BLOCKCHAIN POLICY

ITE&C DEPARTMENT, GOVT. OF TELANGANA

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1 Preface

Technology presents evolving challenges and generates new solutions. Blockchain is seen as a technology with a potential to disrupt almost all industries and economies. Blockchain technology offers a decentralized, secure, and efficient way to manage transactions across multiple parties in a business network. Developers, companies, and governments recognize the potential and have already started coming up with many use cases of implementation.

It is estimated that Blockchain in 2030 could generate $3 trillion/year in business value [1]. It is possible to imagine blockchain powering 10-20% of our global economic infrastructure by then. The 'World Economic Forum' anticipates that 10% of global GDP will be stored on the blockchain by 2025. Use cases of this technology may be different but what remains unchanged are the benefits derived from using the technology as it provides solution to the commonly faced problems today in terms of transparency, immutability, redundancy and security of data and systems.

Apart from Financial Services, Capital Markets, Insurance, Government, Health, Education and a host of other consumer services are making significant investments in research and development to see how they can harness blockchain.

As the industries across embark upon the journey of adoption of blockchain technology, Government will have a crucial role to play. Government is seen as a facilitator for providing a conducive environment to the industry players through much needed interventions on regulatory reforms, skill and capacity building, standardization, interoperability, infrastructure and security measures. An Industry-Government collaboration is critical to ensure that a conducive environment is created for the technology to mature.

Hyderabad, the capital city of Telangana is uniquely positioned to take a leadership role in the development of blockchain technology due to the critical mass of industries leveraging blockchain technology located in Hyderabad (financial services, insurance, pharmaceuticals and life sciences, supply chain and logistics etc.), access to talent, support of entrepreneurship, and collaboration with enterprises

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[1] Report by Gartner

2 Vision

In line with its vision to be a leader in emerging technologies, the government of Telangana has taken up several initiatives to develop a conducive ecosystem for the industry in the State. Realizing the potential of Blockchain technology, the government in consultation with the industry is working towards making Hyderabad an active hub in this technology and the State envisions:

To make Hyderabad as one of the top 10 Blockchain Cities of the world

Taking a giant leap in this direction, the Government of Telangana has conceptualized India's first *'Blockchain District'* which will be a physical area within Hyderabad and will aim to create the world's best blockchain technology ecosystem. The Blockchain District will house all major blockchain technology companies, will have a huge incubator and a world-class facility for promoting research, innovation and industry collaboration. This one of its kind initiatives will aim to put all blockchain companies based out of Hyderabad at a strategically advantageous position globally.

While the Blockchain District acts as an anchor around which the blockchain ecosystem will develop, this policy sets the strategic direction and is based around four main pillars:

Developing Talent Pool

Supporting Infrastructure

Promoting Research and Innovation

Enabling Collaboration and Building Community

3 Key Pillars

3.1 Developing Talent Pool

The cost of talent is the largest expense for most technology firms, and the quality of talent is becoming one of the most important differentiators. With a long-term talent-supply focus, the State will facilitate introduction of formal education and certification programs to meet the growing demand for skilled resources as the blockchain technology adoption matures. Special programs will be created, and initiatives will be taken to build the talent pool in Telangana:

1. Telangana will provide institutional support through Telangana Academy for Skill and Knowledge (TASK) to deliver blockchain courses to engineering students in the state. These courses will be designed in partnership with some of the most trusted names in the blockchain industry.

2. One of the most important focus areas is re-skilling and up-skilling of the existing workforce for the future demand. There are many blockchain certification programs that have sprung up and it is becoming increasingly difficult for the developers to choose the right and credible program. The government will partner with industry to establish a training and certification agency in the state.

3. An elite certification program will be designed to a select few techies with stringent screening tests. This program will be run in collaboration with the industry players with placement prospects. The professionals graduating out of this program would go on to become the most sought after blockchain developers in the industry.

4. The State will encourage its industry partners to offer internships to students who may secure a pre-placement offer at the end of the internship.

5. The State will encourage technology institutions in Telangana to add blockchain in their curriculum and provide option for their students to undergo certificate programs in blockchain technology from TSB or from premier institutes in Telangana

6. Public enterprises and government agencies will encourage their employees or professionals to undergo workshops launched in blockchain technology to facilitate better adoption within government.

