

KEY RECOMMENDATIONS

- REC VI.1.** Consider establishing a Blockchain Innovation Zone to incentivize and provide safe harbor to blockchain companies working to solve California's most pressing problems.
- REC VI.2.** Promote collaboration through:
- i. Creating a multi-stakeholder governance model for regulating blockchain technologies that would include government regulatory agencies, consumer advocacy groups and other industry stakeholders.
 - ii. Creating a resource for best practices to be shared and co-created among businesses of various sizes and types.
- REC VI.3.** Create a unit within the California Department of Technology to monitor developments in the blockchain industry. Possible responsibilities for this unit include:
- i. Monitoring and reporting any consumer protection issues,
 - ii. Train the IT workforce within government agencies.
 - iii. Working with the state legislature and local governments to create flexible and adaptive regulations.
 - iv. Attending or hosting conferences to encourage responsible blockchain business development in California.
 - v. Arranging community education programs to teach more Californians about consumer protective measures related to blockchain and ensure that our laws are adaptive to changes in the industry.
- REC VI.4.** **Blockchain definition.** Legislature to adopt an accurate, concise definition of blockchain, such as that proposed in this report. With this agreement, policymakers can turn to two questions: 1) How can blockchain be used to increase efficiency? and 2) What changes to state laws and regulations will be needed to implement the new technology?
- REC VI.5.** **Neutral terminology.** Adopt technology-neutral terminology to expand use cases for blockchain.

INTRODUCTION

Blockchain technology offers decentralization, immutability, interoperability, security, transparency, and financial innovation to the economy and other fields. Over the next decade, blockchain technology may be integrated within many industries to enhance trust, safety, health, and efficiency in sectors such as healthcare, real estate, finance, data, energy, trade, and government. Blockchain technology is projected to have a value of \$176 billion by 2025,¹ and 10 percent of global GDP is projected to be stored on blockchain ledgers by 2027.²

California is home to nearly 600 blockchain companies, around 6 percent of the global blockchain market,³ less than the 20 percent California typically commands for most technology fields, given Silicon Valley's prominence in the State. Blockchain companies face regulatory uncertainty and lack safe harbors granted to other emerging industries. At the same time, such companies must comply with regulations established by Federal agencies including the SEC, the CFTC, and the IRS.⁴

The vast majority of blockchain businesses in California are small businesses and startups. Nearly two-thirds of the companies have 10 or fewer employees. California can add value to this market by supporting blockchain entrepreneurs with 1) blockchain-centered incentives; 2) greater regulatory certainty; and 3) opportunities to establish digital asset banking.

Blockchain Innovation Zone

California should consider creating a Blockchain Innovation Zone in which

¹ConsenSys, "Gartner: Blockchain Will Deliver \$3.1 Trillion Dollars in Value by 2030." <https://media.consensys.net/gartner-blockchain-will-deliver-3-1-trillion-dollars-in-value-by-2030-d32b79c4c560>

²McKinsey Digital, "Blockchain beyond the hype: What is the Strategic Business Value?" <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/blockchain-beyond-the-hype-what-is-the-strategic-business-value>

³ "California Blockchain Companies," Crunchbase https://www.crunchbase.com/search/organization.companies/field/hubs/org_num/california-blockchain-companies

⁴"Crypto Asset Market Coverage", Report by Satis Group https://research.bloomberg.com/pub/res/d2gg3p_HTg39HRCuzQjlyy8NVZQ

qualifying companies receive incentives and resources. The incentives program should be tied to achieving state economic development benchmarks over the next decade, and only those companies working toward those goals (although not necessarily their only line of business) should be granted such incentives.

The State could consider offering qualifying blockchain companies legal exemptions currently lacking at the Federal level but have been adopted in other states including Arizona, Colorado, and Wyoming. The state could also offer grants, loans, and tax credits for blockchain startups working to serve key industries.

To qualify, blockchain companies should target sectors affecting California industries. This incentive package would reduce expenses for early-stage, cash-strapped companies looking to help California meet its policy and economic goals.

