

Blockchain Working Group Meeting Minutes
April 7, 2020 10AM to 4PM

1) CALL TO ORDER Chair Crittenden called the meeting to order at approximately 10:10AM

ROLL CALL:

Calderon: Yes, Michael MacGee is here from his office
Senator Hertzberg: Yes, Cynthia Castillo is here from his office
Ben Bartlett: Yes
Brian Behlendorf: No
Audrey Chaing: Yes
Liz Chien: Yes
Radhika Iyengar-Emens: Yes
Meredith Lee: Yes
Ken Musgrove: No
Anne Neville: Yes
Arshad Noor: Yes
Ted Ryan: Yes
Jason Alberg: Yes
Sheila Warren: No
Sergio Gutierrez: Yes
Michele Neitz: Yes

Quorum Established

2) APPROVAL OF THE FEBRUARY MEETING MINUTES

Approvals: Arshad, Anne, Jason, Michele Neitz, Sergio, Ben Bartlett, Radhika Iyengar-Emens, Meredith Lee, Ben Bonte, Ted Ryan, Cynthia Castillo (Hertzberg's office), Liz Chien

3) AGENDA AND MEETING GUIDELINES

Orit goes over the agenda and meeting guidelines briefly

4) BLOCKCHAIN WORKING GROUP SCOPE OF WORK AND PROCESS

Camille reviews the original scope of work of the project. As summarized, the group is charged with:

- *Evaluating blockchain uses, risks, benefits, legal implications, and best practices;*
- *Defining the term blockchain; and*

- *Recommending amendments to other statutes that may be impacted by the deployment of blockchain.*

Chairman Crittenden also reviews the timeline and schedule of remaining meetings.

- Audrey: Just wanted to let the group now that Kai has left the group. He was my partner on Property, which consists of Real Estate, Auto and Parts, and Insurance, and am not sure I can cover all of this in time when including the rest of the responsibilities I have.
- Camille: Thanks. For all members, please just let us know what you think you will and will not be able to accomplish. We have staff support from GovOps and the Goldman School of Public Policy for those that need additional assistance.

Camille goes over the draft table of content.

- Michelle: I was asked to draft a report on voting, election records, and campaign finance. We've assessed this and decided not to move forward with this as a use case.
- Camille: It is a useful finding to state that blockchain should not be used for voting/election records/etc. It's important to show that we considered it and state why we came up with the conclusions we did.
- Meredith: Depending on how many cases where we have that scenario, I'm wondering if it makes sense to group those into additional topics. In Education & Workforce, for example, we talk a bit about civic participation.
- Camille: We can include additional topics in our executive summary.

5) UPDATE ON LEGISLATIVE BILLS RELATED TO BLOCKCHAIN

Michael MacGee from Calderon's office reports on legislative bills currently related to blockchain:

- Michael MacGee (Calderon's office) & Cynthia Castillo (Hertzberg's office): In the first meetings, Assemblymember Calderon and Senator Hertzberg gave an overview of what a spot bill. There is a deadline to introduce bills in February. There are three blockchain-related bills in the legislature right now:
 - AB 2004 (Calderon's office bill): Will be a vehicle for any recommendations that come out of the BWG
 - AB 2150 (Calderon's office bill): Not related to the BWG, but is more about regulation on cryptocurrency. These are efforts that have been in the works for 2.5 years. This includes information in the Universal Law Commission. This will look different from cryptocurrency-related legislation of the past.
 - SB 373 (Hertzberg's bill): A vehicle for the Senate side for any blockchain-related issues, specifically right now related to marriage certificates and vital records.
- Cynthia Castillo: We don't know what this legislative session is going to be like. Currently, we won't be going back into session into May. Normally, we'd be going through the legislative process right now and going through the first House. Right now,

we're going through a much quicker timeline. Right now, we have these three bills ready to go, but the process is still unclear to us as well. We'll be sure to circle back.

- Ben Bartlett: Let's keep in mind that Hertzberg asked for ready-to-deploy blockchain recommendations for the legislature. Let's also remember to be ambitious. Any opportunities to achieve greater efficiency and effectiveness in government is especially important right now given the impact COVID-19 is going to have on the fiscal standing of the state.

