



# *Report*

## **CITY AND COUNTY OF SAN FRANCISCO EMERGING TECHNOLOGY OPEN WORKING GROUP #5**

MONDAY NOVEMBER 5, 2018, 2:00 – 4:00 PM

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**OnStrategy**

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## EXECUTIVE SUMMARY

The following observations reflect the entire Working Group process and all five sessions.

### **Technology is widely accepted as a part of San Francisco and its future.**

Whether representing community stakeholder groups or a technology company or a public entity, not everyone is thrilled about it, but everyone acknowledges that emerging technology will be a part of San Francisco's present and future, especially as one of the World's tech hubs. Even technology companies acknowledge that not all emerging technology serves the "greater good." Regardless of perspective, all want to minimize the harm emerging technology might bring to the public, to the City and most do not want the technology companies to be harmed by significant hurdles to testing or implementing technology.

### **Information and Communication are key.**

For stakeholders who may be affected by or users of emerging technology, they want to know what's coming and be involved in the decisions whether to 'unleash' technology onto the public. Technology companies want clear direction from the City/County regarding the *consistent* process they need to follow to gain approval to test or launch a technology and want to understand what does or does not require a permit / approval; companies also would like to be part of the process of helping the City/County anticipate emerging technology (seeing into the future and anticipating what the likely technologies are to 'hit San Francisco's streets'). No doubt, this will ultimately present some challenges as technology companies will want to retain confidentiality around new concepts, but the community wants to know what's being considered.

### **Metrics and transparency matter.**

Whether metrics are tied to knowing whether San Francisco has achieved its vision for emerging technology in the City/County or metrics of compliance are fully disclosed, all stakeholders hope that the processes and policies will result in reportable metrics that will demonstrate the (positive or negative) impact emerging technology is having on San Francisco, its residents and technology companies. There is some expectation that the City/County of San Francisco will make these metrics publicly available and use them to improve policies and processes. In fact, most in the Working Groups agree that that San Francisco's processes and policies for regulating emerging technology will require ongoing revisions and iterative improvements as data comes in.

### **Most seek specificity.**

While technology companies would like some general guidelines that give them generous latitude for what is or isn't permitted, they nonetheless acknowledge that processes and policies should be specific enough to give them a sense whether their concept has a decent chance to be approved before embarking on the permitting process. As one would expect, community stakeholders want to see and understand emerging technologies' impact, practices, implications and so on. By laying out and enforcing the requirements for companies, San Francisco can serve both constituencies. Another point about specificity: most stakeholders and companies in the Working Groups struggle with understanding the City/County's language, processes and policies; the tendency for the City/County to develop processes or policies based on the City/County's needs can be confusing and may be barriers to these non-government stakeholders. There were many conversations and suggestions around how San Francisco government might 'bring in' stakeholders to help ensure a user-friendly and efficient approach for managing how emerging technologies are introduced into the City/County and for community stakeholders to understand how they can weigh in or participate in the process.



## DETAILED SESSION NOTES

### Objective

The final Open Working Group meeting was designed to get reactions to initial policy recommendations for Emerging Technologies. Participants were asked to react to and help refine recommendations.

### Session Agenda

- I. Opening remarks and welcome by Naomi Kelly, City Administrator
- II. Outcomes, Process Overview, Working Group's Goal
- III. Introductions
- IV. Overview of Progress to-date
- V. Participant input session
- VI. Wrap up

### Participant Input

Attendees were randomly assigned a number between 1 and 4; following the Progress to-date, each attendee was directed to 1 of 4 "Recommendation Stations" in the room:

1. Collaboration Playbook
2. Collaboration Lifecycle
3. Emerging Technology "Front Door"
4. Permitting Evaluation (checklists)

After approximately 20 minutes, each group was asked to rotate to the next Recommendation Station so that every attendee had the opportunity to review all 4 recommendations and to provide feedback to each.

### Station #1: Collaboration Playbook

#### Problem

Because there is pressure to deploy and rules can be hard to navigate, Companies often deploy their products in the public right of way without communicating with the City or understanding the rules and regulations. There is limited trusted communication and transparency between companies and government.

*Possible Language Refinement: Because there is pressure to deploy and rules can be hard to navigate, Companies often deploy their products in the public ~~right of way~~ realm without communicating with the City or understanding the rules and regulations. There is limited trusted communication and transparency between companies and government.*

#### Recommendation

The Collaboration Playbook outlines expectations for both companies and the City government to achieve a more collaborative environment for product launches in San Francisco.