- A. Public-Private Partnerships.** Expand the state's use of public-private partnerships, and sponsor pilot projects.
- B. Money Transmitter License.** Consider amending current regulations regarding requirements for obtaining a money transmission license to accommodate cryptocurrency companies.
- C. Decentralized Autonomous Organizations.** A cornerstone of blockchain companies is the Decentralized Autonomous Organization (DAO). DAOs are a collection of smart-contract automated agreements and business processes which guide the governance of many blockchain businesses. Participation in the DAO may require operating the blockchain's code ("proof of work") or obtaining and assigning the native-network asset ("proof of stake"). DAOs might be considered an advancement of co-ops with bylaws written in computer code. DAOs can serve the same purpose as co-ops while removing many of the administrative frictions. For DAOs working toward the public good, California could provide protections like those created for non-governmental organizations (NGOs) or offer legal standing as a California Benefit Corporation.⁵ This potential framework merits further study and analysis.
- D. Facilitate blockchain-enabled municipal finance.** (See also discussion in Chapter V.) Municipal finance is about to face its biggest challenge in

⁵ California Corp Code Div. 1.5 "Social Purpose Corporations Act"
https://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=CORP&division=&title=1.&part=&chapter=&article=

over a century with depressed revenues and likely continued need for social distancing, making paper-based approaches very difficult. The current proposal from the Federal Reserve to expand its plans to buy municipal bonds under emergency powers currently limits this option for counties with fewer than two million people or cities with fewer than one million residents. Such municipalities are raising their concerns, but States may be faced with needing to establish new arrangements to enable smaller entities to effectively raise financing. This is just one of the challenges that smaller municipalities will face in the coming months and years.⁶ By expressly supporting the adoption of blockchain-based digital municipal bond issuance programs, the State can help address issues that will arise with municipal finance as well as support enterprise-class adoption of blockchain technology. A starting point would be to adopt legislation similar to Wyoming's, expressly allowing bonds issued by municipalities to be digital securities.⁷

Regulatory Clarity

A cornerstone of business success is clarity of the regulatory regime. Cryptocurrency is defined in five ways at the federal level: securities (SEC); commodities (CFTC); currency (Treasury); property (IRS); and money transmission (FinCEN). The latter is a particular thorn; in addition to obtaining necessary federal Money Service Business licenses, companies wishing to engage U.S. customers must comply with individual licensing requirements in all 50 states and then must also apply for BitLicenses in states such as New York and Washington.

California can improve the blockchain business climate by adopting a common legal definition of blockchain and clarifying key regulations. California could follow the lead of other states such as Arizona, Colorado and Wyoming and countries such as Singapore, Germany and Switzerland: define digital assets based on their function and regulate them separately. California could create three categories: i) payment, ii) consumptive/utility tokens, and iii) asset tokens, and exempt consumptive or utility tokens from state securities laws. The state should further research and explore these possibilities.

WORKING WITH CONSUMER ADVOCATES AND OTHER STAKEHOLDERS

⁶ Smiaek, Jeanna " Fed Gearing Up to Help Smaller Local Governments"

<https://www.nytimes.com/2020/04/20/business/economy/fed-local-governments-coronavirus.html>

⁷ State of Wyoming Legislation 2020 <https://wyoleg.gov/Legislation/2020/HB0020>.

INTRODUCTION

The need for regulators and advocates to work together on blockchain policy is clear. As a complex emerging technology, blockchain requires collaboration between subject matter experts and regulatory agencies to ensure that proposed regulations are proportional to the issue being addressed. While there is inherent risk in allowing stakeholders with business-fueled incentives to influence policy, a degree of inclusion is necessary to develop balanced regulation that addresses the true demands. Regulators will need to develop expertise they currently lack regarding cryptocurrency to effectively regulate it, and do so through a process that allows them to make independent and objective decisions.

Consider the New York State BitLicense. The designer of the virtual currency licensing framework indicated on numerous occasions that BitLicense was largely a response to the Mt. Gox cryptocurrency exchange hack.⁸ Although well-intentioned, the regulatory framework was prohibitively expensive for many smaller cryptocurrency businesses, and ultimately drove cryptocurrency business out of the state.⁹ The complexity of cryptocurrency necessitates increased collaboration between industry experts who understand and have experience with real-world use cases and the regulators creating and enforcing licenses and other frameworks while ensuring that consumers' and investors' interests are adequately protected. The end goal is creating regulatory policy that protects consumers, provides businesses with legal certainty, and does not compromise the core concepts of a decentralized blockchain system.