Public comments:

- Chris Groshong: For whoever is working on voting [Michele], I met a gentleman who is working in Central America with the Guatemalan government. They're using blockchain to confirm voting data, and they're using the public to do it. I would like to have a side conversation with you on what they're doing, and something that we could consider using for the group.
 - Orit: You could go to the survey on the BWG webpage and add your comments there
- Eric Bryant: I'd be happy to help out the real estate use case. I am part of the real estate standards organization, and we're working on a project with Consensys. We're designing a universal identifier (licensing identifier) and we've reached out to the State of Wyoming's Bureau of Real Estate.

No further questions or comments

6) STATE PROCESS FOR ADOPTING NEW TECHNOLOGIES -- INFORMATIONAL

Sergio and Benjamin Bonte go over the CIO survey results:

- Benjamin Bonte: The Department of Technology sent out a survey to State of CA departments. The survey was sent out in January to a number of participants. Received 23 responses. As Sergio and I reviewed the survey, we were able to pull out a few common themes. The questions on the survey were related to the level of familiarity that IT staff had with blockchain, who the stakeholders were.
- Benjamin Bonte: Overall, doesn't seem like there's a familiarity with a lot of IT departments with blockchain. Not a deep level of familiarity across the state. Doesn't seem to be certainty among state departments among how blockchain could help solve problems. In addition to that, there were concerns about security and implementation costs. Those were the primary concerns. Interestingly, there was some sentiment that blockchain could lead to some efficiencies particularly around shared data governance and improved security.
- Sergio Gutierrez: State government is not an early adopter of technology. Typically, we look at low- or moderate-risk technology. Blockchain has not been assessed by a lot of state departments. I've talked to my colleagues with the Dept of Technology and found that vendors that have submitted bids to the state government have yet to propose technology using blockchain yet.

BWG comments:

- Radhika Iyengar-Emens: I've done a lot in terms of the applications of blockchain for business problems. If you need any assistance in this regard, I'm happy to help in any way I can.
- Camille Crittenden: Ken Musgrove was unable to come to today's meetings. He also wanted to iterate state CIO considerations that are absent in a private business context. State CIOs need to be aware of obligating state resources and undertaking a new workflow/technology to make sure it's serving the public interest in the most cost-effective way possible. And thinking about the implementation of it, we should think of running new tech in parallel with old tech to make sure systems don't fail.
 - Ben Bonte: I would add on that the state does have a highly structured process, particularly for large projects, that needs to sync up with the legislative and budgeting cycle. Things take awhile to develop and as Sergio talked about, within the process there are market research processes, requests for info, etc. In a lot of ways, departments become dependent for solutions being proposed to those processes rather than proposing solutions themselves. Also--smaller projects that may prove a concept are more likely to get done more quickly.

- *No more questions or comments from BWG or the public*

7) PRESENTATION FROM CA DEPARTMENT OF MOTOR VEHICLES

Camille summarizes the slides that DMV was going to present on digital ID

- Camille Crittenden: There are 3 potential use cases of blockchain in the DMV:
 - 1) The drivers' license could create a verified online profile that could be managed by the DMV. Other agencies could access DMV with the person's permission. DMV is validating identity, and other agencies can verify ID through the DMV
 - 2) Vehicle registration: If each vehicle were registered on the blockchain could reduce fraud, create greater efficiency in what is now a very manual system. Right now, it's a very time and labor-intensive process to make sure a car title is secure and trustworthy.
 - 3) Transferring individual licenses across state lines: If there were a blockchain-based system that if you had a license in one state that was recognized in another state, you could reduce reliability on a system that now relies on SSNs.
- Camille Crittenden:
 - Challenges include:
 - 1) Making sure data sharing agreements are aligned between agencies
 - 2) Setting up a blockchain-based system