[Link to One Pager](#)

#### Checklist for Collaborating

1. Identify a point person
2. Reach out to the City
3. Engage the community



4. Build your product for a diverse set of users
5. Explore what regulations might apply to you
6. Share information to solve problems
7. Identify opportunities for technology to support City goals

**Our Commitment to You**

We are excited that you want to work with us, and we look forward to collaborating to solve problems. When you reach out to us, we commit to:

- Clearly articulate the City’s priorities and goals
- Put in the effort to build trusted relationships
- Communicate transparently and in a timely fashion
- Proactively learn about new solutions
- Advocate for solutions

**Our Priorities**

Problems we face in government are complex. It will take the best and brightest from inside and outside of City Hall to solve them. The sections below lay out a few of the things we’d love to collaborate with you on, as well as specific ways your company can support them.

1. Improve Public Safety & Accessibility
2. Promote Equitable Benefits
3. Engage with Communities
4. Responsible Data Sharing, Security, and Privacy (1)

For Mobility (example of a policy-specific priorities):

1. Support Transit
2. Reduce Congestion

- If yes, write down the organization name and contact info on the station flipchart

**Group Discussion / Feedback**

Each group was given the following prompts for the checklist for collaborating:

- What’s missing?
- What other things should companies do before launch? What else should the city do?
- Would your organization be interested in having technology companies talk to you?

**Feedback for Checklist for Collaborating**

| Checklist Item   | Feedback   |
|--|--|
| 1. Identify a community and City point person.   | <ul style="list-style-type: none"> <li>• How do we identify a community point person?</li> <li>• Add item – “review the city’s goals to help anticipate how you will help.”</li> <li>• How would this work?</li> </ul> |
| 2. Reach out to us.  |  |
| 3. Engage the community.   | <ul style="list-style-type: none"> <li>• Language is too vague.</li> </ul>   |
| 4. Explore what regulations might apply to you.  | <ul style="list-style-type: none"> <li>• What is being asked for?</li> </ul>   |
| 5. Share information to solve problems.  | <ul style="list-style-type: none"> <li>• Where is central data kept?</li> <li>• Language is too vague.</li> </ul>  |
| 6. Understand and be prepared to articulate how you’re supporting the City’s goals. We want to be working with | <ul style="list-style-type: none"> <li>• Move this item to number 1</li> </ul>   |



|  |  |
|--|--|
| companies who can help us solve challenges we're facing. |  |
|--|--|

**What is Missing**

- Implies large scale organization. What is necessary for small startups?
- Logic mod
- Community engagement based on size of start-up / company.
- Generic links to some emerging tech rep.
- What is prioritized and how is it prioritized?
- What is the process?
- List of needs of issues and regulations (+code) FAQ's to code language.
- To whom does the playbook apply?
- What information will be shared, to who?
- What problems will be solved?
- What is the expectation for "engage" defined community?
- Set expectations
- Does user base number matter?
- Metrics to define extent of community engagement
- Is the sharing of information going both ways?
- More specific on community outreach/engagement. To who specifically.

**What Companies Should Do**

- What is the private sector lens?
- Who is the audience?
- How do we onboard readers? AI (Checklist so the content is customized?)
- Our community to you? City assign print person(s)
- Our priorities: Mobility Example – SFMTA / SFCTA already have guiding principles. Do we expect other agencies to develop their own as well?
- Which types of startups can most benefit from collaboration with the city? (or thinking out regulations early)
- These should be more than one qualified point person because people get sick, go on vacation, etc. We need consistency.

**What Else?**

- Expectations and timeline
- City appoints point person
- Having example, and hypothetical scenarios.
- What would the level of community outreach need to be?
- Provide a list of potential stakeholders.
- Stick to deadlines on both sides for sharing for and meeting requests.
- What does "public health" mean? What is the space for collaboration?
- Specify to what it applies: products and services?
- Reaching out to potential business generators for input (students, universities) > consult with incubators.
- All points are very ambiguous. Need to be more specific.
- How do we get to alignment / inter partition of regs between values vs. regulations? (City and private sector)
- Define when collaboration is needed. What is public realm?



- Item 1-point person: Clarify if point person is from a department or community? How to identify?
- City: to identify applicable regulations (code)
- Examples of when permits apply
- Add to “our priorities” the vision statement from the slides (...to make SF the best city...)
- Having deadlines and incentives for meeting them for penalties for not.
- What is the incentive for following the playbook?
- Current challenges and how city prioritize them.
- Goals for collaboration.
- Leading with the priorities then starting the checklist.
- Identify which type of collaboration is needed.
- How do we verify incoming information?
- Clarify what is the purpose of having a playbook. How does it help?

