

Gear Shift

Driving Change in Public
Sector Technology through
Community Input

By Meg Young

With Sarah Fox, Vinhcent Le, and Oscar J. Romero Jr.

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Executive Summary

Government technology increasingly mediates access to essential services and impacts residents' rights. As a result, technology purchasing has never been more high stakes: choices about how to define a problem, which systems meet that need, and how those systems are designed have immediate and long-term consequences.

However, government technology decision-making processes rarely feature robust public input. Historically, many governments have considered information technology to be "IT," and primarily an internal matter. There are also misconceptions about what the public is prepared to advise or inform.

It is essential to recognize the forms of expertise that residents and affected communities contribute: They should play a key role in problem formulation, ensuring that novel technology adoption is well-articulated to the needs on-the-ground. Community groups can also help identify blind spots: key risks and problems that must be addressed before a project should move forward.

Gear Shift: Driving Change in Public Sector Technology through Community Input emerged from a gathering of advocates, activists, government staff, academic researchers, and other public interest technologists in October 2024 in New York City called "Gear Shift," which set out to define how government technology adoption could better elicit and follow the input of the people most affected. Many people present raised the concern that eliciting public input will only create ostensible change, without meaningfully challenging the deeper power asymmetries in government encounters with community groups. Others described how government transparency in the form of early announcements of tech under consideration, and relationship-building between public agencies and local community-based organizations can be valuable for longer-term change.

This primer describes these key challenges and argues for pre-procurement community engagement, that is, that the most strategically important time to elicit community input is before a procurement process begins. Increasing community involvement in decision-making about government technology will require public agencies to:

- » Embrace early stage announcements and informal social media post formats to increase transparency;
- » Provide more visibility into government decision-making and project funding;
- » "Just try;"

And all stakeholders in the public interest technology ecosystem to:

- » Adopt the principles of design from the margins;
- » Seek opportunities to foster cross-sector relationships;
- » Support community-based organizations with strong questions to ask;
- » Internalize community critiques into more robust assessment frameworks; and
- » Begin massive-scale public education efforts on AI 101.

However, the value of pre-procurement participation also comes with a warning; a number of Gear Shift workshop participants remind that such participation can be costly for marginalized communities. This truth requires careful consideration of how and when to follow the guidelines offered here.

Introduction

In 2021, researcher Alexandra Mateescu found that the mobile apps used to pay home health care workers for Medicaid recipients are built on flawed, harmful assumptions.¹ These apps, called electronic visit verification (EVV), were created to verify care workers are serving their clients and to prevent fraud — but do so by surveilling workers' locations multiple times a day, and geographically limiting where services can be provided. Everyday activities like grocery shopping can be flagged as exceptions and often result in withheld or delayed payment. Minor data discrepancies could put service recipients' access to critical services at risk, while jeopardizing their workers' employment. The state agencies buying and using these apps waited until too late in the design process to seek feedback. The result? Rigid, onerous, and invasive systems: EVV apps act as a digital tether, often keeping service recipients and their care workers at home.

At this moment, state and local governments must take the lead in demonstrating how technology can be designed to protect residents' rights and support their needs.

The software developers' broken assumptions behind EVV apps misunderstand workers, service recipients, and their typical workday. This failure underlines a powerful reality about government software systems: government workers usually make key decisions in private — far from those who will be most affected. Instead, public agencies often make technology adoption decisions without community input. When public engagement

1 Alexandra Mateescu, *Electronic Visit Verification: The Weight of Surveillance and the Fracturing of Care* (Data & Society Research Institute, 2021).

does happen, it is often at the end of a long purchasing process, after system adoption is a foregone conclusion and it is too late to make meaningful changes.

The present political moment raises the stakes of public agencies' refusal to engage. The current administration is dismantling public services from the federal government outward — technology and automation are being used as a pretext to further that goal.² At this moment, state and local governments must take the lead in demonstrating how technology can be designed to protect residents' rights and support their needs. Without these precautions:

- Public agencies risk creating broken or harmful digital services that exclude people from needed services;
- Data collected for one purpose can easily be reused or resold for another;
- Rapid system adoption and rollout can harm local democratic processes and public trust; and
- Technologies intended for vital support can be instead used to punitive ends.

These risks and gaps may not be visible to decision-makers in agencies, but are clear to the people who will ultimately bear their impact.

