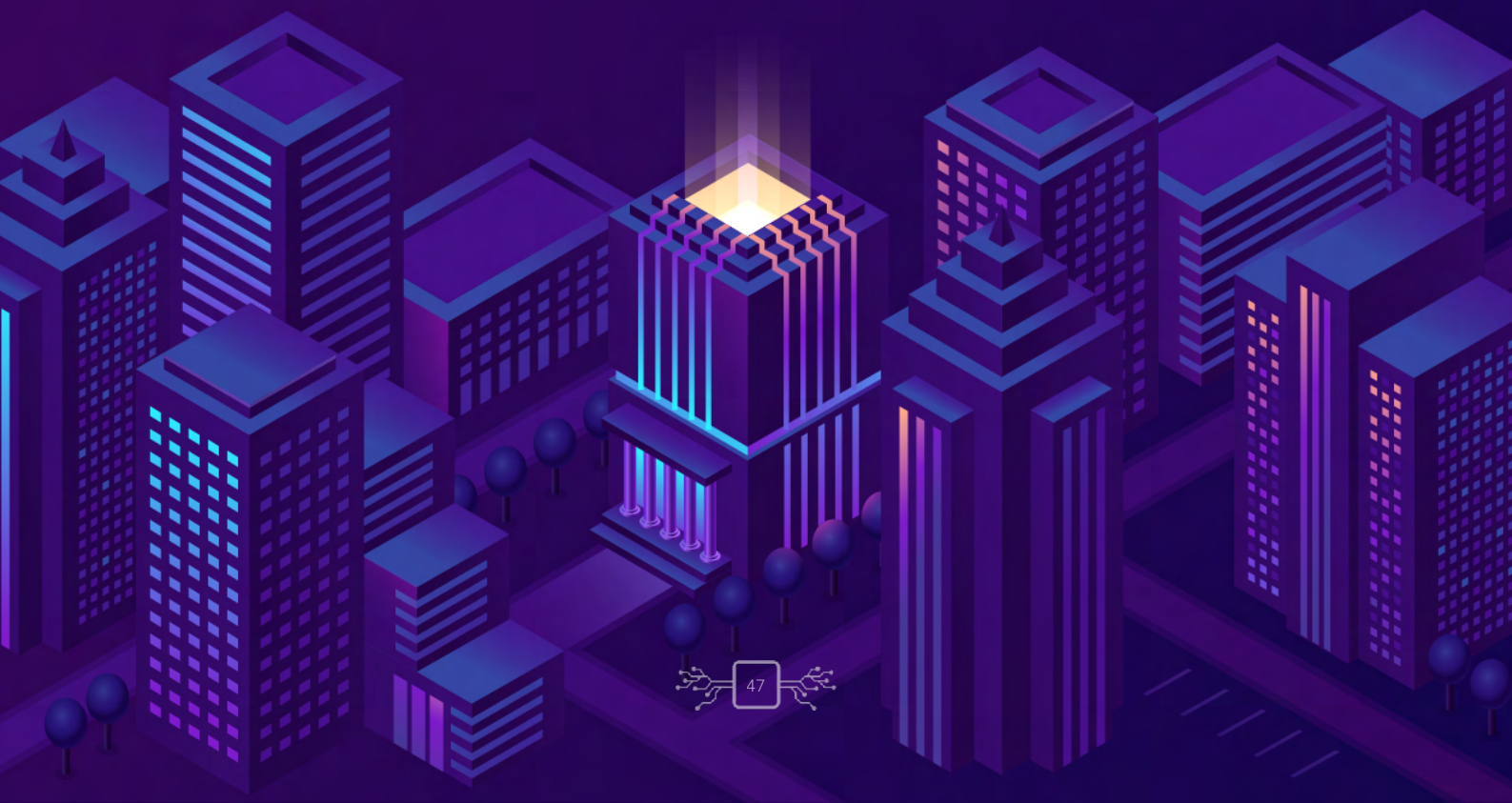
In September 2023, the European Blockchain Sandbox announced the acceptance of 20 innovative blockchain use cases from across the EU for its first cohort and matched the use cases with the relevant regulators. After a constructive dialogue on the most relevant regulatory issues, a report on best practices will be published by the regulator.



In addition to the EU, several jurisdictions such as the UAE, Japan and Singapore have taken steps to create a favourable regulatory environment for the sector.