#### **Additional Feedback:**

- Collaboration should be required in advance, or you will not be able to deploy
- Be prepared to present a “community impact statement” like an environmental impact report before building can start.
- More detail on how to do checklist (e.g. email address to reach out to).
- How would someone find out about this? What would be the format for the playbook?
- Context for what is needed to engage (sunshine?)
- Promise from the City:
  - Point person assigned from beginning to end.
  - Timely responses
- More clarity in checklist language. (e.g. identify a community and city point person (ADD) for your company.)
- Simple onboarding
  - Self-profile > directory
  - FAQ search > Regulations, guidelines, relevant agency contact info, and open RFP.
- It feels like this collaboration playbook would have to come with several other handbooks like:
  - What does community endangerment look like?
  - What are the city’s priorities?
- Prioritize climate and sustainability goals.
- What gives this teeth? Is this required? State this.
- Who does this not apply to?
- Dina a middle ground between regulation and optional good behavior.
- Clarify the benefits
- Be more specific on how to reach out to the City.



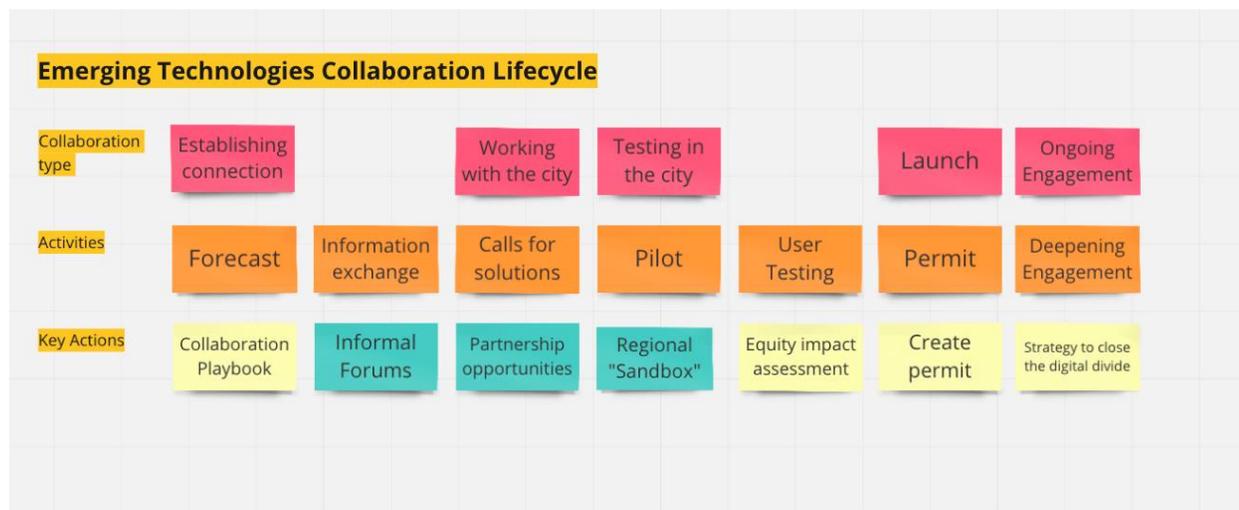
## Station #2: Collaboration Lifecycle

### Problem

To anticipate the impact and benefits emerging technologies may have in San Francisco, we need greater awareness that they are coming!

### Recommendation

The creation of a 1) Council of the Future, 2) a network with other cities, and 3) informal forums with companies, community and City staff will help San Francisco build relationships and better anticipate what’s coming next.



### Group Discussion / Feedback

#### Activities

- Pilot
- Information exchange
- Forecast

#### Key Action:

- Equity impact assessment (1)
- Regional “sandbox” (2)
- Informal forums (1)

#### Other Feedback

- Does the emerging tech need to get pilot approval in the first place? An initial checklist.
- How to get companies to apply for permit in the first place? The “ask forgiveness not permission” culture.
- Can the city “enforce” what we are developing? In other words, do we “require” emerging technology companies to collaborate with the city or do we just “hope” they do?
- How does the city decide how many pilots/permits to allow?
  - Regional sandbox
  - Who is the right home? Leader?
- Multiple pilots at once- which is solving problem better?
- Important for time between pilot + permit
- Earlier establishment of metrics together before pilot