To be clear, many people believe that any use of government technology is always a means of rationalizing and reducing access to services. However, public interest technologists are developing a set of practices for data, software, and services to protect residents' rights, promote access to benefits, and prevent harm.³

This work is addressed to government employees and community-based organizations' staff members, as both are required to drive public sector technology by community input. Public agencies must **re-configure internal constraints** that make community input peripheral to their tech purchasing processes. And to meet this change, local organizations and advocacy groups will also play a critical role in continuing to **channel and amplify** impacted communities' needs. For example, **unions representing home care workers like Service Employees International Union should have been consulted as a primary authority** on what underlying assumptions should guide EVV system design. Instead, disability rights organizations, labor unions, and advocacy groups had mobilized to warn both federal and state-level agencies that EVV implementation would lead to major harms — but federal policy guidance issued to state Medicaid agencies failed to address the stakeholders' early

2 Emily M. Bender and Alex Hanna, *The AI Con: How to Fight Big Tech's Hype and Create the Future We Want* (Harper, 2025); Kevin De Liban, "Austerity Intelligence," *Tech Policy Press*, June 4, 2025, <https://www.techpolicy.press/austerity-intelligence/>; Kate Brennan, Amba Kak, and Dr. Sarah Myers West, *Artificial Power: 2025 Landscape Report* (AI Now Institute, 2025), https://ainowinstitute.org/wp-content/uploads/2025/06/FINAL-20250603_AINowLandscapeReport_Full.pdf.

3 Maria Filipelli, "Public Interest Technology," in *Keywords of the Datafied State* (Data & Society Research Institute, April 24, 2024).

concerns. As a result, flawed premises encoded in both policy and tech vendors' product design shaped how state agencies imposed EVV systems on communities. At the local level, the general public was only consulted when it was too late to make meaningful changes, and only then after affected communities had already begun to experience harm on the ground. In this guide, we define the core commitment that will help avoid this mistake in the future: pre-procurement community engagement.

This primer follows the October 2024 Gear Shift event, a small, two-day workshop of experts convened to discuss how communities (and the organizations that represent them) might better drive decision-making about government technology. It also draws on a closely related salon series on community engagement hosted by Data & Society and GovAI Coalition with academics and government employees that took place online February–March 2025 via the Public Tech Leadership Collaborative. Part 1 explores why public agencies do not usually look to the affected people for technology design. Part 2 explains why technology purchasing, called *procurement*, will be a focal point for needed change. In Part 3, we share our call to action — a deeper gear shift, in which community input is prioritized **pre-procurement**, before the government has even begun a pilot project. In Part 4, we outline specific opportunities and tactics to this end.

Pre-procurement engagement acknowledges residents' critical expertise on how technologies will affect their lives — expertise that technologists and government employees often lack.

Why Affected People and Community Groups are Sidelined

Today, many technologies that the government adopts are purchased without robust community input. In this section, we outline four core barriers — undervaluing community input; time and resource constraints in government and communities, and lack of trust — that leave affected people in the periphery during the procurement process.

Barrier #1: Undervaluing community input

Many government agencies focus on the technical aspects of government IT systems: the specialized data, software, and technology that data scientists and computer engineers are usually hired to advise, and the business case (i.e., the project objectives, cost estimates, and implementation) that project managers supervise. By focusing on these skillsets, some public agencies proceed as though the public does not have the necessary technical expertise to provide insight on technology purchasing decisions and processes, or that their input would be **based on misunderstandings** about the core technologies and how they work. For example, a city agency may be interested in purchasing a system to assess traffic volume over time, and discard or deem as irrelevant community concerns about how that system could be used for surveillance. Decisions like these are typically assigned to project managers based on business needs, far removed from residents.

However, people in government have blind spots that community input can help complement. First, resident input is needed to ensure that an agency's problem formulation is correct. That is, residents should help ensure that the problem that the technology purchasing sets out to solve is precisely targeted at the real needs on the ground. For example, a city agency targeting excessive traffic volume over time might overlook more urgent needs around pedestrian safety in the same corridor, which can only be identified through community dialogue. (Indeed, a sole

focus on speeding up travel times through a given area would exacerbate risks to pedestrian safety.) In this way, residents hold valuable expertise that some public employees may overlook.

However, leaving outreach until the end of a project means that many or all aspects of the work are already baked, that is, unchangeable.