05

Creating a Conducive Environment for the Web3 Ecosystem



5.1 Assessing the Impact of India's Taxation Structure

In recent years, India has witnessed a promising rise in Web3 startups. However, the accompanying tax framework has posed challenges within the Web3 ecosystem. The Finance Act of 2022 introduced Section 194S, imposing a 1% TDS on VDA sales in India from July 1, 2022. Additionally, a high 30% income tax rate on VDA transfers was initiated from April 1, 2022. Further limitations on deductions and losses treatment, with no offsets against other crypto gains, were implemented.

These measures aimed to monitor VDA transactions by Indian residents, discourage speculation and trading, and establish safeguards for Indian interests and financial stability within the VDA sector.

A. India's engagement with VDAs



Despite these efforts, India's engagement with VDAs has not changed. India is at the forefront of grassroots crypto adoption, topping Chainalysis' Global Crypto Adoption Index. Even more remarkable is the fact that India has secured its position as the second largest crypto market globally in terms of estimated transaction volume (\$269 billion), surpassing several wealthier nations. A high TDS rate has therefore only led to significant shift of trade volume and users to foreign platforms and the grey market, while daily volumes on compliant Indian exchanges declined by 70-90%. Contribution of Indians to the volume on foreign VDA exchanges enabling peer-to-peer transactions was to the tune of INR 80,000 Cr between July and Oct 2022. This proves that the TDS requirement did not suppress crypto activities in India but redirected them to unsupervised channels, rendering consumer protection efforts redundant.



B. Challenges for Indian Web3 firms



The tax framework in India poses challenges for Web3 companies, especially with the 30% income tax rate, undermining the legitimacy of the VDA ecosystem. It also creates liquidity issues for Indian VDA platforms and end users, affecting execution prices.

This discourages legitimate businesses unable to offset operational expenses and has led to some Web3 companies leaving India, despite Indian founders' central role in innovative startups.



C. Comparison with Global Taxation Structures



Several countries, such as Singapore, Germany, Switzerland, UAE, and Hong Kong, have embraced Web3 and VDAs, as we can see from their favourable policies. Singapore stands out for its tax advantages, with no capital gains tax on VDA investments and exempting individual earnings. Switzerland treats VDAs as assets, usually exempting gains from VDA trading but taxing commercial activities. Hong Kong adopts a similar approach, exempting VDA investors from tax but taxing business gains.

Certain regions like Puerto Rico offer more accommodating policies with no capital gains tax for investors and a 4% income tax for qualified businesses. Monaco, Malta, Seychelles, Thailand, and Vanuatu also have no capital gains tax for VDA investors.



D. Need for Clarity



India's Web3 landscape is at a crossroads due to its complex tax structure, which is pushing businesses and users to tax-friendly shores. Taxation frameworks should fundamentally support ecosystems that are driving compliance and encourage more participants in supervised and monitored transactions, rather than impose punitive measures and drive participants out of such systems.



To remain a global player in the Web3 revolution, India needs to recalibrate its tax framework to attract innovation and participation while addressing evolving VDA landscape concerns.

“ India's current taxation framework poses challenges for investors and businesses navigating the evolving landscape of Web3. The current Web3 taxation landscape places an undue burden on entrepreneurs, stifling innovation and hindering the industry's growth. The high tax rates, coupled with the multiplicity of taxes and levies, make it difficult for businesses to operate profitably and compete globally. The complex and cumbersome tax compliance procedures add to the burden, and the lack of certainty and transparency in the tax regime further undermines investor confidence.

Striking a balance between innovation and consumer protection is vital, prompting the need for a progressive regulatory framework.

TaxNodes is dedicated to ensuring compliance and security in this dynamic Virtual Digital Assets landscape. We urge collaboration with authorities to establish a transparent and secure crypto ecosystem that fosters innovation and benefits all stakeholders.”