BWG comments and questions

- Cynthia Castillo: This is great. I'm curious because there's overlap between our section with vital records. Could you put me in contact with accepting some other documents (marriage certificate), and how they would implement those kinds of changes?
 - Camille: Yes, will do
- Arshad Noor: The presentation that I saw yesterday brought an interesting thought to me. I wonder if the state or the DMV has considered the possibility that the identification and credentialing process that the DMV does might be better off as an independent agency, so that the DMV can focus on motor vehicle registration and licensing of drivers. There's a best-practice of creating a separate service for the identification and credentialing process. Maybe we should think about doing that.
- Liz Chien: I agree with Arshad's comments. It's an interesting point about having the data piece that's separate from the public piece. Fundamentally, it goes to the question of security. Regardless of whether it's public or private, because it's PII that the security standards would have to be uncompromisable.
- Radhika Iyengar-Emens: I wanted to second Arshad's comment. Identity has many aspects it touches on. Different kinds of identities. It's worth looking at the entire identity portion as a separate portion or agency group that talks about the different aspects of identity. At the DMV, we're talking about one aspect of identity. There's healthcare, financial identities. It's a multifaceted characteristic. I appreciate Arshad's comments, and believe this could be viewed as a potentially separate agency discussion that has a matrixed relationship with the DMV, vital records, etc.

Public comments

- Law enforcement agrees there needs to be a standardized process for government to issue and verify digital identities

8) BLOCKCHAIN WORKING GROUP PUBLIC SURVEY REVIEW

Camille goes over the preliminary public survey results so far.

BWG comments:

- [none]

Public comments

- Aleks Vorobets: I would like to be able to upload graphics and presentation to the public comment

9) BLOCKCHAIN AND ITS DEFINING CHARACTERISTICS

Brian Behlendorf presents revised definition:

- We've incorporated changes based on the last meeting minutes
- Everything in brackets is what Brian and David are not sure whether to include

BWG comments

- Ben Bartlett: Do we want to consider a one sentence definition for the layperson? For this to be implemented, ordinary politicians at the state will be looking at this. Someone just called it a “shared database”
 - Brian B.: I know there’s always a tension between useful, specific, and broad
- Arshad Noor: If the audience is the general public, I tend to support what Ben just said and keep it simple. From a technological point of view, we can make this very arcane too. The definition that Ben just relayed is way more simple. Some other comments: (1) add “potential” before increased trust; (2) the second paragraph doesn’t need the word “mathematically” for the general public; (3) in the third paragraph, take out the word “very”.
- Orit: Ben, does one of these three definitions seem simpler to you?
 - Ben: The first paragraph, with the elements of the smart contract actions get there.
- Radhika Iyengar-Emens: Two things that I find missing: (1) it's not that it's just data shared amongst a group of participants, its data shared among *parties that are distrustful of one another*; (2) issue of governance that needs to be touched upon, perhaps in paragraph 3. It's not just having the technology but having the right governance mechanisms and standards.
 - Brian: Yes, we’ve thought about adding terms like “group of competitive parties”, or “adversaries”, or something like that.
- Liz Chien: I think “distrusting” is a little strong. It's not necessarily people who actively distrust each other, it's parties who have no established bases of trust. That’s what we’re trying to get at. We’re trying to get at the difference between parties who have established trust and two parties who have never interacted. I’m reacting to distrusting because it conveys that the parties/stakeholders actively don’t trust each other, which I don’t think is true. I think reality is more neutral. Parties that interact that don’t have a pre-existing trust relationship.
- Charlie from Senator Hertzberg’s office: Yes, we need something we can convey quickly for committee hearings. For SB 373, we used an MIT definition of blockchain that was a sentence long. That’s what we’ve been going with for the last year. Having something easy to digest and easy to get across will help with the legislative process a lot. We can keep the longer definition in the report.
- Michael MacGee (Calderon’s office): Similar to Charlie’s comment, its very useful if there’s a layman’s terms, quick one-sentence descriptor that gets anyone up to speed insofar as that’s possible. Brian, I did take the definition you provided in the last meeting and went over that with an attorney from legislative counsel. One of his big concerns was defining terms and understanding the intent language. I know this isn’t intended to be a legal definition, but from our perspective, it’s useful to know what has to be unique about blockchain technology? Intent language is useful for edification, but one of the big concerns with intent language like “should bring increased trust”, and “the parties are typically distrustful”--the problem is that in legislation, it doesn't mean much. If there are

characteristics or combinations of characteristics that are needed for it to *definitely* be blockchain (yes--"distributed ledger", yes--"cryptographic", etc.). If there are hard lists and requirements that the group has identified and agreed on, that's great to know.