Second, residents can point toward needed risk mitigation strategies: if a community has concerns about surveillance, data retention, or law enforcement data re-use, these questions present an opportunity for the agency to ensure that residents' digital rights are being protected (e.g., by making sure the vendor is using techniques like privacy-by-design). Communicating with the public about how these best practices are followed is an important part of preserving public trust. In the case of EVV, it appears that app developers made an assumption about caregiving (i.e., that it takes place entirely inside the home) that was fundamentally flawed, and had severe downstream consequences. Caregiver input would have helped identify this problem before it caused harm.

Barrier #2: Time and resource constraints in government

Government workers often describe the numerous constraints that prevent their outreach to community groups for input (e.g., time, money, staffing, approvals, and support from leadership, as well as resources for compensating participants or interpreters). They operate under tight budgets and deadlines, while also facing leadership that might not be interested in supporting initiatives for robust public engagement. When there is time and funding for outreach, workers' need for approvals, finding staff, and other resources to support community input can nevertheless introduce delays. Public engagement is not considered part of a minimum viable product; that is, it is not usually a core requirement of a project, and may easily be cut under the pressure of limits on time and other resources. Often, when such engagement does happen, it occurs at the end of a purchasing process to raise awareness of a new service or project. However, leaving outreach until the end of a project means that many or all aspects of the work are already baked, that is, unchangeable. In such cases, it may be too late for public employees to act on the feedback they receive.

Tight budget and capacity constraints on government agencies have resulted from decades of discourse on government inefficiency, and are not easily addressed.⁴ However, government

4 Beginning in the context of recession in the 1970s and 1980s, a government trend called "new public management" set out to apply the market logic of competition, disaggregation, and incentivization to the public sector performance and practices to address government waste. The public sector sought to adopt private

workers should also understand that community outreach does not have to be time and resource intensive. In our two-day workshop, Oscar J. Romero Jr., Chief Information Officer at the NYC Civic Engagement Commission said: “The bar is low. Some thoughtful civic engagement is better than none. Make a phone call, do user research, talk to people; that would be better than nothing. Don’t let the perfect be the enemy of the good. You can only get better at what you practice.” Romero highlights the gaps evident in today’s conventional practice, which results in many programs not seeking community input at all. Instead, even lightweight or direct outreach presents the opportunity to improve a project underway and to build agency capacity. Even “making a phone call,” called heuristic evaluation, is based on the observation that it is very easy for experts to identify problems, which are more obvious to them. In the same way, communities’ experiential expertise makes it easy for them to flag an issue, even in a brief encounter.⁵

Barrier #3: Time and resource constraints in communities

Community members are likely to be stretched thin, or far beyond their capacity. Residents balance their time between work, family, and their communities. Therefore, engaging with the government can feel like an undue burden. When giving input to the government becomes a priority, it is usually because of an emergency; for example, a working parent who must prioritize a school board meeting is likely facing unacceptable funding cuts to a child’s school, library, or afterschool program. When a threat is not urgent, engaging with the government is unlikely to be a priority. In many places, there is a deeper legacy of broken trust. Communities that have experienced neglect or harm through systemic underinvestment and carceral systems are unlikely to believe that engaging government is worthwhile. Others may experience burnout from previous attempts to get involved. Many people may be shaped by experiences of deep power asymmetry, in which their input did not make an impact in the final policy or decision.

sector management styles, such as product-based teams, top-down management, performance measurement, and leaner budgets. Citizens are re-imagined as “clients” or “customers” of government services. Reforms to the bureaucracy were intended to increase the efficiency of service delivery. Governments also came to understand their role as a catalyst for private enterprise. As a result, the state has increasingly ceded ground to the private sector for the provision of services, embracing a technical managerial role over direct service provision. C.f. Patrick Dunleavy, Helen Margetts, Simon Bastow, and Jane Tinkler, “New public management is dead — long live digital-era governance,” *Journal of Public Administration Research and Theory* 16, no. 3 (2006):467-494.

- 5 Meg Young, Lassana Magassa, and Batya Friedman, “Toward inclusive tech policy design: a method for underrepresented voices to strengthen tech policy documents,” *Ethics and Information Technology* 21 (2019): 89–103.

Government workers should also understand that community outreach does not have to be time and resource intensive.