Mr. Avinash Shekhar
Founder & CEO
TaxNodes

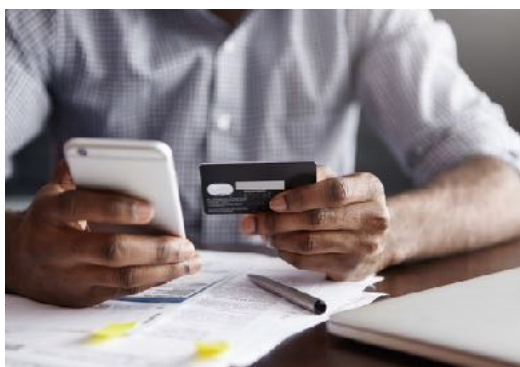
5.2 Ease of Doing Business (EODB) Challenges for the Web3 Ecosystem

A. Access to UPI and Banking Payment Rails



The availability of payment rails, especially UPI, is vital for the development and success of the Web3 ecosystem. However, various VASPs have encountered operational challenges due to discontinuity of payment rails. Additionally, obtaining Merchant Category Codes (MCCs) and processing VDA-related transactions via UPI is proving difficult. Payment aggregators and gateways have limited integration with the sector.

Access to credit and debit cards, popular online payment methods in India, remains limited within the VDA ecosystem. This has prompted users to opt for foreign platforms, potentially compromising payment security. The absence of payment rails has inconvenienced the VDA ecosystem and can potentially cause financial losses for compliant Indian VDA users.



B. Business Registration



Opening a bank account and registering a Web3 business in India is still quite tricky for Web3 players. This is mainly because the rules and regulations aren't very clear. To make things easier and help these companies, we need to create specific guidelines that apply to Web3 businesses in India.

If these businesses get recognised under Startup India, it will bring them certain benefits and give them more legitimacy and credibility. This would go a long way in solving the issues related to how people perceive these businesses.

C. Funding and Investment



The funding landscape for Web3 startups in India has shown some decline. In 2022, the total funding reached \$717.5 million. However, by mid-2023, the year-to-date (YTD) total funding has significantly dropped to just \$104.5 million, as reported by Tracxn. The funds that exited the market were largely speculative investments driven by price fluctuations. In contrast, crypto and Web3-focused native funds are still actively deploying capital, but with increased caution and thorough due diligence.


Due to Ease of Doing Business (EODB) challenges, companies are relocating to more favourable jurisdictions. While both investors and companies recognise the potential in India, there is a need to educate investors about this potential and encourage them to adopt a longer-term perspective regarding their investment returns.

The EODB challenges faced by Web3 businesses in India will have the ill-effect on VDA start-ups exploring other international jurisdictions with certainty, predictable, and conducive regulatory environment. Startups are continuing to move outside India due to regulatory frictions and uncertainty, while hiring Indian workforce. Hence, it is crucial to foster a supportive environment to prevent brain drain and retain talent and businesses within India.


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In India, the Web3 and blockchain ecosystem has experienced rapid growth, with over 450 startups securing \$1.5 billion in investments over two years. Major venture capital players, including Ryze labs, Bessemer Venture Partners, and Antler India, have expressed confidence in the sector. Government bodies are adopting blockchain for accountability, positioning India as a crypto transaction volume leader behind USA. Public-private partnerships, like Airchains and the New Town Kolkata Development Authority, are showcasing blockchain's practical applications. Despite a thriving market, regulatory challenges persist, indicating a need for a more favourable regulatory environment to unlock the full potential of Web3 and related technologies.

We at Ryze labs are committed to stand by Indian Entrepreneurs, Builders, Founders and Dreamers in their growth story.



Mr. Vish B.R.



**India Head,
Ryze Labs**

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06

India's Path to Web3 Leadership: Recommendations and Way Forward



Web3 presents India with a chance to lead globally, transitioning from a talent source to a product powerhouse. The first two phases of the internet, namely Web1 and Web2 were primarily Western phenomena. However, to seize this opportunity in Web3, now is the time to act. We therefore recommend for the following:

6.1 Coordinated Global Approach

A global collaborative approach will establish the path and offer India the blueprint to create its own domestic regulations for the Web3 sector. Consequently, it is crucial for India to advocate for this within the G20, even beyond its tenure as the G20 president. The following factors are pivotal in ensuring success in the pursuit of a coordinated approach.

A. Global Taxonomy for VDAs and Linked Services



The cornerstone of a coordinated approach hinges on having uniform definitions, consistent taxonomy, and clear categorisation of services and activities. These components will establish the foundation upon which regulations for each type of VDAs will be formulated. Consequently, the top priority should be to build consensus on the taxonomy for virtual digital assets.