Technical limitations also apply to policy and regulation to address blockchain. Because of the dynamic and rapidly changing nature of blockchain technologies, regulators alone are ill-prepared to execute regulatory functions on their own. Rather, continual collaboration between industry stakeholders and advocates is needed to effectively create, enforce and update regulations on blockchain.

From a paper in the Stanford Journal of Blockchain Law and Policy: “Especially because code embedded in a blockchain system could determine the level of

⁸ https://www.reddit.com/r/Bitcoin/comments/2aycxs/hi_this_is_ben_lawsky_at_nydfs_here_are_the/

⁹ <https://www.bizjournals.com/newyork/news/2015/08/12/the-great-bitcoin-exodus-has-totally-changed-new.html>

oversight on the activities within a blockchain-based financial ecosystem, regulators should consider ways to cooperate with engineering communities developing code despite often disparate incentives and mindsets."¹⁰

Impediments to Collaboration among Regulators, Consumer Advocates and Stakeholders

One of the biggest roadblocks to regulators working together with advocates and stakeholders is the lack of open communication. While regulators are consistently becoming more technologically literate, agencies may not have sufficient resources to become subject-matter experts on blockchain technology, capable of making decisions in a vacuum. Shin'ichiro Matuso, research professor and director of the Blockchain Technology and Ecosystem Design Research Center at Georgetown University, has highlighted the need to solve this communication problem.

Referring to the lack of open communication and traditionally tense relationship between regulators and stakeholders: "The main issue is, we still don't have proper communication channels among stakeholders in this ecosystem. Regulators don't have a functional language to talk with open-source engineers. Open-source engineers sometimes do not want to speak with regulators."¹¹

To this end, government regulatory agencies, together with consumer advocacy groups and industry stakeholders, should consider a multi-stakeholder governance model for regulating blockchain technologies. Blockchain advocacy groups may include: Electronic Frontier Foundation, Blockchain Advocacy Coalition, Chamber of Digital Commerce, Colorado Council for the Advancement of Blockchain Technology Use, and Global Blockchain Business Council.

As a result of the decentralized and open-source nature of blockchain, a multi-stakeholder governance framework is necessary for oversight of blockchain systems. This runs counter to the general model of regulatory agencies, which are by definition central authorities. A multi-stakeholder framework, similar to the

¹⁰ <https://stanford-jblp.pubpub.org/pub/multistakeholder-comm-governance>

¹¹ <https://www.coindesk.com/bridging-the-gap-between-bitcoin-and-global-regulators>

governance standard adopted for the Internet, has the potential to benefit all parties involved.

RECOMMENDED AMENDMENTS TO CALIFORNIA STATUTES

INTRODUCTION

In establishing the Blockchain Working Group, California's Legislature has taken the first step in studying blockchain technology and assessing its potential value in the public and private sectors, while weighing potential risks. Given the complexity of the technology and lack of familiarity among most lawmakers and residents, clarity is needed to evaluate any meaningful regulation or adoption. Rather than outlining comprehensive steps for current statutes to accommodate possible blockchain applications, this section intends to describe what other states have done, what principles should guide California's regulatory framework, and what incremental changes could be implemented to meet California's needs.

Related Efforts in Other States

States such as Wyoming have taken a business-friendly approach, enacting a total of thirteen blockchain-enabling laws allowing the industry to flourish there. Meanwhile, states like New York have instituted a tighter regulatory framework, creating a license that imposes specific requirements for any business offering cryptocurrency services to New York-based customers. Like New York, California has tens of millions of consumers and access to investor capital. However, New York's approach is often regarded by blockchain advocates as too restrictive. Wyoming has been highlighted by industry advocates as successful in attracting business, but it is a far less populous state, with a far smaller and less complex economy, with the ability to be more nimble.

Guiding Principles

An important distinction that sets California apart from other states is Silicon Valley and its leadership in technology innovation. Given this characteristic, the following principles should guide California's regulatory framework.

- 1. Promoting innovation:** As leaders in tech innovation, California companies seek to attract talent and startups from around the world. Overly prescriptive definitions or requirements may stifle innovation.

