

Appendix F: Prototyping Evaluation Criteria for Emerging Technologies

Before launching a product to all of San Francisco, emerging technology products must comply with a series of minimum requirements to operate in public spaces. New products with unforeseen impacts should be also closely evaluated and tested on a variety of issues, most notably on their impact on public spaces, equity, accessibility, data ethics, and security, and privacy among others.

The following describes some of the regulatory requirements all products must satisfy to operate in public spaces, followed by some proposed checklists to evaluate emerging technologies.

San Francisco Regulatory Minimum Requirements:

1. An applicant may be required to comply with various regulations, including:
 - a. Americans with Disabilities Act (ADA), Title II (28 CFR part 35) and Title III (28 CFR part 36).
 - b. ADA Accessibility Standards for Accessible Design (ADAS); 2004 ADA Accessibility Guidelines plus above federal regulations.
 - c. California Civil Code, commencing with section 51; The Unruh Civil Rights Act.
 - d. California Government Code, commencing with section 4450.
 - e. California Building Code (CBC); CCR Title 24, Part 2.
 - f. California Vehicle Code (CVC).
 - g. California Streets and Highways Code (CSHC).
 - h. San Francisco Better Streets Plan.
 - i. San Francisco Privacy First Charter Amendment and subsequent legislative requirements.
2. In testing situations where food or other goods are being delivered, additional approval may be required from other stakeholder agencies, including but not limited to the Department of Public Health, SFMTA, etc.
3. All user controls and operating mechanisms shall be accessible in accordance with CBC Section 11B-309 and the ADAS Section 309.
4. If there is interaction for users (both operator and end user), accessible reach ranges to all controls and operating mechanisms shall be provided in accordance with as described in the 2010 ADAS Section 308 and CBC Section 11B-308.
5. The Permittee shall comply with the current Fire Code and guidelines including providing and maintaining minimum distances required for building access, exit egress, and access to SFFD protection services.
6. The new technology shall satisfy all federal, state and local laws and regulations.
7. The new technology shall meet minimum vertical clearance requirements as required by local codes

Minimum Accessibility Requirements on sidewalks:

1. The new technology shall provide a minimum clear path of travel meet the minimum ADA clearances requirements 6' clear path of travel in commercial corridors and 4' clear path of travel in residential corridors.
2. A minimum two (2) foot clearance is required along the curbside when operating adjacent to existing on-street parking.
3. Emerging Tech Shall not block or obstruct an accessible route (typically the pedestrian throughway zone as defined in the SF Better Streets Plan, plus facility entrances, public and private transit stops, passenger loading zones and accessible on-street parking spaces). Emerging Tech shall move out of an accessible route when a pedestrian is present and shall allow the unencumbered passage of pedestrians within the public right of way.
4. Placement on the sidewalk must not in any way interfere with curb ramps, access to the building, driveways or access to any fire escape.

5. No element of the proposed Emerging Tech may interfere with access to or egress from any building or facility.
6. No element of the proposed occupancy may be below a fire escape, obstruct access to a Fire Department Connection (FDC) , or fire hydrant.
7. Shall not impede street furniture
8. Shall not be allowed over a manhole, public utility valve or other at-grade access point in the street or sidewalk and may not be bolted to the roadway.

General Operating Requirements:

1. Submit a copy of the S.F. Business License Certificate
2. Bonding Requirement (if applicable)
3. Public Notification (if applicable)
4. The permittee shall be responsible for any damage to any facilities of the City, including but not limited to, San Francisco Public Works, the San Francisco Public Utilities Commission, and public utility companies due to this occupancy.
5. Permittee agrees on its behalf and that of any successor or assign to hold harmless, defend, and indemnify the City and County of San Francisco, including, without limitation, each of its commissions, departments, officers, agents and employees (hereinafter collectively referred to as the "City") from and against any and all losses, liabilities, expenses, claims, demands, injuries, damages, fines, penalties, costs or judgments including, without limitation, attorneys' fees and costs (collectively, "claims") of any kind allegedly arising directly or indirectly from (i) any act by, omission by, or negligence of, Permittee or its subcontractors, or the officers, agents, or employees of either, while engaged in the performance of the work authorized by this Permit, or while in or about the property subject to this Permit for any reason connected in any way whatsoever with the performance of the work authorized by this Permit, or allegedly resulting directly or indirectly from the maintenance or installation of any equipment, facilities or structures authorized under this Permit, (ii) any accident or injury to any contractor or subcontractor, or any officer, agent, or employee of either of them, while engaged in the performance of the work authorized by this Permit, or while in or about the property, for any reason connected with the performance of the work authorized by this Permit, or arising from liens or claims for services rendered or labor or materials furnished in or for the performance of the work authorized by this Permit, (iii) injuries or damages to real or personal property, good will, and persons in, upon or in any way allegedly connected with the work authorized by this Permit from any cause or claims arising at any time, and (iv) any release or discharge, or threatened release or discharge, of any hazardous material caused or allowed by Permittee in, under, on or about the property subject to this Permit or into the environment. As used herein, "hazardous material" means any substance, waste or material which, because of its quantity, concentration of physical or chemical characteristics is deemed by any federal, state, or local governmental authority to pose a present or potential hazard to human health or safety or to the environment.

