A NEW DIGITAL ORDER – UNVEILING THE INTERPLAY OF LAW & BLOCKCHAIN TECHNOLOGY

(AN ARTICLE SERIES)

PART C | BLOCKCHAIN TECHNOLOGY IN INDIA: USE CASE AND STATE INITIATIVES

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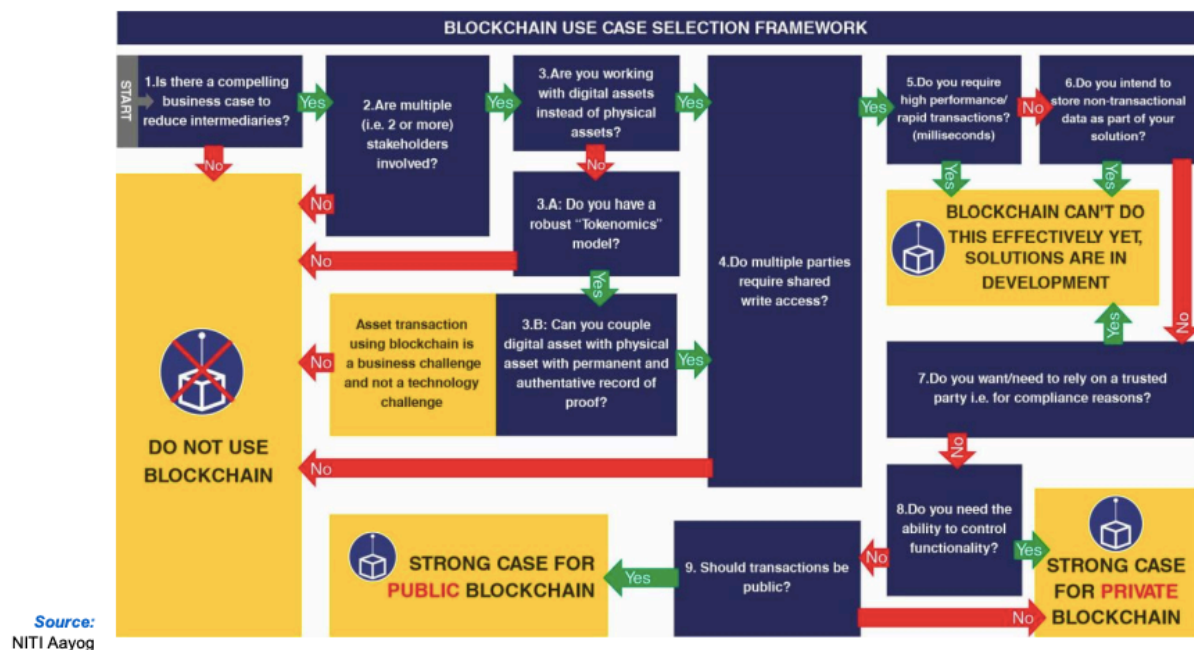
A) Introduction

While blockchain technology fetches its own set of advantages (*as discussed in the previous parts)*, the decentralized nature of the technology renders it a constant source of scuffle against the legal machinery. In this third and final part we seek to encapsulate the various means through which States across India have sought to apply the technology in an attempt to create a cross-section between the technology and various independent sectors with the aim of harnessing the benefits thereof.

B) Blockchain - Use Cases

As discussed in the previous parts of the paper, blockchain technology may be put to use in a variety of sectors. While the most common usage of the technology may be in the domain of crypto-assets at present, however, it is untrue that the technology can only be put to use in the above domain. Continual efforts are on across all levels to utilise the potential of the technology to the utmost extent possible.

Niti Aayog in its January 2020 report titled '*Blockchain: The India Strategy (Part 1)*' sets out a use case selection framework (reproduced below):[1]

Figure 4: *Framework for blockchain use case evaluation*

Discussing the aforesaid framework in the context of legal practice appears to be challenging. In order to enable a closer analysis legal practice needs to be split into transactional/advisory and litigation/dispute resolution. While transactional/advisory related legal services may require a permissioned blockchain, dispute resolution may provide a strong case for use for both private and public blockchain (depending on the nature of the dispute). Presently, platforms such as Kleros and Codelegit are providing blockchain enabled dispute resolution platforms for parties.