- Brian: Thanks for the feedback.

Public comment:

- Eric Bryant: This is the layman's definition I've used in the past: "Blockchain is an immutable and trustless digital ledger in which transactions are recorded chronologically and in a shared manner. It consists of a number of digital information blocks, strung together in a chain, to create a history."

10) CONSIDERATIONS FOR APPROPRIATE APPLICATIONS -- DECISION-MAKING PROCESS

Sheila Warren leads discussion with BWG members

- Sheila Warren: My view on this framework is to create a customized version just for California. We should not do that until we're further along in this process, until we figure out use cases. Given what we've heard about funding, legislative considerations, etc. it shouldn't be a technical assessment. It should take into consideration policy considerations of California. Question to the group--how does the group feel about this framework? That this isn't just a technical framework of "value-add of blockchain", but it actually considers the realities of prioritization of goals, funding, etc.
- Orit: This seems like a continuation of the conversation from this morning from the CIOs of what the limitations of implementing new technologies are, right?
- Sheila: Somewhat, yes. This workstream is a way of capturing that was being discussed. I see the output being a decision-tree of some sort that starts with the problems that CA is trying to solve.
- Audrey: I support what Sheila just said. Even with the most perfect technology, it won't be successful unless you have the support from the right departments and teams.
- Michele: I agree with Audrey and Sheila that we need a framework in making these decisions, and this seems like a good one.
- Liz Chien: I like the idea of what Sheila supported, and in any other time I would support it. In light of COVID-19, should we incorporate prioritization of budgeting in our recommendations. For example, if there's a single pot of money that the state has to implement new tech, it's almost like "What's the choice?". Maybe this is a question for Camille and the state legislators and Orit. How do we want to incorporate that? With tax, I spent time speaking with Ken Musgrove and looking at tax use cases. He did say we did have existing technology that could accomplish goals that blockchain fixes, and this existing technology will be cheaper to implement. Blockchain is expensive. Before this crisis, CA's budget was a lot more flush. Now, we're going to be in a deficit situation. How does that change the framework of what we're doing?
- Camille: That's valid. Also the report could take a longer-term view.

- Arshad: I agree with Sheila that a framework will help people consider when blockchain might be useful. When we recommend the framework, we should recommend under what circumstances and who should change the framework? We don't want a framework to become gospel truth when things might not be the same going forward.
- Sheila: I think that any framework will have to spell out an assumption set. Maybe assumptions about the pandemic can be put up front, when we talk about budget. The pandemic itself is an ever-changing situation. I don't know that we know what the priorities will end up being. So spelling out assumptions seems imperative.
- Sheila: I'm going to take this info back in light of the other comments made in the last meeting. It'll be very active and live until we settle on this.

Public comment:

- [none]

11) POTENTIAL USE CASES FOR BLOCKCHAIN APPLICATION

Arshad presents security considerations for blockchain--see associated Powerpoint

BWG comments:

- Brian Behlendorf: Agrees with Arshad that the precautionary principle should rule now more than ever. I would only like to push back on the last consideration for smart contracts. Smart contracts would well off a lot of potential use cases to have that be a rule. There might be other preventative measures that might mitigate risk. We'd be throwing away a lot of use cases if we kept the last consideration.
 - Arshad: That's valid. If the rest of the considerations go forward, we could maybe change the last to "Carefully review the use of smart contracts..."

Public comments:

- [none]

Health records with Radhika and Arshad:

- Radhika: Solving this puzzle isn't easy but it'll be very important. Health records problem is a problem of data fragmentation. You have spotty and sporadic context about health data. We all know that there are many people that are trying to solve this problem--health systems trying to make health records more contextual and comprehensive when it's your data. The problems rely on data silos, not achieving the degree of interoperability to bring different datasets together, and touching upon other administrative considerations (financial) in terms of incentivizing what it means to have the patient at the center of this. Some of these are broad issues on data. The holy grail is for us to achieve a complete and contiguous for people. Also, addressing the issue of health accessibility.
- Radhika: If you look at what's happening with healthcare is moving to telemonitoring and telehealth. Central to all this discussion is ownership of data. From the California context, we're seeing problems associated with all health records like interoperability and

fragmentation of data. [Radhika then summarizes her section--see associated document].