6. Permittee must hold harmless, indemnify and defend the City regardless of the alleged negligence of the City or any other party, except only for claims resulting directly from the sole negligence or willful misconduct of the City. Permittee specifically acknowledges and agrees that it has an immediate and independent obligation to defend the City from any claim which actually or potentially falls within this indemnity provision, even if the allegations are or may be groundless, false or fraudulent, which obligation arises at the time such claim is tendered to Permittee by the City and continues at all times thereafter. Permittee agrees that the indemnification obligations assumed under this Permit shall survive expiration of the Permit or completion of work.
7. Permittee shall obtain and maintain through the terms of this Permit general liability, automobile liability or workers' compensation insurance as the City deems necessary to protect the City against claims for damages for personal injury, accidental death and property damage allegedly arising from any work done under this Permit. Such insurance shall in no way limit Permittee's indemnity hereunder. Certificates of insurance, in form and with insurers satisfactory to the City, evidencing all coverages above shall be furnished to the City before commencing any operations under this Permit, with complete copies of policies furnished promptly upon City request.

In addition, the Emerging Technology Open Working Group drafted criteria the City could use to evaluate issues specific to new technology. Some of these issues are still evolving and thus current regulation does not capture them. The following checklists may be helpful to develop evaluation criteria that are being tested in San Francisco public spaces.

Equity Checklist

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

Additional Accessibility Checklist

1. Is the product intended to be used in the public right-of-way?
2. On the basis of safety and access, how will the following communities be impacted by the deployment of the product in public spaces?
 - Blind or low vision
 - Chronic health (e.g. autoimmune, neurological)
 - Cognitive (e.g. intellectual disabilities, learning disabilities, autism spectrum)
 - Deaf or hard of hearing
 - Mental health or psychological disability
 - Mobility disabilities (e.g. wheelchair, walker, cane)
3. When others are using the product, how will people with sensory disabilities detect the product?
4. What accountability mechanisms are in place when issues may occur?
5. Has the product been tested to be physically accessible (504 compliance)?
6. Has the web based interface been tested to be 508 compliant?
7. Has any voluntary product analysis testing been conducted?
8. How may disabled communities benefit from the availability of this product?
9. What mechanisms are in place for disabled communities to provide feedback on design on an ongoing basis?

Data Ethics Checklist

1. Is the terms of service in plain language? In multiple languages?
2. Does the company explain to users in plain language the type of data collected, collection methods, and how data will be used?
3. Do users have the ability to see what information the company has on them?
4. Are surveillance technologies used in the product and are the implications made clear to users?
5. Is there an option to use the service but “opt out” of providing personal information?
6. Will personal information be sold as a commodity?
7. Does the product use an algorithm that is based on historical datasets with potential biases?

Security & Privacy Checklist

1. What kind of data will be stored, process, or accessed?
2. What is the data retention policy for each type of data collected?
3. Will sensitive data be stored, process or accessed by a third party?
4. What is the location of the data center where data is stored?
5. What is done with data collected that is not directly related to the business?
6. Does the company follow any industry security standards? Which one?
7. Can independent verification be provided to show security standards are in practice?
8. Will the product be connected to City infrastructure?(e.g. network, streetlights, power grid)
9. Does the company have an incident response plan?
10. What is the contingency plan for a data breach?
11. What happens to data if the company is bought, sold, or shut down?