7. Government shall partner with blockchain protocol ecosystem players to facilitate educational workshops and conferences that will allow practitioners and experts to provide specific insight and illustrate practical application and foster innovation through hackathons, national challenges, boot camps, and accelerators.

3.2 Supporting Infrastructure

Blockchain, like other emerging technologies, is going through phases of exploration, pilot tests, early adoption and finally implementation to reap the intended value. Companies and innovators take a cautious approach towards making significant capex investment that may be needed before the technology adoption starts making commercial promise. The aggregation of interested stakeholders for shared usage of required infrastructure for testing, develop and initial deployment of blockchain solutions is one way of optimizing the cost while paving the way for continuous research and development.

Government of Telangana will support the use of shared infrastructure, both IT as well as physical, to encourage research, prototyping and development of blockchain solutions in the state. Telangana State will work towards creation of shared infrastructure facilities which can be utilized by start-ups, industry, communities and academia either at nominal cost or free of cost. The State would take up some specific steps in this direction, as detailed below:

1. The government will provide office space to house all the blockchain start-ups, co-working and incubation spaces at highly subsidized prices

2. To foster innovation in Blockchain technology, a sandbox for prominent blockchain protocols will be created that will allow simulation and prototyping of solutions. This sandbox will provide safe environment, within controlled boundaries, for businesses to test, develop and provide innovative Blockchain products and services.

3. An international liaison office of the Blockchain district will created to collaborate with international players to bring in investments and for exchange of knowledge and practices.

4. IT infrastructure facility for provision of cloud hosted computing and storage through T-Cloud will be extended at subsidized rates thus allowing for a future vision of Blockchain as a Service provided by the Blockchain District.

3.3 Promoting Research and Innovation

1. The Blockchain District will provide a platform for Academic institutions and Industry to come together and provide students hands-on industry experience through internships on the real-life implementation and problem solving around the technology. Universities and technical institutions of Telangana will be promoted and encouraged to build partnerships with the technology companies to undertake research in this technology and build solutions and skills supporting the future initiatives of the private and public sector.

2. The innovation ecosystem will only flourish when there exists a continuous flow of ideas. To ensure the development of research and innovation, the state will encourage immigration of talent to the state:

   o The state will collaborate with corporates to start the research fellowship that would sponsor researchers in blockchain technology to undertake research in Telangana.

   o The international liaison office of the Blockchain district will collaborate with international start-ups/companies and encourage such companies to open their offices in the state.

3. Research, innovation and prototype development shall be promoted in innovative solutions in blockchain design and developing of Cryptographic Algorithms and Security Protocols.

4. Government will facilitate partnership of select industry players with Blockchain District to set-up incubators or accelerators to promote innovation in the blockchain technology. Telangana shall support select incubators and accelerators with specific packages/support depending on the strategic value of the product or solution.

5. Government will fund research programs in blockchain technology by setting up a research chairs in select premier institutes and fund research scholars working in the domain.

6. For researchers in Telangana who get recognition for their blockchain research at several important international platforms will be facilitated at the flagship annual blockchain event. They will also stand an opportunity to win an all-expense paid trip to one of the major Blockchain academic conferences around the world.

7. Government, in partnership with the industry and academia will organize an annual academic conference for all Blockchain researchers in the state to showcase their work.

3.4 Enabling Collaboration and Building Community

We believe that enabling collaboration and building community are very critical to tap the potential capabilities of the growing blockchain industry. Telangana government regards its role in the development of the blockchain ecosystem as one which supports the distinct needs of the respective stakeholders: entrepreneurs, capital providers, developers, governments, and academics. To accomplish this mission, there are various initiatives that the government will take up:

1. Since cryptocurrencies' popularity overshadows that of blockchain's, many people still tend to confuse between the two. Because the blockchain technology is still new, there's a lack of general awareness within the larger developer community. The government will run strategically designed awareness program to tackle this challenge. The government will run these programs in collaboration with the industry associations.