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[1] *Blockchain: The India Strategy,* (Feb. 2020), NITI AAYOG, https://niti.gov.in/sites/default/files/2020-01/Blockchain_The_India_Strategy_Part_I.pdf.

Other use cases like voting has gained traction especially on account of platforms like FollowMyVote and BitCongress which are taking the conversations around digitizing voting through blockchains forward. The aim of such a protocol is to ensure that an individual can vote only once and the same has to be recorded on the immutable ledger. The process may prove quite beneficial in cases where postal ballots may be rendered inefficient by corruption charges. However, the utility of blockchain technology may prove lacking because a voting network would have to be extremely fast and efficient to record votes from multiple ballot boxes at the same time.

In India, at the central level corporations like the National Payments Corporation of India (NPCI) has developed 'Vajra', a platform that functions on distributed ledger technology to enable automated payments. The network can only be accessed by entities who have received permission from the administrator. India is also set to release its own National Blockchain Framework with the objective of considering various case-uses of the technology.

In 2017, Bankchain was created to act as a community of banks for exploring, building and implementing blockchain solutions. Presently, Bankchain comprises of 37 member banks with 8 live projects. Few of the Bankchain projects include auction of assets, charge registry, contract authentication, verification & storage, shared KYC and due-diligence and Data marketplaces.

In addition to the above there are several numerous blockchain initiatives, the Schedule sets out an indicative list of blockchain initiatives undertaken by various states in India.[2]

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[2] Several States are not included to indicate absence of any regulations or initiatives taken by them to regulate or employ Blockchain Technology in their jurisdiction.

	STATES	BLOCKCHAIN INITIATIVES[3]	STATUS
1.	Andhra Pradesh	Andhra Pradesh has started a pilot program backed by blockchain technology in two departments and plans to expand it to the entire administration. The State intends to adopt the technology to eliminate tampering with land records.[4] Additionally, the government has partnered up with Zebi data for employment of blockchain in land registry. The government is also partnering with Hitachi to set up an online citizen governance platform.[5] The Andhra Pradesh government has also sought to turn Vishakhapatnam into a full-fledged fintech ecosystem powered by blockchain technology. The initiative named 'FinTech Valley Vizag' will create a blockchain database that seeks to make government data freely accessible to all.[6]	The State has announced the Draft Blockchain Policy.
2.	Assam	The Assam government is collaborating with Nucleus Vision to integrate the technology with governance processes towards the creation of citizen-facing applications.[7] The National Law University and Judicial Academy, Assam along with Infinity Law Tech Educational Services has formed NLUJAA-ILTES Centre for Blockchain Technology and Legal Studies.	The NLUJAA-ILTES Centre for Blockchain Technology and Legal Studies is undertaking research and conducting seminars and personnel training for sensitising government officials and others in the field of blockchain.[8]
3.	Chhattisgarh	The Chhattisgarh Infotech Promotion Society ("**CHIPS**"), an IT nodal agency of the government of Chhattisgarh is taking proactive	CHIPS organised 'Blockchain for e-Governance Grand

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[3] Note: This is not an exhaustive list of initiatives by different states in India.

[4] *Andhra government to adopt blockchain tech to end land record tampering*, (Dec. 15, 2019), The New Indian Express, *https://www.newindianexpress.com/states/andhra-pradesh/2019/dec/15/andhra-government-to-adopt-blockchain-tech-to-end-land-record-tampering-2076359.html.*

[5] NASSCOM and Avasant, *NASSCOM Avasant India Blockchain Report 2019*, (March, 2019), *https://www.nasscom.in/knowledge-center/publications/nasscom-avasant-india-blockchain-report-2019.*

[6] Sharanya Haridas, *This Indian City is embracing Blockchain Technology-Here's why?*, (March 5, 2018, 02:13 AM), Forbes, https://www.forbes.com/sites/outofasia/2018/03/05/this-indian-city-is-embracing-blockchain-technology-heres-why/#1ab1faa18f56.

[7] Supra note 5.

[8] NLUJAA-ILTES Centre for Blockchain Technology and Legal Studies, (April 29, 2020, 11:38 pm), http://nluassam.ac.in/nicblt/index.html.