B. Minimum Standards for Adoption to avoid Regulatory Arbitrage



To mitigate the risk of regulatory arbitrage, the global framework should outline the minimal standards, to the greatest extent possible, that G20 nations ought to adopt. Ensuring transparency in areas like taxation, consumer protection, and anti-money laundering regulations is imperative to guarantee equitable conditions for both businesses and users.



C. Flexibility in Applicability basis Local Circumstances



Depending on the macroeconomic and financial stability considerations of a specific region, the framework should accommodate flexibility in its application beyond the required minimum standards. For instance, in a nation like India, despite being categorised as an Emerging Market and Developing Economy (EMDE), the likelihood of VDAs completely replacing traditional payment systems is significantly lower due to the well-established digital payment infrastructure in place.

D. Coordinated Monitoring, Supervision, and Enforcement



A standardised approach ensures that all participating nations adhere to a common set of monitoring and enforcement practices. By sharing best practices and collaborating on the oversight of Web3 activities, countries can create a level playing field for businesses and users while promoting consumer protection and market integrity.

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India's Presidency has put on table in the G20 issues related to regulating or understanding that there should be a framework for handling issues related to crypto assets. Crypto (is a) threat as well as an opportunity.

But crypto is also an example to say how unless global cooperation works out well, you are not going to be able to have a responsible financial ecosystem which can regulate it as well.

Smt. Nirmala Sitharaman



Hon'ble Finance Minister, Government of India
at the Global Fintech Fest on 5th September 2023

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6.2 Comprehensive Domestic Legislation

The impact of Web3 and its underlying technology will extend to every sector. Therefore, it is crucial to evaluate the suitability and efficacy of a domestic legal framework to harness the potential of this innovation while addressing the risks.

A. Principle and Risk-Based Approach



It is desirable not to make the regulations too prescriptive and instead base them on principles, especially when dealing with emerging technologies. These may include consumer protection, macroeconomic and financial stability, AML/CFT, fostering innovation, upholding market integrity, and reducing regulatory arbitrage. The Digital Personal Data Protection Act is a great example of a principle-based approach in India.

Additionally, regulations should also adopt a risk-based approach, aligning with the actual risks presented by VDAs and linked services rather than relying on hypothetical or speculative risks.

B. Clarity in Coverage and Scope



The initial and most important step for creating legislation is defining the **taxonomy** for VDA, with a forward-looking perspective. Equally important is to **categorise the types of service providers** covered by the legislation, as well as those that fall outside of it. For example, the MiCA regulation has excluded DeFi and NFTs excluded from the scope of the regulations.



C. Identifying the Primary Regulator



This could reside in one of the existing regulators with the primary regulator working with other secondary regulators. Key stakeholders include the Ministry of Finance, Ministry of Electronics and Information Technology, Reserve Bank of India, Ministry of Home Affairs, Securities and Exchange Board of India, to name a few.

In Dubai, the Virtual Assets Regulatory Authority was set up in 2022 as the world's first independent regulator for virtual assets. In contrast, countries like Singapore have the Monetary Authority of Singapore overseeing VDAs, while in Germany, service providers must register with the Federal Financial Supervisory Authority (BaFin).

D. Licensing and Registration Requirements



Defining clear licensing requirements for each type of service provider is imperative. Given the cross-border nature of Web3, it is also important to consider passporting of licensing across jurisdictions. As per the MiCA legislation, a service provider licensed in one Member country may passport its activities to other Member States without additional authorisation requirements.

It is also important to list the entities exempt from licensing requirements. The Virtual Assets Regulatory Authority (VARA) of Dubai defines 'Exempt Entities' as UAE government entities, non-profit organisations, and charitable organisations. Nonetheless, Exempt Entities must notify VARA and obtain non-objection certificates before commencing VDA related activities.

E. Category Specific Regulations



Within the Web3 ecosystem, various categories of digital assets and service providers exist, each necessitating guidelines tailored to their specific use cases and nature of the services they offer.

F. Empowering Self-Regulatory Organisations (SROs)



SROs better understand the nuances of various VDAs, enabling effective oversight in keeping up with emerging tech. In the gaming industry in India, the government is in the process of designating SROs to certify permissible online real money games. In the Web3 realm, the Japan Virtual Crypto-Assets Association (JVCEA) serves as a legally recognised self-regulatory body.