One way for the government to be more responsive to these legacies is to locate community outreach in places where people already are. For example, public outreach regarding a bike lane could take place at an Earth Day gathering, or by setting up a table to share information at a public park or bike trail. For outreach on technology, consider approaching local community organizations and neighborhood associations to hold engagement sessions on-site at their own offices to elicit residents' reactions, expectations, and concerns. For example, the City of San José in California worked in collaboration with our team at Data & Society to seek community input on multiple proposed use cases for object detection technology; on-site sessions at organizations protecting immigrants' rights and those serving people experiencing homelessness helped to narrow the scope of what use cases the city considered moving forward.⁶

Another best practice is to allow for “bottom-up” problem identification, without the government over-determining the scope of the conversation. For example, the NYC Civic Engagement Commission (CEC) leads the NYC Citywide Participatory Budgeting program, known as The People's Money. The program has four phases that combine participatory and deliberative democracy: idea generation, borough assemblies, voting, and implementation. In the idea generation phase, the CEC partners with community based organizations to host community workshops; every fall, between 9,000 and 12,000 New Yorkers engage in 400-500 workshops that are held in 12 languages in the neighborhoods where inequality is the

6 “The San José Information Technology Department Digital Privacy Team partnered with the Algorithmic Impact Methods Lab (AIMLab) at the Data & Society Research Institute to assess the impact of AI object detection technology. To ensure an inclusive engagement process, the team prioritized groups that research has shown may be disproportionately impacted by AI-powered vision systems: people experiencing homelessness, bicycle commuters, Black residents, and immigrant communities. By gathering input from these groups, the City sought to understand digital rights concerns and identify AI use cases that would be compatible with public trust. Two community organizations — Amigos de Guadalupe and the Vietnamese American Organization — participated in engagement sessions conducted in Spanish and Vietnamese with in-person interpreters. The sessions provided an overview of object detection technology and its potential applications, facilitated discussions on community concerns, expectations, and ideas for implementation, included a Q&A session with members of the Digital Privacy Team.” The City also worked directly with Destination: Home and the Lived Experience Advisory Board of Silicon Valley. This feedback played a key role in narrowing the scope of the City's use of object detection technology to road safety purposes. City of San José Information Technology Department, Road Safety Conditions Pilot: AI Object Detection Initiative - Status Report. San José, CA: City of San José, March 20, 2025, <https://www.sanjoseca.gov/home/showpublisheddocument/119937>.

greatest.⁷ Between 2,000 and 4,000 ideas are collected every year.⁸ That creates an avenue for communities to set the priorities, and strategize about how those priorities should be addressed (e.g., residents might say they want more public safety, but they don't want more policing, crime predictability, nor surveillance; some have proposed transformative justice and placemaking strategies).

An additional best practice is to compensate community members for their time. In Long Beach, California, the LB Co-Lab initiative pays residents for their time to participate in a longitudinal codesign program, where residents work closely with city staff to bring forward community needs and co-design services that respond to them. Another important strategy is to proactively read and integrate already-published reports and documentation on communities' digital rights needs. Activist Sarah Hamid of the Electronic Frontier Foundation pointed out that "communities have already documented their concerns with these technologies" and argues that city employees should seek out that information during their internal deliberations.

7 NYC Taskforce on Racial Inclusion & Equity, "Neighborhoods," NYC Gov, <https://www.nyc.gov/site/trie/about/neighborhoods.page>.

8 For the second phase, The CEC convenes five Borough Assembly Committees made up of residents who applied online or in idea generation sessions to represent their borough. Every spring, 100-120 residents are selected through a sortition process based on four demographic categories, age, gender, race & ethnicity and level of education. In the committees residents deliberate the ideas, meaning that they can engage in discussion to determine community priorities. The assembly members deliberate throughout six meetings, held between January and February that last for a total of 16 hours. Ultimately, each assembly produces a ballot that is voted across the city by all New Yorkers 11 years and older, and regardless of immigration status. In the last phase, the winning projects are implemented.

REJECTING THE PREMISE OF COMMUNITY INPUT

It is essential to know that many activists and community advocates at our October 2024 Gear Shift event objected to the premise of this primer. Some attendees described how many people in marginalized communities are already pushed to the limit — managing the demands of daily life and repeatedly having to assert their rights within systems that continually fail them. Others raised the alarm that the premise (i.e., public sector technology should be driven by community input) is itself harmful; that community input simply creates a **permission structure**⁹ for government to signal that residents' opinions matter, when its deeper purpose is better understood as creating legitimacy for buying and using technologies that the government intended to anyway.¹⁰ That is, many people were skeptical that government agencies would genuinely listen to resident input and change course in response to public dissent. Ultimately, many were concerned that resident groups' attendance or participation would be framed as implicit endorsement for a government-controlled process, or even outcome, when it matters most.