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		measures in earmarking areas in which blockchain can be employed.	Challenge', where national and international start-ups, companies, and students were encouraged to develop proof-of-concepts (PoCs) in selected 4 domains viz., data exchange management, e-health records, land record management and open innovation.[9] The participants would also be offered an opportunity to collaborate with the State in future projects. The State has also collaborated with NITI Aayog to explore the usage of blockchain technology in governance.[10]
4.	Delhi	Electricity distribution company BSES Rajdhani Power Ltd (**"BRPL"**) has launched consumer-to-consumer (peer-to-peer or P2P) solar power trading on a trial basis.[11]	BRPL has partnered with Power Ledger, an Australian company.
		The New Delhi Municipal Council (NDMC) attempts to track the maintenance and growth of 10,000 tree saplings — of neem, peepal, jamun, tamarind, etc. with the help of blockchain technology and geotagging.[12]	Aiming to implement this at a large scale.[13]
5.	Goa	Government of Goa in collaboration with NITI Aayog, Nucleus Vision and the Government of	It is not clear whether the State is working on a policy or whether it intends to

[9] *Chhattisgarh: Blockchain for e-Governance Grand Challenge*, (April 29, 2020, 12:33 pm), Chhattisgarh Infotech Promotion Society, https://www.chips.gov.in/chhattisgarh-blockchain-e-governance-grand-challenge.

[10] Jane T., *GovBlocks wins the Chhattisgarh "Blockchain for eGovernance Challenge,* (April 29, 2020, 10:33 pm), https://www.linkedin.com/pulse/govblocks-wins-chhattisgarh-blockchain-egovernance-dr-jane-thomason/.

[11] IANS, *BSES Delhi Partners Australian Firm To Launch Blockchain-Based P2P Solar Electricity Trading Platform For Gated Societies*, (November 14, 2019), Swarajya Magazine, https://swarajyamag.com/insta/bses-delhi-partners-australian-firm-to-launch-blockchain-based-p2p-energy-trading-platform-for-gated-societies.

[12] Dipen Pradhan, *Blockchain This Week: West Bengal Districts To Use Blockchain For Issuing Birth Certificates, Chinese City Using It To Track Convicts On Parole, And More*, (Sept. 12, 2018), Inc42, https://inc42.com/buzz/blockchain-this-week-west-bengal-districts-to-use-blockchain-for-issuing-birth-certificates-chinese-city-using-it-to-track-convicts-on-parole-and-more/.

[13] *Bringing blockchain to India's power consumers*, (April 3, 2020), Smart Energy International, https://www.smart-energy.com/industry-sectors/business-finance-regulation/bringing-blockchain-to-indias-power-consumers/.

	STATES	BLOCKCHAIN INITIATIVES[3]	STATUS
		Telangana organised the International Blockchain Congress.[14]	incorporate the technology in its governance.
6.	Haryana	'Apiary' a Centre of Excellence (**"CoE"**) in Blockchain has been established by the Software Technology Parks of India in association with the government of Haryana to provide knowledge and financial support to start-ups with potential cutting-edge information technology especially in the field of blockchain technology.[15]	The CoE has been launched this year at the STPI Incubation Centre in Gurgaon.
		UNDP in collaboration with the Government of Haryana sponsored Blockscale Solutions to build a land registry using blockchain technology for the city of Panchkula.[16]	Pilot project has been completed. Pending with Haryana government for scaling up to larger cities.
7.	Jharkhand	The State government had organised a start-up hackathon based on the theme of innovative citizen centric services using AI/Machine learning and blockchain, with an aim to obtain innovative solutions in the field of governance.[17]	A policy for the present year is yet to be released.
8.	Karnataka	National Informatics Centre (NIC) has set up the Centre of Excellence (CoE) for Blockchain technology in Bangalore.[18] The State has arguably been the most proactive and aggressive to examine the scope of incorporation of blockchain policy in governance.	The State has announced its blockchain policy and it is in the process of incorporating blockchain in governance.

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[14] Goa Startup Mission, https://startup.goa.gov.in/IBC. Also at, *Nucleus Vision, Introducing the International Blockchain Congress in collaboration with NITI AAYOG, Indian State Government of Telangana Goa*, *https://medium.com/@NucleusVision/introducing-the-international-blockchain-congress-in-collaboration-with-the-indian-state-government-2e3f17c0e081.*

[15] *STPI launches Apiary, centre of excellence in Blockchain at its incubation centre in Gurgaon,* (July 20, 2020, 7:54 AM), https://government.economictimes.indiatimes.com/news/technology/stpi-launches-apiary-centre-of-excellence-in-blockchain-at-its-incubation-centre-in-gurugram/77048580.