- Forecasting informs creation of pilot
- Baseline data collection happening at info exchange (with clear metrics!)
- Public-private academic committee/groups to support forecasting- city (and VCs) have hard time forecasting
- Specific triggers on when to go from pilot to permit
- Instead of “forecasting” call it “liaison”- who’s out in the city engaging with companies
- Equity impact assessment should go after pilot
- Add track for business that doesn’t require a permit but wants to work with city; policy change that is not a permit
- What are opportunities for partnership throughout lifecycle- not just solutions
- Funding/grants when solving a clear public benefit
- Clarity around equity and how we will measure

### **Establishing Connection**

- Innovation relationships even before a company created
- Ensure companies are solving civic problems
- Teeth and transparency for how to operate in the city
- Clear processes and intentions of equity assessments and scalability for small companies
- If only “googles” can apply, it’s not an equitable process
- Clear requirements and enforcement of rules
- Assess number of permits to ensure city isn’t favoring a small set of companies- make service more expensive
- Potential for no permit and how to make that decision
- How do we allow companies to continue operating while we are creating a permit?
- Avoid creating a new permit with ever new tech
- Multi-disciplinary committee to assess impact, share research and what safeguards companies already have in place
- Peer-review commission

### **Who Initiates Connections?**

- TechCrunch and other “forum” as resource
- City needs a front door to facilitate feedback with public
- Need clarity for rules of engagement
- “You don’t know what you don’t know”
- Research and get people to come to you- or make it required or provide benefits/incentives
  - Multi-city partnerships or facilitate test in other city (however, not all cities are equal)
- Unknown technologies = unknown problems

### **Where Does The Community Weigh In?**

- Broader participation from more cities
- What tech is applicable to this process?
- Company data sharing and piloting?

### **Establishing Connections/Forecasting**

- Impact analysis research in other cities
- What incentive for startup to engage with CCSF?
- Who is accountable to initiate engagement?
- Before forecasting initiate info sharing
- Engage with incubators

### **Working With City And Testing In SF**

- If specific problem is not presented but company has solution, can they still test?
- “Regional” may need just local



- Test in smaller area vs citywide or regional
- City specific pilot areas may not work best for company
- Call for solutions for the city such as early reach out to ET sectors
  - By the time a technology exists, the “call for solution” is focused on VC funded tech to operate, not necessarily helping solve a city issue
- Apply the “playbook” approach to establishing a connection
  - Outline steps for age groups to reach out to the city- makes it less intimidating
- Testing in a “community of concern” under the umbrella of a low-risk pilot is a good way for the company to move forward with expansion
- Don’t test in communities without their permission!
- Community engagement in every phase (remember city is working for the community)
- Engage with incubators to understand new tech forecasts/what is coming
- Regional sandbox benefits to get best practices
- Work with companies to understand their needs for testing
- Who makes the first move/call?
- How will a “regional sandbox” approach balance out the different cities/counties (or group of cities) to be an attractive testing zone?
- What if the technology has already been tested (and tested successfully) in another city?
- What if it’s not SF regulatory framework? What proof of success would the vendor have to show so the “pilot” step could be skipped?
- Do the same rules apply to tech firms?
- What types of startups would be most relevant for this process? Would it be like Airbnb several years before the regulations actually get implemented?
- Build relationships; public hearings; community outreach activities
- What is the “public realm” and what applies/does not apply to this process? (clear definition needed)
- What would the “regional sandbox” include? Who should lead it (MTC)?
  - Offering vendors, the opportunity to pilot in multiple cities simultaneously could be a benefit that incentivizes collaboration
- Equity impact assessment- Would the new “service” or product have any effect on current labor laws? Would it increase wage inequality?
- How would the city capture the public’s needs/wants? How would this set priorities? How could this be solicited?
- How long will pilots last? Different duration for different projects? How to be fair to applicants?
- IRB- like protocol application pre-pilot
- What is the incentive for companies to engage with the city (at info exchange level)?
- Parallel paths: City needs and calls for solution related to the call for tech; tech has existing solutions and wants to find place to prove it
- “Information exchange” needs to take into consideration the resources that already exist within the city
  - Ex. Transportation tech emerges in cities with bike lanes, but e-scooters aren’t welcome in bike lanes
- Can the city track startups that are being funded that will likely affect the city? E.g. headlines on TechCrunch and reach out first?
- Benefits of “testing” together and achieving permit benefits can be advertised for user to be interested in playbook
- What is the process for technologies that impact non-physical space? How does the city create incentives for collaboration beyond regulations?
- Extend civic bridge and startups in the city programs; increase demo day participants
  - For example: South San Francisco would not be as enticing as a pilot that gets to choose 2-4 cities in San Mateo county



## Station #3: Emerging Technology “Front Door”

### Problem

For emerging technology products, their impact on and benefits for San Francisco residents may be hard to define at first. This makes it difficult to create rules, and there is no single place in the City to ask questions about permit rules.