Much of the discussion at the Gear Shift event was informed by experiences of mandatory community input in a specific model of surveillance legislation, the American Civil Liberties Union's (ACLU) model municipal legislation for regulating surveillance, known as Community Control Over Police Surveillance (CCOPS).¹¹ Many anti-surveillance activists have criticized CCOPS laws, arguing that its mandate for resident input has often served to legitimize, rather than challenge, surveillance practices.¹² ACLU's model legislation, or an adapted version of it, was passed in more than a dozen major US cities. It requires local governments to be more transparent about the surveillance technologies they use, assess their impact on communities' civil rights, proactively seek community input, and submit each technology up for approval by elected city council members. While surveillance CCOPS-based ordinances vary by city, activists argue that in many cases, they have created a framework for officially ratifying existing surveillance technology use.

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- 9 Usually, a "permission structure" is a term used to describe the conditions that allow a group of people to justify a change in a previously-held belief; the term is used in politics to describe how new ways of framing ideas can help to drive social change. In this context, the group used "permission structure" slightly differently, as the conditions that allow a government agency to do what it was going to do anyway while maintaining the appearance of seeking public input.
- 10 See also Bill Cooke and Uma Kothari, eds., *Participation: The New Tyranny?* (London: Zed Books, 2001). Cooke and Kothari argue that community participation in international development is used to ratify existing decisions of powerful actors around land use, water rights, and development of local forests.
- 11 Vincent M. Southerland, "The Master's Tool and a Mission: Using Community Control and Oversight Laws to Resist and Abolish Police Surveillance Technologies," *UCLA Law Review* 70 (2023): 2. See also Meg Young, Michael Katell, and P. M. Krafft, "Municipal surveillance regulation and algorithmic accountability," *Big Data & Society* 6, no. 2 (2019): 2053951719868492.
- 12 It is also important to note that some states are passing laws to "pre-empt," or override, a local government's ability to make decisions about city technologies. See for example Belser, Ann. "State House Bypasses Pittsburgh City Council and Mayor to Force Return of E-Scooters." NEXTpittsburgh, October 25, 2023. <https://nextpittsburgh.com/latest-news/state-bypasses-pittsburgh-council-and-mayor-to-force-return-of-e-scooters/>.

The best-documented case of local community activists' objections to CCOPS comes from Los Angeles, California. Vincent Southerland explains how Stop LAPD Spying and other local activists identify the surveillance ordinance as co-opting and ultimately undermining their grassroots organizing to abolish the use of surveillance technology, by channeling that impulse toward a bill that legitimized business-as-usual.¹³ The legacy of these CCOPS laws shaped the conversation in our October 2024 gathering. Some attendees had been closely involved with anti-surveillance organizing in their own communities; in the wake of these experiences, they emphasized that the premise of community input on government technology risks serving as a permission structure that legitimizes predetermined government decisions, rather than enabling communities to meaningfully shape or challenge the direction of technological governance.

Another objection to the premise of this primer was that it represents a form of imaginative capture: the idea that governments should seek community input on technology is so compatible with the prevailing political order that it may serve less to challenge the status quo than to reinforce it. One attendee, citing the Black feminist technologist and scholar Ruha Benjamin, noted that marginalized communities are “living in the imagination of others,” that is, that society is so deeply structured by race and class that even the realm of ideas and imagination is regularly structured by the same logics that uphold existing power relations.¹⁴ This person cautioned that imaginative capture obscures deeper structural issues: what might seem to some as an aspirational goal, such as community input on government technology, is not genuinely liberatory, and is instead an expression of the problem of white supremacy and its maintenance of power via institutions like government.

Others, responding to this critique, pointed out that well-resourced nonprofit organizations like Data & Society play a key role in creating and distributing ideas like these, which help uphold the status quo. They argued that white papers, primers, and research reports that are most compatible with the existing political order are harmful when they justify policies that hurt marginalized communities.