2. Developer communities played a major role in flourishment of several technology domains such as ERP, CRM, ITSM etc. Government recognizes that establishment of such communities play a pivotal role for technologies like Blockchain as well. And hence, government plans to provide blockchain communities with necessary infrastructure and sponsorship for meetups/gatherings/events. The government will also encourage new and upcoming blockchain communities by providing appropriate support.

3. For Telangana to be known globally as the blockchain hub, it is imperative that all the great work that is being done within the state gets noticed internationally. The government plans to partner with blockchain start-ups/companies to create compelling success stories on all the relevant public/private projects within the state and showcase them in global blockchain conferences/events.

4. The government will organize an annual event every year with the aim of making it the most sought after blockchain gathering in the world, thus establishing Telangana as the blockchain capital.

5. The government will launch a virtual community for all the relevant stakeholders in the blockchain ecosystem viz. industry, governments, start-ups, investors, developers, and academia. Companies can post requirements; job postings and the developers/start-ups can connect directly on this virtual community. It will also act as a common platform for everyone to interact, discuss ideas, seek inputs and collaborate on various initiatives.

6. State will actively pursue membership with industry organizations and blockchain consortiums at national and international levels. The access to current market knowledge and highly regarded subject matter experts, which these industry organizations and consortium memberships provide, will ensure the State is highly informed and well positioned to execute its policy.

7. Government shall utilise the industry relationships to conduct seminars, workshops and lectures by renowned industry leaders and technologists in this area to mentor start-ups and talent pool. Moreover, the government will help in the formulation of 'symbiotic clusters' of blockchain innovation by connecting start-ups, who can provide the technology research, with established firms to supply developed applications at lower costs.
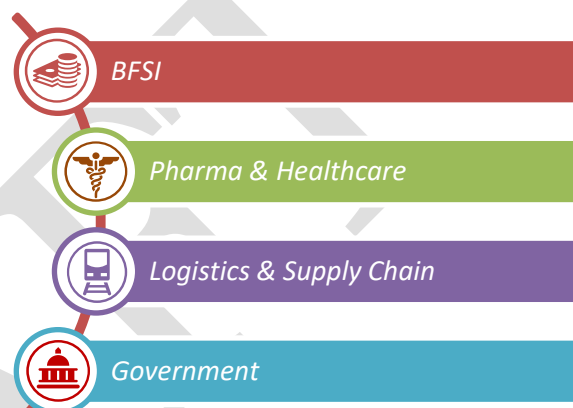
4 Focus Areas of the State

While digital currencies are initial users of Blockchain technology, application of the technology is catching up fast in sectors such as Banking, Manufacturing, Financial Services, Insurance, Healthcare and others. The Telangana State will have a focussed approach to harness sector specific opportunities and deal with the underlying hurdles in partnership with the industry.

1. Industry sectors will have varied scope for adoption and scaling up of Blockchain technology. Further, each sector will be at different levels of learning curve for the technology. In view of this, Telangana State will take up a tailored approach based on potential and maturity of the specific industry.

2. While Telangana State will remain committed to promote the technology adoption across all sectors, it will have a dedicated focus for selected ones to start with. The following sectors have been identified as high potential sectors of Blockchain adoption:

   ➲ Banking, financial services and insurance (BFSI)
   ➲ Pharmaceuticals & Healthcare
   ➲ Government departments & Institutions
   ➲ Logistics & Supply Chain

3. The state will work closely with the stakeholders in the chosen sectors with a clear four-point agenda as under –

   ➲ Formation of focus group, consortium to bring together the industry players (national and international) having common objective of promoting adoption of blockchain technology within the sector worldwide.
   ➲ Shaping up a conducive regulatory framework in tune with the sector need
   ➲ Encourage the developers, researchers, start-up community in the state to work closely on sector specific solutions and use cases. This is aimed to bring down the cost of research, prototyping, development in the evolutionary stages while expediting the adoption of technology within the sector.
   ➲ Support creation of local talent pool in keeping with unique demand of the sector

4. State will support representation of the industry consortium at various national and international forums in addition to its larger network of researchers, entrepreneurs, start-ups, professional and developer communities that will form part of the Blockchain district.