### Recommendation

An Emerging Technology Front Door should be created to help anticipate upcoming technologies and help navigate the permitting process. Specifically, their responsibilities include:

- Focus on the needs of residents, tourists, and small business
  - Emphasis on equity, accessibility, data ethics, cybersecurity, and privacy
- Have strong technology credentials
  - Understands the technology community
  - Policy expertise
  - Prototyping and piloting experience
  - Conduct impartial impact analysis for residents & technical areas
- Have strong permitting relationships
  - Legislative expertise
  - Manage a “predictable & certain” permitting process
  - Authority to resolve internal conflict

### Group Discussion / Feedback

#### Focus On The Needs Of Residents, Tourists And Small Businesses

- Needs of businesses and tourists: restore M.O.N.S. mayor’s office of neighborhood services
- Early feedback on expectations with quantifications
- Assess SPRON permit relations; survey new permittees by type of business as to satisfaction; 10 months after issuance to get data before renewal
- How can you make this equitable?
- Connector/ match making
- Communication + all departments on the same page (3)
- Ability of staff to provide clear directions/ understanding of permitting process
- Provide real time status tracking of application/process
- Commitment promise of going through front door
- How are needs identified? Can I submit a need?
- Not just needs of residents, tourists, etc. but also benefits to them
- Clarify the benefit for the vendor to connect with the city (in addition to its being a requirement, if it is one) (3)

#### Front Door

- Have no barriers to entry; front door would be very accessible to all
- Front door department needs good communication skills, to be adequately qualified, and to move quickly
- Entry through front door should be required and there should be NO back door (4)
- Front door to serve as a forum for collaboration- foster communication between various stakeholders who may not engage otherwise.
- How can the front door operate as a resource to connect tech companies to communities, for instance, when they are designing new tech?



## Have Strong Technology Credentials

- Emphasis on equity, accessibility, data ethics, cyber security, and privacy
- Understand the technology community (7)
- Prototyping and piloting experience (1)
- Conduct impartial impact analysis for residents and technical areas (8)
- Policy expertise (2)

## Triage & Speed

- Open-minded: creative on how to work with company
- Need to demonstrate value; show how companies have moved through this process and succeeded
- Some sort of evangelizing/capacity around shared values to help attract companies with your interests in mind (1)
- Use tech to make process faster AI/ML city opening its send for its benefits to tech
- Should be able to serve as a connector to other departments/resources beyond just case managing
- Speed up regulatory process
- Ability to quickly triage impact or applicability to the “public relations” (not key to end-to-end solve all issues, but at least gave applicability) (3)
- Agility to evolves as needed

## Connector/ Matchmaking

- Build relationships between permittees and city agencies; be a conduit between to the two; taking burdens off both permittees and agency staff (3)
- Be a resource to show value
- Connect city departments
- Act as a matchmaker between tech and community; build bridges between both constituencies (2)
- Important to have an “insider” person working in the office; maybe half time working in Silicon Valley

## Visibility / Transparency

- Tracking: where is my proposal in the process? (1)
- The front door should be all submission by company available to the public; public could comment/rate on whether to move forward as-is or with changes (1)
- Set expectations: timeline, approval needs, etc.
- Responsive: tech companies work fast
- Understand possible impacts (good/bad) of tech on the community/neighborhoods (6)
- Clear flowchart of instructions (paired with timeframes) for emerging tech vendors (9)
- Remember that they work for the community (3)
- Understand the City’s policies and goals (so they understand/convey how tech related to city values)
- Neighborhood based meetings with residents and companies
- Official discussions of shared data
- Regular reoccurring “town hall” type meetings to discuss ideas, air grievances and provide updates without getting into concerns of privacy and competitions
- Be clear on terms of testing vs deployment (1)
- Understand terminology in tech i.e. testing vs deployment
- Where is big business captured in this? i.e. if google has a new tech that effects residents
- I don’t think anyone department will be able to have expertise required to do all this for all tech sectors
- Big picture: city situation and policy, obstacles, tips
- Need a front door as very effective referral to appropriate department (3)
- Quick diagnostic before proposal (for startups)
- Not just permits but also for policy change (4)



## Community & Neighborhood Inclusion

- Barrier to entry: capacity of office/queue and cost/time that are creating winners/losers
- Process/ info management
- Impact analysis: should include tradeoff analysis (1)
- Equity and representation
- Thought leadership around the kind of city SF wants to be: “future work”; proactive not reactive (1)
- Be an area for technology companies to talk with individuals who have access to the data results of the needs of the community
- Liaise between community and tech firms (3)
- Take the time needed to truly ensure tech serves the needs of the community