[16] Anirban Ghosal, *How blockchain could help make Indian land records more reliable*, (May 1, 2018), TECHCIRCLE.IN, https://www.techcircle.in/2018/05/01/how-blockchain-could-help-make-indian-land-records-more-reliable.

[17] *Jharkhand Startup Hackathon 2019*, (April 29, 2020, 10:35 pm), Ministry of Commerce and Industry of India, https://www.startupindia.gov.in/content/sih/en/ams-application/challenge.html?applicationId=5cf0eae2e4b08f8b1a98a879.

[18] Press Information Bureau, Government of India, Ministry of Electronics & IT, *Shri Ravi Shankar Prasad to inaugurate 'Centre of Excellence in Blockchain Technology' in Bengaluru*, (January 17, 2020), *https://pib.gov.in/newsite/PrintRelease.aspx?relid=197477.*

	STATES	BLOCKCHAIN INITIATIVES[3]	STATUS
		The State has also sought to launch an online platform for Intellectual Property, supported by blockchain technology.[19]	
9.	Kerala	The State has established the Kerala Blockchain Academy (KBA) to explore the capacity of the technology to promote Research, Development and Entrepreneurship.[20] The Academy has also partnered with University of Nicosia and Block Co, to launch the Kerala Blockchain Academy Innovation Club.[21] In the year 2018, Kerala State Development and Innovation Strategic Council (K-DISC) had launched Accelerated Blockchain Competency Development (ABCD) program. The graduates of this program were recruited by major IT Firms. [22]	In the next five years, the State plans to make its financial system more efficient and implement pilot government schemes by creating a talent pool of professionals in the area of blockchain.
10.	Madhya Pradesh	The Science and Technology Department of the Madhya Pradesh government has executed a three year-long MoU between MAPIT (Madhya Pradesh Agency for Promotion of Information Technology) and Nasscom as per which the latter will help the Madhya Pradesh government in different sectors. The initiative shall involve digitisation of land records through the usage of emerging technology such as blockchains.[23]	Department of Revenue had in 2018 released an RFP for inviting blockchain firms towards the goal of implementing blockchain technology.[24] The Commissioner of Land Records & Settlement invited blockchain experts / firms to present ways of using blockchain in land records in 2019.[25]

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[19] Debasis Mohapatra, *Karnataka set to unveil India's first platform for intellectual properties,* (Dec. 1, 2018, 23:29 PM), Business Standard, https://www.business-standard.com/article/economy-policy/karnataka-set-to-unveil-india-s-first-platform-for-intellectual-properties-118120100771_1.html.

[20] KERALA BLOCKCHAIN ACADEMY, (May 11, 2020, 11:38 pm), https://kba.ai/.

[21] *IITM-K based Kerala Blockchain Academy to partner with Cyprus Varsity and Start-up,* (Sept. 2, 2019), https://www.edexlive.com/campus/2019/sep/02/iitm-k-based-kerala-blockchain-academy-to-partner-with-cyprus-varsity-and-start-up-7749.html.

[22] *IT Majors Recruit Graduates From K-DISC*, (March 5, 2019), TNN, *https://timesofindia.indiatimes.com/city/thiruvananthapuram/it-majors-recruit-graduates-from-k-disc/articleshow/68261429.cms.*

[23] Vishwas Dass, *Madhya Pradesh to get State Cert agency by first quarter of next FY*, (March 6, 2020), EXPRESS COMPUTER, https://www.expresscomputer.in/news/madhya-pradesh-to-get-state-cert-agency-by-first-quarter-of-next-fy/50344/.

[24] Available at: http://landrecords.mp.gov.in/tender/tender_mpclr_201718_8.pdf.

[25] Available at: http://landrecords.mp.gov.in/tender/Presentation%20Invitation%20for%20Blockchain_v3.pdf.