This primer takes seriously the critique that research and policy work frequently overlook the insights of the most affected. In response, we have sought review and input from people in community-based organizations prior to publication. These conversations have produced diverging perspectives about what recommendations are meaningful, appropriate, and, ultimately, worthwhile. Rather than resolve these tensions, this primer seeks to hold space for them — recognizing that the recommendations it offers may fall short. Our responsibility is to reflect these differences with care and honesty, and to remain accountable to these critiques.

13 The local reception to surveillance ordinances inspired by ACLU CCOPS legislation has varied across the country. While Los Angeles activists have publicly condemned the local surveillance ordinance, in other communities, advocates have pointed out that their surveillance ordinances have significantly slowed their city government's adoption of new surveillance systems. Nevertheless, information-sharing arrangements that a local police department may have with state and federal law enforcement means that it is possible for many police departments to access data from undisclosed surveillance tools.

14 Ruha Benjamin, “Race after technology,” in *Social Theory Re-Wired* (Routledge, 2023), 405-415.

Barrier #4: Lack of trust

Many community-based organizations have had the experience of participating in government outreach processes, only for their input to not be reflected in the outcome. This experience is not unique to technology decision-making; it darts across the history of the participatory turn in policymaking. In 1969, Sherry Arnstein diagnosed why some citizen participation initiatives can feel hollow, or merely symbolic, by illustrating the spectrum of different types of government outreach from those that centralize power in government the most, to those that best distribute decision-making power to the people affected.¹⁵ These experiences of disappointment have contributed to a sense of mistrust and burnout reflected in the tensions described above in the callout section “Rejecting the Premise of Community Input.”

However, Arnstein’s work also underscores that not all attempts to elicit resident participation are alike: in some modes, albeit more rarely, the government genuinely follows through on resident input.¹⁶ One example of this type of delegated power is found in the NYCx Co-Labs in New York City implemented by the former Mayor’s Office of the Chief Technology Officer between 2017–2022 and led by Oscar J. Romero, Jr.. A group of 25 people representing 18 organizations in the Brownsville neighborhood identified community needs, which then became the foundation for a needs assessment research that called for organizations to propose strategies on “How might we encourage more people to enjoy, navigate, and use Brownsville’s public spaces at night?” Ultimately, The Brownsville Community Justice Center, Peoples Culture, Anyways Here’s The Thing and a multidisciplinary coalition of government agencies designed two projects that illuminated corridors using the art, choreography, and coding ideas of young people in the neighborhood, ultimately supporting safer streets at night through work that combined youth workforce development, place making, and multimedia art.¹⁷ Another example is the aforementioned LB Co-Lab initiative by the City of Long Beach in California, where participating residents frame the problem, put forward a call for proposals, evaluate bids, and select a vendor.

In other cases, the government must respond to community concerns that are not channeled through an existing process. For example, privacy activists in San Diego, California, famously organized against the placement and surveillance capabilities of light poles equipped with video cameras and audio recording. The Smart Streetlight Program was rolled back in 2020 in the wake of significant public backlash.¹⁸ Grassroots organizing has also led some cities across the US to ban or drop facial recognition and gunshot detection sensors.

15 Sherry R. Arnstein, “A ladder of citizen participation,” *Journal of the American Institute of Planners* 35, no. 4 (1969): 216-224.

16 Arnstein, “A ladder of citizen participation.”

17 Community Tech: *Community Tech for Place-Based Change: Reactivating public space using co-created tech solutions in Brownsville, Brooklyn*, (NYCx Co-Labs, 2022).

18 City News Service, “San Diego City Council Approves Return of Smart Streetlights, License Plate Readers,” *NBC 7 San Diego*, August 1, 2023, <https://www.nbcsandiego.com/news/local/san-diego-city-council-approves-return-of-smart-streetlights-license-plate-readers/3276089/>.

However, after a multi-year hiatus, San Diego reactivated the Smart Streetlights program in 2024 with expanded license plate reader capabilities, following the creation of the city's surveillance ordinance ("Transparent and Responsible Use of Surveillance Technology") and the city's privacy advisory board.¹⁹ In response to the Smart Streetlight program's reinstatement, a lead organizer for the effort, Lilly Irani of the Tech Workers Coalition said, "The community consensus is that nobody is listening." Here, Irani channels community group frustration with the city for moving forward with the streetlights, despite the public pushback. San Diego's Smart Streetlights reactivation in the wake of the passage of a local surveillance ordinance and privacy advisory board reflects the Gear Shift workshop attendees' critiques that formal mandates for the government to seek community input can become a permission structure for the further deployment of harmful technologies. It also complicates the idea that additional laws regulating high-risk technologies will intrinsically support public trust.