- Radhika: We've thought about looking at putting immunization records on the blockchain as a pilot. We aren't ready to make a recommendation yet. There are a lot of complexities involved, and we're talking to folks in California who are responsible for tracking immunization.
- Arshad: I would just add that the conversation that we had with CARES (California Immunization Registry) was just a first conversation and COVID-19 hit. Pretty much everything is on standstill. We've had one conversation with California HHS, but since COVID-19 has come, we don't want to push anyone right now since healthcare is the priority for the state govt. We do have some ideas but are not ready to make recommendations.

BWG comments:

- Ben Bartlett: I'm enthusiastic. The healthcare system is likely undergo significant transformation if not outright overhaul. I just want to encourage Radhika and Arshad to think hard on this one.
- Radhika: This is not an easy subject, and I agree with Aleks's comment below. We need to tackle the ownership and control of records. A blockchain-based identity system that provides everyone full access to services is critical. Other countries and systems have tried things out. Estonia and Dubai have been approaching this. As daunting as this topic may be for California with 40 million people, it's important.

Public comment:

- Aleks Vorobets: These records need to be portable. With blockchain-enabled records, only the individual person can authenticate this record. The only way this conversation can evolve is if we realize and are okay with how data can only be authenticated by the individual person.

Food and agriculture with Brian Behlendorf

Brian: [Gives an overview of his section of the report--see associated written document]

Radhika: From a supply chain perspective, given that CA is so important with respect to agriculture and food, this is a topic that's very important and relevant for California. If you think about compliance, that's a huge issue. Lots of connection with water rights too.

BWG Comments:

- Meredith: I like the framing at the top of this document in terms of local, regional, national and global impact. I think the connection between the environment and water could be stronger, especially with the Water Transparency Act. I'd like to see a stronger connection for water rights and am happy to help out.
 - Camille: I agree. If we can reallocate some pieces to go along with Energy & Natural Resources section would be great.

- Charlie (Hertzberg's Office): Recently had a conversation with someone at NRDC in terms of overfishing. They talked a lot about how CA Dept of Fishing and Wildlife is overwhelmed, and the stuff they're using is outdated, and doesn't reflect what they're supposed to be doing. Looking around the world, lots of blockchain supply chain use cases focus on seafood and tracking overfishing, and human rights abuses along the way. I wanted to add that point.
- Radhika: I agree with linking these parts to other parts of the report. Definitely dealing with similar issues. The other thing--I do agree with the fishing front [see below]. There's some well-documented cases. We should probably include those as well.
- Brian: Yes, for fish, we should have covered consumption and should have highlighted some projects happening globally.

Public comment:

- Aleks Vorobets: Wanted just a brief comment. Napa Valley Ventures are doing a project to track and trace Napa Valley wine from field to consumer. Just wanted to throw that out there.

Firearms: Sheila and Anne

- Anne: California DOJ just stood up a new firearms tracking database. Given that, it's unlikely they'll test a new technology. We also just don't know if there's a specific example use case right now. There's not really a "low-hanging fruit" here.

BWG comments:

- Camille: One area I thought blockchain might be interesting, and noted that California's database doesn't do well at matching up who has a firearm and who is not allowed to have a firearm. Maybe a blockchain use there? But agree that this may not be a low-hanging fruit. **We should write up this info anyways though to demonstrate that this use case has been addressed.**

Public comment:

- Law enforcement: Yes, there is potential for better awareness of "armed prohibited". See <https://lawcenter.giffords.org/disarming-prohibited-people-in-california/>.

Pharma: Radhika and Calderon's office:

- Radhika: This is a continuation of the health section. *[Radhika summarizes her and Calderon's write-up--see associated attachment]*.

BWG Comments:

- [none]

12) UPDATE ON POTENTIAL USE CASES FOR BLOCKCHAIN APPLICATIONS

Property--Audrey and Kai

- Audrey: No big updates from last time. We looked into some Title Insurers. The largest title insurer decided to use blockchain. Given our new deadline of April 22nd, I could use some help.
- Camille: Incorporating the DMV's presentation would also be important in this section.