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11.	Maharashtra	The government of Maharashtra has launched its "Blockchain Sandbox" policy to make e-governance more efficient.[26] As of today, the primary areas of focus for the government of Maharashtra for incorporation of blockchain technology are supply chain management, vehicle management (RTO), health and agriculture.[27] The government has signed an MoU with the Swiss government to share ideas on blockchain technology and its applications.[28]	The State is yet to come out with a blockchain policy.
12.	Manipur	The government of Manipur has signed an MoU with Lynked.World to explore usages of blockchain in various State run systems. [29]	The government of Manipur also organizes training sessions for their employees from time to time. [30]
13.	Odisha	Under the draft Agricultural Policy of Odisha released in 2019, the State government aims to promote the use of IoT (internet of things) sensors to keep a real-time check on the supply and consumption of inputs like seeds, fertilizers and pesticides etc. Similarly, it will initiate measures for setting up technology systems for automated grading and sorting of crops using robotics and machine vision. This will reduce efforts and wastage in the supply chain. In addition, new age technologies like blockchains would be used to support the implementation of contract farming.	The State government will set up a project management unit and data science team for managing the technological operations.[31] In Paddy Procurement Automation System (P-PAS) application of FS&CW department, the government has implemented a private blockchain technology to

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[26] Kritti Bhalla, *Maharashtra Launches Blockchain Sandbox For E-Governance*, (Feb. 8, 2020), inc42.com, https://inc42.com/buzz/maharashtra-launches-blockchain-sandbox-for-e-governance/.

[27] Abhishek Raval, *Maharashtra working on multiple use cases of Blockchain; policy to be out soon*, (March 27, 2020), expresscomputer.in, *https://www.expresscomputer.in/news/maharashtra-working-on-multiple-use-cases-of-blockchain-policy-to-be-out-soon/51504/.*

[28] NASSCOM and Avasant, *NASSCOM Avasant India Blockchain Report 2019*, (March, 2019), *https://www.nasscom.in/knowledge-center/publications/nasscom-avasant-india-blockchain-report-2019.*

[29] Sumedha Bose, *Indian State of Manipur Signs MoU With Lynked.World To Foster Blockchain Developments,* (April 20, 2020, 11:00 pm), BTC WIRES, https://coinspectator.com/news/988202/indian-state-of-manipur-signs-mou-with-lynkedworld-to-foster-blockchain-developments.

[30] *Blockchain Technology Training Programme for Government Officials of Manipur,* (April 30, 2020, 09:37 pm), SOMISH, https://www.somish.com/blockchain-events/blockchain-technology-training-programme-for-government-officials-of-manipur/.

[31] Nirmalya Behera, *Odisha govt to adopt new age technologies to improve farming quality*, (Sept. 5, 2019), BUSINESS STANDARD, https://www.business-standard.com/article/economy-policy/odisha-govt-to-adopt-new-age-technologies-to-improve-farming-quality-119090501232_1.html.

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			validate a farmer ID before payment to the farmer.[32]
14.	Punjab	Implementing blockchain to certify and trace seed potato straight from nucleus to seed level (harvest). This will enable the potato farmers to trace the origin of the seeds. The barcode and QR code will allow the farmers to cross check whether they are buying genuine seeds hailing from Punjab or not.[33] The Punjab Government may soon introduce a special 'IT Cadre' for implementation of its e-Governance initiative as part of the 'Digital Punjab' mission[34] (which will also include blockchain).	Punjab Agri Export Corporation (PAGREXCO) will deploy blockchain technology with the help of technology partner Cropin Technology Solutions — a Bengaluru-based company.
15.	Rajasthan	Implementation of blockchain for land records. This will help create an immutable digital record of transactions.[35] The State has already successfully launched EHR (Electronic Health Record) using blockchain technology with the help of Mumbai based Auxesis group.[36]	The Rajasthan Urban Land (Certification of Titles) Act passed in April 2016 makes the State government, a guarantor for land titles in Rajasthan. The guarantee is subject to certification by the Urban Land Title Certification Authority, which will verify ownership of any property at a nominal fee.
16.	Sikkim	The State Bank of Sikkim being an autonomous body vide Article 371-F of the Constitution of India, is not bound by the RBI's directive banning cryptocurrency. Therefore, post the directive the same was seen as a paradise for traders in cryptocurrency.[37]	

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[32] Vishwas Dass, *Odisha: At the cusp of an e-Gov revolution*, (Feb. 18, 2020), EXPRESS COMPUTER, https://www.expresscomputer.in/egov-watch/odisha-at-the-cusp-of-an-e-gov-revolution/49214/.