G. Amendment to Existing Laws



It is essential to consider amendments to existing laws to eliminate ambiguity and expand regulatory purview. For instance, this might entail modifications to the IT Act and Contracts Act to explicitly acknowledge digital signatures and smart contracts, or amendments to the Indian Penal Code or Consumer Protection Rules to encompass VDAs and Web3.

6.3 Facilitating Ease of Doing Business

To prevent flight of capital, users, and businesses, we must create a conducive business environment to not only bring back the companies, but also emerge as the preferred destination.

A. Conducive Taxation Framework



VDAs should be treated as any other asset in the hands of consumers or businesses, allowing them to offset or carry forward losses resulting from VDA transfers. This is pertinent as intra-head setoff of losses are allowed for all heads of income, including speculative businesses.

Similarly, establishing a trail of VDA transactions can be achieved by a lower TDS rate while helping Indian investors to continue to trade from Indian KYC-enabled platforms. Further, the PMLA notification granting Reporting Entity status to VDA service providers fulfills the government's intent in tracking transactions, warranting reconsideration of the TDS rate.

Lastly, from a consumer perspective, the income from transfer of VDAs should fall in the bracket of either 'income from other sources' or 'capital gains' basis the nature of VDAs. From a business perspective, the income from transfer of VDAs should fall in the bracket of 'business income' and accordingly, the relevant tax rate should be applicable.



B. Access to Banking and UPI Rails



Allowing access to VASPS by UPI member banks, payment gateways, payment aggregators and other payment system participants is critical in creating a conducive environment. Assigning them Merchant Category Codes (MCCs), will help smoothen transactions. This will also provide additional oversight on the transactions.

C. Access to Regulatory Sandboxes



This enables the government to pilot the technology and use case in a controlled environment and minimising risks. Leading the initiatives for Web3, the Government of Telangana has partnered with the Bharat Web3 Association and other parties to set up a regulatory sandbox in Telangana. In the first phase of the sandbox, 8 startups have been shortlisted.

D. Recognition as a Separate Vertical under Startup India



Currently, within the Startup India categorisation, there exists a sub-category labelled 'Bitcoin' under 'Financial Technology'. This sub-categorisation is limited and narrow in scope as it focuses solely on Bitcoin, overlooking the various other innovative technologies and applications in the Web3 ecosystem. Therefore, the categorisation should be broadened to encompass all types of infrastructure providers, use cases, and enablers within the ecosystem. The creation of a separate vertical would open the door to specific Web3 awards under the Startup India Awards, offering benefits and enhanced credibility to organisations operating within this space.

E. Incentives and Tax Breaks



This recognition would ease the financial burdens faced by Web3 startups, allowing them to allocate resources more effectively. It would also incentivise Indian companies to return to India. The government can also establish Web3 Incubators, Atal Tinkering Labs, and Innovation Centres at National Institutes to provide resources, mentorship, and platforms for startups, students, and researchers to explore and innovate in Web3 technologies.

F. Investor Engagement



By showcasing the potential of India's Web3 sector and facilitating networking between investors and entrepreneurs, India can catalyse investments and accelerate the growth of the sector. These can be done through invitation for investment summits and events. These events could include providing information on regulatory frameworks, investment policies, and incentive programs related to the Web3 sector in India to streamline the investment process and remove any barriers encountered by investors.

6.4 Creating Awareness and Highlighting Use Cases

A. Hackathons and Pilot Projects



India's strength lies in its talent pool and the digitally savvy population. Encouraging this talent will involve both the industry and government collaborating for hackathons and pilot projects aimed at addressing real-world challenges.

B. Education and Awareness Workshops



The more we engage in discussions, the broader the conversation will extend beyond VDAs, encompassing the entire spectrum of Web3. It is essential to educate all stakeholders, including government entities to enhance their understanding of the technology for drafting regulations, educate consumers to protect them from frauds, work with Law Enforcement Agencies (LEAs) to strengthen compliances and educate businesses to help them grasp the potential of Web3.

In embracing these recommendations, India can position itself as a Web3 leader, leveraging its strengths, nurturing innovation, and creating an environment conducive to the development of Web3. The time to act is now, and by doing so, India can chart a pioneering course in Web3.