5. The State has been at the forefront in piloting or implementing various use cases in securing certificates, land records and microfinance area. New use cases will be identified in areas such as voting, financial transactions between the government agencies and citizen or contractors, supply chain visibility in agriculture and citizen registration that can have high impact on some of the systemic problems faced. Government of Telangana will continue to work closely with the Line Departments to identify new projects and use cases leveraging Blockchain technology.

5 Incentives

Government of Telangana provides fiscal and non-fiscal resources such as access to investments, subsidies, tax credits or exemptions, state-of-the art infrastructure facilities, technical institutions and universities for the Enterprises, SMEs and start-up firms that invest efforts in research and innovation in emerging technologies. Relevant incentives mentioned in the GO on Incentives for Expansion of IT/ITeS 2016 shall be applicable for Blockchain technology firms. In addition to the incentives mentioned in the IT/ITeS and Innovation Policy, the following incentives shall be provided to companies developing blockchain products and delivering blockchain services:

5.1 Incentives to Enterprises

1. 25% subsidy on lease rentals up to INR 5,00,000 per annum for the first 3 years of operations

2. 50% subsidy on the exhibition rentals for the SMEs (firms operating out of Telangana) participating in national or international exhibitions limited to 9 Sq. mts of space

3. A tailor-made incentive package will be provided for mega blockchain projects or marquee blockchain companies.

4. Land will be allotted at subsidized rates to blockchain companies by Telangana State Industrial Infrastructure Corporation Limited, the guidelines specified for regular ICT companies in terms of annual revenue, investment promises, employment creation promises will be partially relaxed for blockchain firms.

5. For all the research projects sponsored by companies in technical universities, an equal amount of investment will be made by the govt. for up to INR 5 Lakhs per year for next three years

5.2 Incentives to Start-ups

1. 100% reimbursement of State Goods and Services Tax (SGST) for a period of three years to start-ups with revenues less than INR 5 Crores

2. 75% reimbursement for travel and ticket costs for selected Blockchain conferences across the globe subject to a maximum of INR 2 Lakhs per year per start-up in the first 2 years of operation for selected start-ups

3. R&D grant up to 10% of the R&D expenses or up to 2% of the annual turnover whichever is lesser to the start-ups innovating in blockchain technology in Telangana

4. One-time start-up grant of INR 10 Lakhs will be provided to a maximum of 10 blockchain start-ups per year for the next three years. These selected start-ups will be mentored by industry partners of the Blockchain District

5. To better support innovation in this technology, further incentives in the areas of Patent Filing and Quality Certification will be made available:
    a. Assistance in Patent Filing – Reimbursement of 50% of the cost of filing patents, subject to a maximum of INR 5 Lakhs.
    b. Costs for Quality Certifications – 50% subsidy on the expenses incurred for quality certification limited to a maximum of INR 5 Lakhs

6. 25% reimbursement on internet charges up to a maximum of INR 2.5 Lakhs per year for the first 3 years

5.3 Incentives to Other Entities

1. Any organization conducting a blockchain related conference/event can approach the Government to seek sponsorship support. The Government will offer a sponsorship of INR 1-25 Lakhs based on the scale, quality, and uniqueness of the event
2. All Blockchain related communities in Hyderabad will be provided venues for meetups, gatherings, and small-scale events at no or subsidized cost

5.4 Non-Financial Incentives

By virtue of working in the technology, the blockchain product firms, considered as IT units below ICT industry incentives, are automatically applicable to blockchain firms operating out of Telangana.

1. Firms are exempt from the purview of The Pollution Control Act, except in respect of IT Parks/IT SEZ campuses with built up areas more than 20,000 sq. mt.

2. Firms are exempt from inspections under Acts and the Rules framed thereunder, barring inspections arising out of complaints. The firms are permitted to self-certificates in the prescribed formats.

    a. The factories Act 1948
    b. The Maternity Benefit Act 1961
    c. The Telangana Shops and Establishment Act 1988
    d. The Contract Labour Act (Regulation & Abolition) Act 1970
    e. The Payment of Wages Act 1936
    f. The Minimum Wages Act 1948
    g. The Employee Exchanges (Compulsory Notification of Vacancies) Act 1959

3. General permission will be provided for three shift operations with women working in the night as these firms provide services to global customers

4. Firms services will be declared as essential services under Telangana State Essential Services Maintenance Act