## Design/ Navigation & Use

- Front door should have deep ties with departments involved (2)
- Homepage easily findable from google search (1)
- Query routing
- Proactively reach out to new groups who may not know about Front Door
- Community referral form to refer new companies to Front Door (1)
- How can we ensure this “Front Door” is a two-way system? That there is space for dialogue and collaboration between SF and companies? (1)
- Partnership on data/research: identify city data that exists; identify research gaps; explore impacts/consequences (1)
- Two offices:
  - Office of tech administration (to avoid regulatory capture) that would focus on accessibility, etc.
  - Office of tech navigator (to act as advocate and guide for tech companies) - focus on prototyping, navigating, etc.
- Tech navigator
- Clear design principles around tech/ emerging tech
- Area for collaboration to coordinate across the departments of who needs to be involved in deploying the technology or could benefit
- Strong technological credentials; have trainings to update city on new tech and innovations are being used in SF (1)
- Make it as easy and simple and fast as possible for startups to go through “Front Door”! Otherwise this will be overhead to innovation and desire to maintain status quo (1)
- Ability to work with crossover technology; stuff that falls under multiple categories (1)
- How might we engage early with designers and technology in their development of new products and services (1)
- Forum for collaboration
- No redundancy; streamlines that don’t slow down process (1)
- Understand the emerging technology sector and #1 priority is the protection of residents and public infrastructure
- Tech policy expertise
- CBA over volume of opposition
- Define impartiality

## Communication

- Clear website with chronological checklist of info, links to other info (6)
- Forum for questions
- Frame technology for audience customer/resident or customer/merchant
- Communications to SF residents who want to be involved/join pilots
- Effective communication of controlling the message
- Subdividing the SF populations
- Desire for companies to share their message effectively and clearly



- Hold focus groups and be a central point to collect other focus groups on the needs of the residents (10)
- Regularly open working group to pitch, process (3)
- Clear communication and reconciliation of evaluation metrics
- Needs a strong understanding of the city
- Central point; data centralization
- Help identify needs of departments and community (3)
- Clear messaging across stake holders of how to access Front Door and that it exists; with reliability, equitably employed
- Transparency to the public; type of proposals being made through this avenue and ability to give feedback (3)
- Be a resource (3)
- Template of case studies (2)
- Provide case studies based on technology that has worked in the past for better info sharing in startup community
- Sharing of learning from past deployments/ownership on business



## Station #4: Permitting Evaluation

### Problem

The impact of emerging technologies in public spaces can be hard to define, and often present new issues that not accounted for in existing laws. New rules are needed to protect San Francisco residents.

### Recommendation

Before launching a product to all of San Francisco, emerging technology products should be closely evaluated and tested for the following issues: impact on public spaces, equity, accessibility, data ethics, and security and privacy.

The idea is to develop a set of checklists and questions to determine whether or not to approve a pilot for an emerging technology, and if approved, for them to inform the criteria for evaluating the pilot. The checklists are: **Public Spaces; Equity; Accessibility; Data Ethics; Security & Privacy**

### Group Discussion / Feedback

Participants were asked to both ‘vote’ for the checklist item they thought was a great idea as well as provide their feedback to each checklist.

| PUBLIC SPACES CHECKLIST   | Votes |
|---|-------|
| Does the new technology satisfy all local and federal codes?  | 6     |
| Does the new technology meet the minimum ADA clearances requirements i.e. 6’ clear path of travel in commercial corridors?  | 3     |
| Does the new technology meet minimum vertical clearance requirements as required by local codes?  | 1     |
| How does the new technology benefit the public?   | 14    |
| Does the business model intend to monetize the public right-of-way?   | 23    |
| What are the proposed days and hours of operation? Will there be an elevated noise levels during operation during both day and night hours? If so, what are the decibel levels?   | 5     |
| Will the new technology be mobile, stationary or a combination of both? Where does the technology intend to operate i.e. sidewalks, parking strip, bike lanes, vehicular lanes of traffic?                                    | 18    |
| Thinking long term if the pilot is successful, who will ultimately be responsible for upkeep and maintenance. Who will assume liability? Is the business model sustainable long-term? Will checks and balance be established? | 12    |

### Feedback

- Will the tech require new or expanded infrastructure?
- How will the company evaluate impact of its product on the public spaces?
- List federal, state, and local codes
- Short term environmental impacts?
- How do you define public space?
- Does the solution/tech improve public transit?