BWG comments:

- Arshad: The last time we had a BWG, we had a conversation about new developers registering Title registration on a blockchain. Did you have a chance to explore whether the state was interested in that?
 - Audrey: No I did not, and I think that's fascinating. I haven't had the bandwidth to pursue this.
- Camille: We could have a section with future research questions, and could include this title question in there.
 - Orit: Arshad, could you write up a paragraph of a problem statement?
 - Arshad: Of course.

Education & Workforce--Jason and Meredith

- Meredith: Three major updates from our last version of the report are: (1) the Digital Credentials Consortium published a 38-paged white paper, where they talk about incubating standards. We refer to this in our section of the report, and encourage folks to take a look at that; (2) We incorporated feedback from the group and the public, specifically a lengthier mention of community colleges, foster youth, the gig economy. If there's anything that's missing, please send them to Jason and myself, while still keeping the document concise; (3) We expanded paragraphs on training and workforce development, applicable to blockchain and other technologies
- *No BWG or public comments*

Blockchain and Privacy--Jason and Radhika

- Jason: Radhika and I met and decided to combine our sections, and use my section as the base. The main question we wanted to address was: How does CCPA and GDPR relate to permissionless blockchains like Ethereum, especially if people don't follow the recommendations of not putting PII on the blockchain aside from digital identity? We say probably under CCPA, that doesn't pose a compliance issue for node operators. Under GDPR, there may be greater concerns from the data protection authorities.
- *No BWG or public comments*

Blockchain and Privacy--Jason and Radhika

- Radhika: No major updates or concerns. We addressed most major concerns.

Vital records--Senator Hertzberg

- Cynthia C: Last time, we'd focused on marriage certificates. Since then, we've had contact with the Dept of Public Health, and the use case with birth and death records is more similar to marriage certificates than we saw. We want to delve into the process a bit more with those three applications. We're developing that and if anyone has relationships with anyone that works on the death and birth certificates space, that'd be helpful. And the other piece that Jason and Radhika touch on is in this new version on vital records, we were discussing this issue of what info goes on the blockchain. We come to the conclusion that we may need a permissioned blockchain with a couple of folks on there. I put this question to the rest of the question: Should we delve into what type of blockchain is good for vital records, or will that be discussed elsewhere in the report? Maybe that's something the BWG need to think about as a whole.
 - Jason: Cross-referencing will definitely be important.
 - Radhika: There's certain sections, as I'm looking through this as well. I'm wondering whether, from a table of contents perspective, it makes sense to have a brief discussion of the types of blockchains. That way its framing the context for later sections to come. Second, sections like "privacy" or "digital identity" or "ethical considerations"--those sections are not really use cases, but more overarching themes that touch across many different sections. Maybe that's something to think about.
 - Orit: That is how its set up right now.
- Charlie (Hertzberg's office): In the next iteration of the report, we want to separate permissioned vs permissionless blockchains when we're talking about each use case. That does change what's possible and the risks associated. It's important to draw that line.
 - Camille: Makes sense, and we'll do that

BWG or public comment:

- Cynthia: Just to close, what we'll do is develop the kind of blockchain that will work for vital records and send that to the BWG and see where this can be added it. We'll just look at what the other sections are using, and maybe it'll blend in later.
- Aleks: I would love to see more time spent on digital identity, since that's basically all we've discussed today.

13) SUBCOMMITTEE UPDATES

Finance subcommittee-- Audrey

- Audrey: [See associated slides]. These slides are from the March finance subcommittee meeting that ended up being cancelled. Updates:
 - Talked to folks from Colorado and Wyoming who are interested in talking to us, but do we have anything in particular to ask them?
 - CalCoin: I talked to folks doing the Marshall Islands sovereign coin. To note, they're compliant with lots of international guidelines. They've spoken with the IMF, World Bank, US Treasury, etc. Coin to be released in 2021. In terms of uses for California, it might make sense for cannabis payments.

- Public Banks: Ben and I visited a community development finance trip, and they are interested in a pilot.
- Municipal bonds: [See Ben's draft]. Talked to Alpha Ledger Technologies is using blockchain for municipal bonds. CA is the largest issuer of municipal debt in the USA (\$60 billion in 2019).