C. Compendium of Best Practices, Use Cases, and India-specific Research Reports

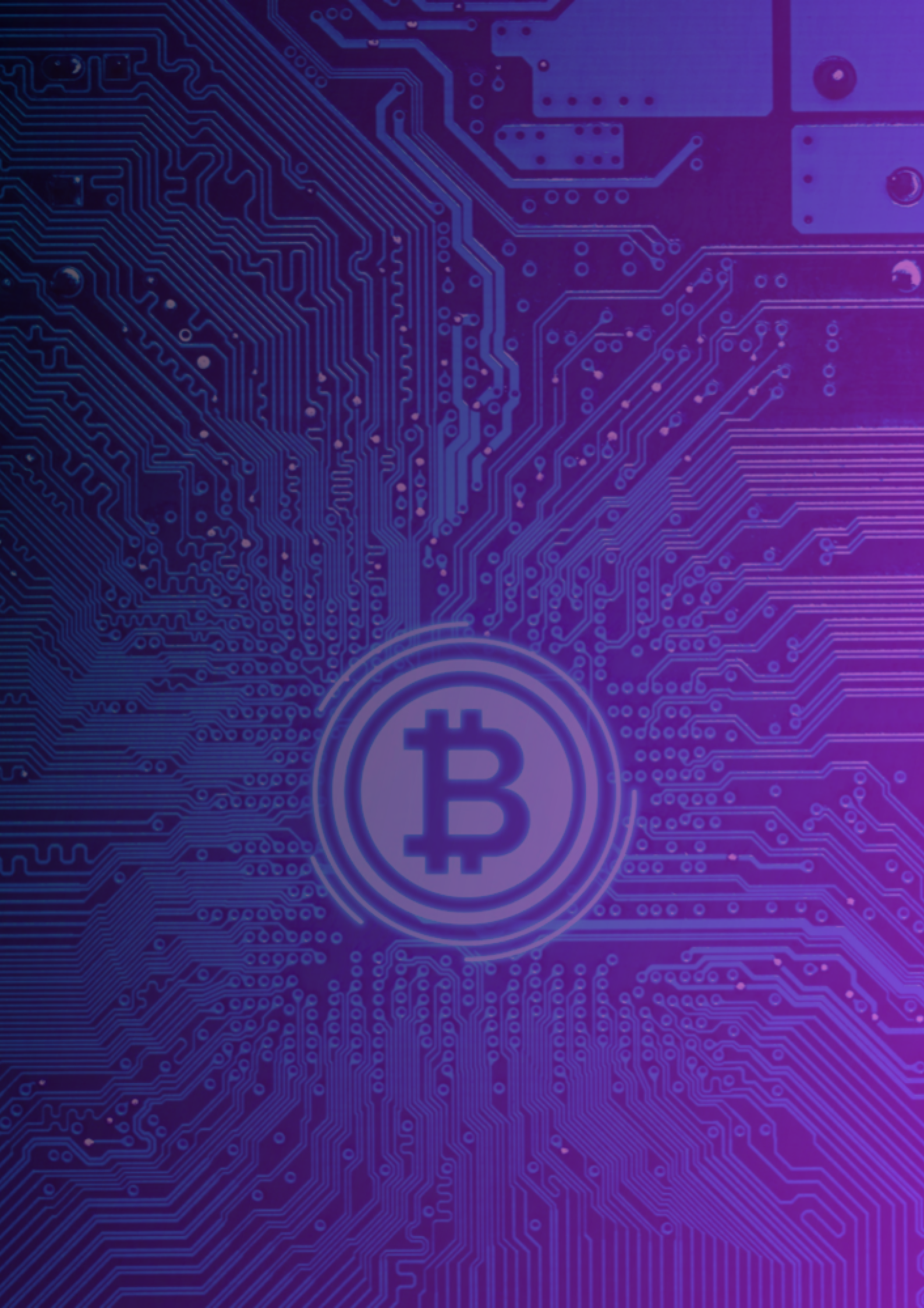


This will act as a reference guide to help industry participants and regulators make informed decisions and navigate the Web3 landscape. This could serve as guidance for requirements, sharing of best practices and providing regulatory support.

D. Partnerships with Academia, Corporates and Government



Such partnerships will be crucial in leveraging individual strengths and bringing at the forefront use cases, nurturing skilled talent, and creating a conducive regulatory environment.



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Source Forge

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