- Federal codes- most tech does not fall under current federal codes; work with companies on understanding conflict in current regulations
- Needs to be broad enough to include technologies beyond mobility (streets, sidewalks)
  - Forecast: biotech/public infrastructure
- What is the next best alternative uses of the public resources and who gains/losses access to that resource directly and indirectly?
- Does current code make sense for city policy?
- If it does not satisfy local and federal codes, should we amend the code and why or provide an exception? Should provide a design review hearing? (1)
- One defining characteristic of “emerging tech” is that it does violate existing codes! This should not be a barrier (1)
- If it satisfies local and federal codes, is this because of lobbying? i.e. no helmets on scooters as of Jan 1
- Which “publics”? (requires balancing different public interests)
- How does the technology support/detract from/ engage with existing community strategies to create livable public spaces?
- What public space adjustments can ensure that all stakeholders concerns are addressed?
- #8 especially when company is sold/bought...
- Easy to say, hard to prove- what is that test?

| EQUITY CHECKLIST  | Votes |
|---|-------|
| Who will have access to the product? Who won't?   | 10    |
| Does your product directly address an identified inequity? If yes, which one(s) and how?  | 6     |
| How might your product improve equity indicators? For which communities?  | 5     |
| How might your product worsen inequity? What are your mitigation strategies?  | 16    |
| Does the product rely on algorithm that rely on historical data that may contain biases? What mitigation techniques are in place? | 16    |
| Have you consulted with underserved communities on your product's design or strategy?   | 26    |
| Describe how your plan for evaluating your product's impact on equity after launch.   | 12    |

**Feedback**

- Combine this with accessibility? (1)
- Are your equity solutions easy to use?
- For proven “emerging” techs, answers to these questions may be entirely hypothetical and not provable without a pilot. (2)
- Doesn't fit anywhere but how assessing “responsible” re: youth and others?
- Could conflict if there are environmental constraints in the underserved communities and can create an unrealistic expectation?
- Consider facial recognition software and its impact on trans people in the community
- There will need to be some “onboarding” to bring people along
- How does it affect current workforce?
- Does the solution compete with public transit? If so, what mitigations could be mutually beneficial?



- How would a company know if a new product underserves any community? (1)
- Quantify this with a single metric score
- The city should make it clear to companies that if they do not follow the guidelines to do/initiate business with the city there will be a strong penalty financially.
- What do we mean by “worse” inequality? Are we providing clear guidance and technology to build solutions?
- Perhaps provide standard metrics and city-used categories for gender, race/ethnicity, so data is comparable across proposals
- Establish equity indicators
  - Decrease car dependencies
  - Improve air quality
  - Accessibility at all ages
- How are we pre-testing questions to make sure data isn't skewed or biased?
- How does it impact/benefit LGBTQ+ community?
- If you haven't consulted with underserved communities, what is your plan to do so? What support do you need?
- What plans are in place for education public about the tech/implementation?
- Possibly equity indicator dashboard
  - Displacement
  - Digital divide
  - Financial Access
- Who is funding data collection on equity?
- Do you have a strategy to address historically underserved or disenfranchised populations?
- Is lack of equity/access bad? How equitable does it need to be?
- How can individuals provide consent for use of personal data?
- What are the following economic impacts to the community?
- Less affluent kids/teen/adults help on education about amount of time spend on tech and how does that affect behavior?



| ACCESSIBILITY CHECKLIST   | Votes/Notes  |
|---|--|
| Is the product intended to be used in the public right-of-way?  | 8  |
| On the basis of safety and access, how will the following communities be impacted by the deployment of the product in public spaces? <ul style="list-style-type: none"> <li>• Deaf or hard of hearing</li> <li>• Mobility disabilities (e.g. wheelchair, walker, cane)</li> <li>• Blind or low vision</li> <li>• Cognitive (e.g. intellectual disabilities, learning disabilities, autism spectrum)</li> <li>• Mental health or psychological disability</li> </ul> | 16<br>2<br>1<br>5<br>0<br>1                                  |
| When others are using the product, how will people with sensory disabilities detect the product?  | 2<br>Invisible disabilities e.g. environmental sensitivities |
| What accountability mechanisms are in place when issues may occur?  | 9  |
| Has the product been tested to be physically accessible (504 compliance)?   | 4  |
| Has the web-based interface been tested to be 508 compliant?  | 6  |
| Has any voluntary product analysis testing been conducted?  | 4  |
| What mechanisms are in place for disabled communities to provide feedback on design on an ongoing basis?  | 19   |