[33] Vijay C Roy, *Now, check authenticity of organic products in Punjab*, (Feb. 22, 2020), THE TRIBUNE, https://www.tribuneindia.com/news/business/now-check-authenticity-of-organic-products-in-punjab-45568.

[34] IANS, *Amarinder's push for Digital Punjab Mission*, (Sept. 16, 2019), ECONOMIC TIMES, https://government.economictimes.indiatimes.com/news/digital-india/amarinders-push-for-digital-punjab-mission/71149738.

[35] Rahul Matthan, *Blockchain Governance*, (JULY 13, 2016), LIVE MINT, https://www.livemint.com/Opinion/7WB68uUCDoFAvYCTCcWDTP/Blockchain-governance.html.

[36] Abhishek Raval, *Rajasthan leads India's first government Blockchain implementation*, (July 25, 2018), EXPRESS COMPUTER, https://www.expresscomputer.in/news/rajasthan-leads-indias-first-government-blockchain-implementation/24028/.

[37] Nupur Anand, *India's crypto traders may have discovered a way around the RBI's ban*, (June 15, 2018), QUARTZ INDIA, https://qz.com/india/1305515/indias-bitcoin-traders-could-use-state-bank-of-sikkim-to-skirt-rbis-cryptocurrency-ban/.

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17.	Tamil Nadu	Tamil Nadu has adopted Blockchain-as-a-Service model, wherein the departments will not have separate nodes.[38] The Government has established a Centre of Excellence (CoE) in the Tamil Nadu e-Governance Department. The Government has signed an MoU with IIT Chennai to explore blockchain applicability in different use cases.[39]	The State Government aims to setup and maintain a State-wide blockchain infrastructure that can be leveraged by all Government departments, which is named Nambikkai Inaiyam (NI) which roughly translates to 'Trust Link'.
18.	Telangana	The Government of Telangana has issued a Draft Blockchain Policy and set up a blockchain district in Hyderabad.[40] The State has also established a blockchain incubator for training of blockchain start-ups [41] and is allocating land at subsidised rates and granting funds for research on blockchain technology.[42] The State has tied up with the Centre for Development of Advanced Computing to integrate the technology within the State revenue department and for land registration.[43] The Government has signed an MoU with Tech Mahindra and is collaborating with IIIT Hyderabad and C-DAC to build a State-level blockchain platform. It is also collaborating with NITI Aayog for Blockchain in governance.[44]	The Government has issued its Draft Blockchain Policy in May of 2019.

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[38] Abhishek Raval. *Tamil Nadu implements blockchain for operational efficiency,* (Feb. 28, 2020), Express Computers, https://www.expresscomputer.in/blockchain/tamil-nadu-implements-blockchain-for-operational-efficiency/49855/#:~:text=Tamil%20Nadu%20has%20adopted%20Blockchain,or%20experimentations%20have%20been%20done..

[39] NASSCOM and Avasant, *NASSCOM Avasant India Blockchain Report 2019*, (March, 2019), *https://www.nasscom.in/knowledge-center/publications/nasscom-avasant-india-blockchain-report-2019.*

[40] ITE&C Department, Government of Telengana, Draft Blockchain Policy, May 17, 2019, https://it.telangana.gov.in/wp-content/uploads/2019/05/Telangana-Blockchain-Policy-Draft-May-2019.pdf.

[41] *Telangana to set up blockchain incubator soon*, (February 3, 2020), Telengana Today, https://telanganatoday.com/telangana-to-set-up-blockchain-incubator-soon.

[42] *Telangana to have India's first blockchain district; woos firms with incentives*, (May 26, 2019), PTI, https://www.livemint.com/technology/tech-news/telangana-to-have-india-s-first-blockchain-district-woos-firms-with-incentives-1558862756949.html.