2. Protecting consumers: Some of the world's best known and most valuable companies are technology companies based in California. This makes them attractive targets for cybersecurity attacks. Indeed, six Silicon Valley companies are listed among the 15 largest security breaches of the 21st century, representing half of those in the United States. Given this reality, it is absolutely critical to adopt proper guardrails to protect all Californians from data breaches and bad actors. One way to ensure these protections would be to create a unit within the California Department of Technology to monitor developments in the blockchain industry. This unit could:

- Monitor and report any consumer protection issues, including working with the federal government to protect against fraudulent activities.
- Train the IT workforce within government agencies to understand the technology.
- Work with the state legislature and local governments to create flexible and adaptive regulations, possibly including state disclosure requirements modeled after the federal securities laws.
- Attend or host conferences to encourage responsible blockchain business development in California.
- Arrange community education programs to teach more Californians about consumer protective measures related to blockchain and ensure that our laws are adaptive to changes in the industry.

3. Equity and accessibility: As the fifth largest economy in the world, and one of the most culturally and ethnically diverse, California has an opportunity to promote access to blockchain technology for underserved and underrepresented communities. The state must ask how it can make the blockchain industry itself more diverse, based on gender, race, age, national origin, and socioeconomic factors, and how it can educate Californians about the potential of blockchain technology. A key component will be to expand workforce training. Partnerships with public universities and bolstering programs within the workforce development division of the California Department of Technology would be a good place to start.

ENDNOTES

-
- [1] ConsenSys. "Gartner: Blockchain Will Deliver \$3.1 Trillion Dollars in Value by 2030." June, 2019. <https://media.consensys.net/gartner-blockchain-will-deliver-3-1-trillion-dollars-in-value-by-2030-d32b79c4c560>
- [2] Carson, Bryant et al. "Blockchain beyond the hype: What is the Strategic Business Value?" *Mckinsey Digital*. June, 2018. <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/blockchain-beyond-the-hype-what-is-the-strategic-business-value>
- [3] Crunchbase "California Blockchain Companies," https://www.crunchbase.com/search/organization.companies/field/hubs/org_num/california-blockchain-companiesthe-hype-what-is-the-strategic-business-value
- [4] Satis Group. "Crypto Asset Market Coverage." July, 2018. https://research.bloomberg.com/pub/res/d2gg3p_HTg39HRCuzQjlyy8NVZQ
- [5] California Corp Code Division. 1.5 "Social Purpose Corporations Act" https://leginfo.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=CORP&division=&title=1.&part=&chapter=&article=
- [6] Smiaek, Jeanna " Fed Gearing Up to Help Smaller Local Governments." *The New York Times*, April 20, 2020. <https://www.nytimes.com/2020/04/20/business/economy/fed-local-governments-coronavirus.html>
- [7] State of Wyoming. Legislation 2020 <https://wyoleg.gov/Legislation/2020/HB0020>.
- [8] Wallach, Andrew and Bloomer, Brian "Wyoming, the Equality State," Seeks to Level the Playing Field for Digital Assets Businesses." *Orrick, Herrington & Sutcliffe LLP*. <https://blogs.orrick.com/blockchain/wyoming-the-equality-state-seeks-to-level-the-playing-field-for-digital-assets-businesses/>
- [9] https://www.reddit.com/r/Bitcoin/comments/2aycxs/hi_this_is_ben_lawsky_at_nydfs_here_are_th
[e/](https://www.reddit.com/r/Bitcoin/comments/2aycxs/hi_this_is_ben_lawsky_at_nydfs_here_are_th)
- [10] Del Castillo, Michael. "The 'Great Bitcoin Exodus' has totally changed New York's bitcoin ecosystem." *New York Business Journal*, August 12, 2015. <https://www.bizjournals.com/newyork/news/2015/08/12/the-great-bitcoin-exodus-has-totally-changed-new.html>
- [11] Takanashi, Yuta. "Call for Multi-Stakeholder Communication to Establish a Governance Mechanism for the Emerging Blockchain-Based Financial Ecosystem, Part 1 of 2." *Stanford Journal of Blockchain Law & Policy*. January, 2020. <https://stanford-jblp.pubpub.org/pub/multistakeholder-comm-governance>
- [12] Matsuo, Shin'ichiro. "Bridging the Gap Between Bitcoin and Global Regulators." *Coindesk*, June 30, 2019. <https://www.coindesk.com/bridging-the-gap-between-bitcoin-and-global-regulators>

endnotes currently being completed