**Feedback**

- Include W3C web accessibility guidelines
- Disability feedback part of the pilot rather than a requirement
  - How can some companies with products in PROW test with OWD's when they don't have a permit first?
- How do companies know how to have access to these communities?
- Would companies be required to comply with all disability categories on Day 1?
  - Back and forth communication on this would be helpful
- Could there be "exemptions" for compliance during user testing phases?
- Do most people know what this is?
- How does this tech impact social structures within communities (i.e. support/detract from interdependence)?
- Has testing included user testing from communities impacted?
- Pt. 2 cognitive- include dementia
- Pt 9- include seniors and deaf community
- What user testing has been done for accessibility?
- Does your product expand/improve accessibility for people with disabilities?
- What disability-related state/local/federal legislation or regulation currently applies?
- Were people with disabilities a part of the product development team?
- What is the financial impact on people with disabilities?



- If the product does not meet accessibility criteria, CCSF could issue fine. Money collected through fine could fund accessibility improvement.
- Products may affect people with disabilities even when it’s not in public right-of-way (i.e. drones in the sky).
- Applicants should be required to submit voluntary product analysis testing conducted.
- Has the applicant form a use case for disabled communities?

| DATA ETHICS CHECKLIST  | Votes/Notes  |
|--|--|
| Is the terms of service in plain language? In multiple languages?  | 6  |
| Does the company explain to users in plain language the type of data collected, collection methods, and how data will be used? | 16   |
| Do users have the ability to see what information the company has on them?   | 19   |
| What surveillance technologies does the product use?   | 2<br>Difference between: <ul style="list-style-type: none"> <li>• Clearly surveilling a specific user</li> <li>• Aggregate data</li> <li>• “Anonymous” personal capture e.g. your photo is taken on a street mapping camera</li> </ul> |
| Is there an option to use the service but “opt out” of providing personal information?   | 7<br>Separate opt out for non-functional data (e.g. data not needed for the tech to work; e.g. specific age not needed to operate a scooter)   |
| Will personal information be sold as a commodity?  | 8  |
| Does the product use an algorithm that is based on historical datasets with potential biases in it?                            | 11   |

**Feedback**

- Is there a baseline for sharing between avenues?
- Does the company explain what rationale is used in its AI (algorithm) to come up with decisions?
- How do you decide what data is necessary and needed vs. what is just nice to have?
- Does the product have a feature to remove their data when a user wants to end service?
- Can the vendor sell the data being collected even if it is de-identified?
- How can you use the rigorous technique to correct for this bias?
- What biases may be present in the provisional data sets?
- Will data be provided to the city for planning/ to help city meet its goals?
  - Provide enough data that city can test the success of the pilot
- What impact study will be done on company’s data sets and outputs created from its algorithms or AI?
- How do we prioritize data that we think will really benefit residents?



| SECURITY & PRIVACY CHECKLIST   | Votes/Notes   |
|--|---|
| What kind of data will be stored, processed, or accessed?                                      | 3   |
| What is the data retention policy for each type of data collected?                             | 4   |
| Will sensitive data be stored, processed or accessed by a third party?                         | 10<br>Where are the data stored?<br>In what country?                  |
| What is done with data collected that is not directly related to the business?                 | 8<br>Does the emerging technology follow the precautionary principle? |
| Does the company follow any industry security standards? Which one?                            | 8   |
| Can independent verification be provided to show security standards are in practice?           | 6   |
| Will the product be connected to City infrastructure? (e.g. network, streetlights, power grid) | 8   |
| Does the company have an incident response plan?   | 6   |
| What is the contingency plan for a data breach?  | 9   |
| What happens to data if the company is bought, sold, or shut down?                             | 7   |

**Feedback**

- Can data be shared with different organizations if the data is beneficial to the community?
- If required to share data with public agency, how will private info be protected?
- Will company or organization share data with the city if data is connected to key metrics?
- What kinds of data should companies be required to share with the public? And vice-versa?
- What levels of aggregation will protect user data while providing city with enough data to evaluate pilot or program (and create policy)?
- Will data be made available to City for evaluation of safety, reach, equity, etc.?
- Can data be collected/ used for other uses than the initial department?
- How will individual data be analyzed and protected?
- When determining checklist, what is standardized/baseline for new tech and what is considered “above and beyond”?
- Transportation tech is usually independent- what would it look like if city-controlled infrastructure and dictated the way emerging tech is rolled out?
- Is there a way to verify this and summarize for residents w/o confusing clear language needs identified in the Data Ethics Checklist?
- Expand language to include compliance with federal, state, and local regulations
- Is participation advertised that and what data is collected with option to opt out?
- Is data collected functionally or used for collateral revenue (ads)?