[43] Mugdha Variyar, Varsha Bansal, *Blockchain tech is joining e-gov dots in AP, Telangana,* (June 27, 2017, 12:59 PM), THE ECONOMIC TIMES, https://economictimes.indiatimes.com/small-biz/security-tech/technology/blockchain-tech-is-joining-e-gov-dots-in-ap-telangana/articleshow/59330625.cms?from=mdr.
44 NASSCOM and Avasant, *NASSCOM Avasant India Blockchain Report 2019*, (March, 2019), https://www.nasscom.in/knowledge-center/publications/nasscom-avasant-india-blockchain-report-2019.

	STATES	BLOCKCHAIN INITIATIVES[3]	STATUS
		The Telangana government is working in collaboration with Tech Mahindra in order to track the supply of medicines, sanitisers and masks to containment zones and ensuring that the same are infection-free.[45]	
19.	Uttar Pradesh	One of the first States in India to launch blockchain-enabled solar power trading. The pilot project (to be undertaken on few government buildings in Lucknow) will test the feasibility of energy trading through blockchain from rooftops with solar power to neighbouring households and buildings.[46] The State also seeks to apply blockchain technology for ensuring data security of land and revenue records. Blockchain system will also facilitate online mutation, registration and verification of such records, apart from preventing forgery and tampering.[47]	Uttar Pradesh Power Corporation and Uttar Pradesh New and Renewable Energy Development Agency – will host the first pilot project. This will be implemented by an Australian company PowerLedger in partnership with India Smart Grid Forum (ISGF), a public private partnership initiative of the power ministry.
20.	West Bengal	The municipal corporations of Bankura and Durgapur districts in the State of West Bengal have partnered with the Netherlands-based company Lynked.World to build a blockchain based platform for issuing birth certificates. Apart from the above the exercise also intends to cover sectors like land registrations, duty payments, record management, cyber security and data management.[48] The West Bengal Government is developing a State excise supply chain system (eAbgari) to employ blockchain technology for preventing	The first blockchain based birth certificate was presented to a boy by the New Town Kolkata Development Authority.[51]

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[45] Sruti Venugopal, *Telangana with TechM uses Blockchain Technology to break virus chain,* (June 25, 2020, 3:26 PM), Telangana Today, https://telanganatoday.com/telangana-with-techm-uses-blockchain-technology-to-break-virus-chain.

[46] *Uttar Pradesh to become first state to launch blockchain-enabled solar power trading*, (November 29, 2019), ET ENERGYWORLD.COM, https://energy.economictimes.indiatimes.com/news/renewable/uttar-pradesh-to-become-first-state-to-launch-blockchain-enabled-solar-power-trading/72291409.

[47] Virendra Singh Rawat, *Yogi Adityanath govt to build blockchain architecture for data security*, BUSINESS STANDARD, (July 22, 2018), https://www.business-standard.com/article/economy-policy/yogi-adityanath-govt-to-build-blockchain-architecture-for-data-security-118072200331_1.html.

[48] NASSCOM Avasant India Blockchain Report, Executive Summary, Page 14 (2019).

[51] Anirban Ghoshal, *Municipal Corporation in Bengal is now issuing blockchain based birth certificates,* (Dec. 20, 2018), https://www.techcircle.in/2018/12/20/municipal-corporation-in-bengal-is-now-issuing-blockchain-based-birth-certificates.

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		loss of revenues and eliminating counterfeiting blends in the supply chain of packaged liquor.[49]	
		The State has also tied up with the Indian Statistical Institute to establish a Centre for Excellence in blockchain.[50]	

C) Conclusion

Blockchain as a technology, with the onset of time, is being developed in a way so as to capture the attention of legislators and governments across the globe with each hoping to harness the capabilities of the technology and regulate it at the same time. While efforts are on at all sectors, reaching a stage where we are able to exploit the technology at its fullest may take quite some time.

It is also important that legislators continue to devise ways through which the legislative machinery can be modified in a manner so as to accommodate the intricacies of the technology. This will allow innovators and start-ups to exploit the technology towards testing it against distinct case-uses.

-    11 August 2020

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[49] *State excise supply chain*, (Apr. 29, 2020, 11:35 pm), National Informatics Centre, https://blockchain.gov.in/state-excise.html.

[50] *West Bengal to tie up with ISI for blockchain unit,* (Dec. 19, 2018, 7:59 AM), TIMES OF INDIA, https://timesofindia.indiatimes.com/city/kolkata/state-to-tie-up-with-isi-for-blockchain-unit/articleshow/67152330.cms.