BWG or public comment:

- Liz: Question. In the Marshall Islands, you said they were going to sell it next year. What's the long-term plan--are they going to exchange paper dollars for coins? Or is it on top of the existing currency?
 - Audrey: They will have a staggered sale. They talked to some economists and they said they shouldn't sell it all at once.
- Liz: Second comment was on the California state banks. From what I understand, the banks only have the ability to make loans and to do business with the cannabis industry. That's why the banks haven't made and progress in California, they're pretty limited. The minute you take in deposits from cannabis, it limits your touch points.
 - *Liz will add her knowledge about public banks to Audrey's report*

Finance subcommittee-- Michele, Liz, and Arshad

- Michele: *Summarizes her document; see associated attachment*
 - We should not move forward on blockchain and social benefits due to COVID-19. No appetite for experimentation.
 - I have gotten interest related to business programs. I've had interest from the Secretary of State. Business licenses have been experimenting with applications for LLCs. Each type of business licenses is using a different tech module, because they're experimenting to seeing what works best. They might want to experiment with blockchain.
 - What I think is most promising: archives. Right now, the Secretary of State uses a paper-based system. They want to move the archives online. They've done lots of research and have talked to the Dept of Finance. They got excited about using blockchain for this. They like the qualities and characteristics of blockchain, and it might be useful for archives. It's been done in the UK to move government archives online using blockchain. The National Archives explored blockchain technologies for archives. The Secretary of State is thrilled to use blockchain.
 - Caveats: Blockchains might not be the best technology. By definition, the archives are centralized so using a decentralized technology may not be the best technology. Audrey says the Secretary of State should do an RFP and see what comes out of that process. Don't push blockchain here to digitize.
 - Who looks at archives? Litigators and local governments.
- Liz: Here's my update on taxes: Software providers in the tax preparation services do not want the state to take a role in tax returns. They're lobbying against taxpayers having easy and free tax filing services. That's what makes tech in this space difficult. We're

also looking into indirect taxes, and am working to put together case studies of what other countries in Europe are doing with respect to VAT pilot programs using blockchain.

- Arshad: There's one task that we haven't discussed, and that's remittances. We haven't been able to dig into this. We don't see a vehicle for the State of California to get involved with remittances using blockchain. Public banks was one potential option. The community finance group that Audrey and Ben reported on was another. I was expecting to hear from that community finance group, but since that got cancelled we haven't had the opportunity to see if they're doing remittances. I don't know if there's much we can do in the remittances in the subtask right now in the current climate.
 - Liz: Arshad, I completely agree with you.
 - Audrey: I just wanted to answer your question. The community bank doesn't do remittances. They're like a Western Union provider but are just like any other Western Union provider.

BWG comments:

- Brian B.: Obviously, storing large documents in a distributed ledger doesn't make sense because it's inefficient. Giving the documents a timestamp might be the best benefit. It's perhaps not worth decentralizing within a state government, but maybe across state governments. This might provide greater integrity and reliability to the whole system.
- Arshad: I agree with Michele on this. This is an exciting use case for a number of readings. (1) We've worked with archived records tech with strong security controls, and I'd agree with the comments that Michele's colleague made with security. You don't technically need blockchain to verify the authenticity and integrity of a record. But blockchain helps add proof that there exists such a record. If there's no record of the existence of such an archive, that's a problem. Seems like a low-risk opportunity to experiment here.
- Anne: Basically, the precursor to all of this is digitization of the records. What tech have they already looked at?
- Audrey: We should also think about budgets for this, and whether there will be a budget for this given COVID-19
- Liz: I've talked with folks who know a lot about cannabis permitting, and it seems like the problem is between state and local govt communication. So, tech might not be able to solve this problem.
- Anne: Lots of local governments have archives too. Maybe we can go down with local governments and deepening something within California's structure. Libraries and archives tend to work on a tight budget so I'm not sure what's possible, honestly.
- Orit: Do you guys need another subcommittee meeting?
 - Liz: I don't think so, I think we covered a lot of it here
 - Michele: I agree with Liz. We've identified with the archives potential reasons why blockchain may not be a good choice.

Public comment: [none]

Regulatory subcommittee

- Anne: You guys put me on “Developing appropriate regulations” and “fostering a welcome business environment” feel like we’re talking about them out of context. We’re being very broad here. For “education and outreach” and “recommended amendments” it seems like there’s a problem we’re trying to solve. For these first two bullets, I just feel like I’m just going to write some generic language. Any guidance on this?
 - Cynthia: I felt the same, even with the statue piece. Even if it’s broad, it seems like that may be the way to go. I just want to temper people’s ideas. We won’t have a concise list of “this is what needs to change”. Your gut might be right, and the regulatory piece might be broad. I say that so I can temper people’s expectations.
 - Anne: Maybe the mission is around developing the guardrails, and seeing how people feel around them. This might fit into what Sheila was proposing before. Some of this might fall in there.
- Liz: Based on the last email on assignments, Ben and David T. were on the regulatory subcommittee. I had volunteered to help with “recommended amendments”--I can only provide tax guidance, since I’m a tax expert. Mine is quite narrow and I can provide something and share it with Gabby to share with the group.
- Orit: It seems like that last item might come from all of the working group members, and seeing how the recommendations we come up with apply to California statutes.
 - Liz: That’s probably true with some areas, but with tax there are already known issues that make California an unwelcoming state with respect to blockchain. If one of the policy goals is to have companies stay in CA, then there just needs to be more clarity on the CA tax rules. When I do my write-up for tax, I can write a few paragraphs on “fostering a welcome business environment”. I’m not qualified to speak in other areas.
- Liz: One of the questions probably will be around taxonomy. I’m not sure if anyone is planning on speaking to this in any of the bullets. With many blockchain protocols, there are digital assets. What is the digital asset--is it a payment instrument? Is anyone talking about this?
- Audrey: This is all very important, I agree with Liz about taxonomy. I did put together a bunch of info from our first financial subcommittee meeting. Since then, the regulatory subcommittee was formed. Gabby already has it and she can share the slides, and there are quite a lot of details regarding Wyoming, CO, AR, MT, and links to resources.
- Cynthia: Looks like Camille and others said what I wanted to say. Maybe a couple of points for our next meeting. I’m hesitant to hop onto anything else but we’re compromised because of COVID-19 issues.

BWG comments:

- Arshad: In response to Liz’s suggestion about taxonomy is important. A taxonomy that can be used across jurisdictions is important so that everyone understands what we’re talking about. But having participated in many standards groups, coming up with a

taxonomy that everyone agrees on is so very hard. Given the time frame, I don't think this group can complete this, even though I agree with Liz that it's important.

- Camille: There is a short section on standards and interoperability, not sure if that's relevant though.
- Arshad: Take a look at how long we've been discussing the definition. As a group amongst ourselves, we're still debating on the right language. This is the challenge when coming up with language for multiple constituencies.
 - Liz: Maybe what would be useful is provide a model language of what other states who have succeeded in job creation, this is the framework they've put forth. And then leave it up to them as to what they want to propose in the legislation.
 - Arshad: That seems reasonable.
- Radhika: I agree with what Liz said in terms of the scope. Maybe we should point in the right direction to what others are doing, including international bodies. On the subjects of standards committees, there are groups like IEEE P2145 (which I'm on) that actively contribute to lexical standards for governance. The goal of that group is to pull together the right lexical framework for governance.

Public comments: [none]

14) FUTURE AGENDA ITEMS & NEXT STEPS

- Camille: We'll expect to receive your draft reports by 4/22. We'll all discuss the full final draft in early May.
- Radhika: There might be pieces of our reports that are unfinished because of pending interviews. Is it okay if we continue to work towards that before our next meeting if it's after 4/22?
 - Camille: I think we were hoping for final drafts by 4/22. What is your final version of your reports by 4/22, while understanding it will go through an editorial process. If you could get substantial edits or content by 4/22 that'd be ideal.
- Radhika: In the case for health records for example, we wanted to talk to the California immunization registry folks. I don't know if we'll get in touch by 4/22.
 - Arshad: Given these circumstances, we might only be able to have broad suggestions, and we can add this to "future research".

15) CLOSING REMARKS

16) PUBLIC COMMENT ON ITEMS NOT ON THE AGENDA