Public trust has also been impacted by the substance and operationalization of existing oversight. Where surveillance oversight bills have passed, there are also places where the most concerning technologies have been definitionally exempt. As in the case of Pittsburgh's surveillance ordinance, where activists and academics contributed to shaping what began as model legislation, political carveouts (that is, exceptions), particularly for law enforcement, ultimately undermined the substance of the ban. The final policy preserved broad exceptions for the police, creating a loophole that effectively neutralized the regulation. These carveouts and slippages are common. Without widespread public understanding of how this happens, community input stalls.

19 City of San Diego, "San Diego Municipal Code Chapter 2, Article 10, Division 1: Transparent and "Responsible Use of Surveillance Technology," 2024, <https://docs.sandiego.gov/municode/MuniCodeChapter02/Ch02Art10Division01.pdf>.

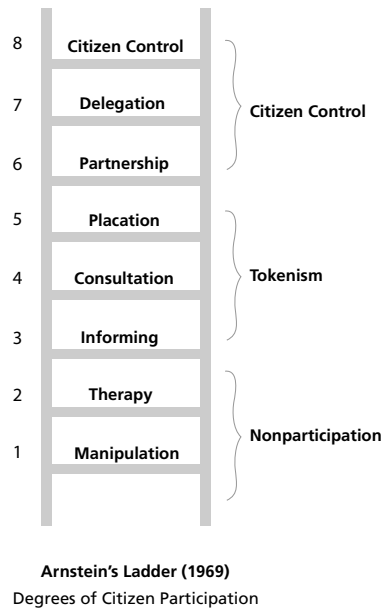


Figure 1. Sherry Arnstein's 1969 ladder of citizen participation. Note that at the bottom of the ladder are types of government outreach that do not constitute resident participation; at the middle are modes of engagement where the outcome is a foregone conclusion; at the top of the ladder are modes that best decentralize decision-making power.

Outside of the four barriers listed, community input in government technology purchasing can be undercut by several other key organizational challenges:

- **Agency uncertainty and risk aversion.** There are no ready-made templates or case studies to guide the implementation of public engagement approaches for technologies, and agencies are concerned about negative PR. Some agencies may still be used to thinking about government technology as IT, and therefore primarily an internal matter. Importantly, government organizations are usually federated and complex; some parts of a local government may support community engagement, while other parts of the same government need to be convinced that it is valuable.
- **Impacted community identification and outreach.** Government workers may not be sure which communities are likely to be most affected by a given technology policy area, or what organizations should be consulted. In complex or contested policy topics, it is also essential to consider how the question of who can be said to legitimately represent a given constituency should not be taken for granted: just because a community group represents itself as speaking on behalf of a given constituency does not mean that it has legitimacy among the people it aspires to represent.
- **Public confidence in discussing new technology and risks.** Members of the general public may be reluctant to discuss new technologies, feeling unfamiliar or intimidated by technical topics like AI. There are not many opportunities for the

general public to learn about new technologies, and the concepts are often presented in a technical way.

- **Deliberate obfuscation from technology vendors:** The vendors providing technology systems to the government are also opaque and often provide misleading information about their systems. For example, activists across the United States pushed their local governments to provide more information about the gunshot detection system Shotspotter; the company repeatedly refused to disclose essential information about how its system worked or how its accuracy rates were calculated, citing intellectual property concerns.²⁰
- **Centralized decision-making.** Finally, numerous decision-making processes within the government are so rigid, complex, and centralized that they leave little room for meaningful community influence. Communities may find it especially difficult to shift the technology purchasing process itself, known as procurement, which we examine in the next section.

20 Jonathan Manes, "Class Action Lawsuit Takes Aim at Chicago's Use of ShotSpotter After Unfounded Alerts Lead to Illegal Stops and False Charges," MacArthur Justice Center, July 21, 2022, <https://www.macarthurjustice.org/class-action-lawsuit-takes-aim-at-chicagos-use-of-shotspotter-after-unfounded-alerts-lead-to-illegal-stops-and-false-charges/>; Jonathan Manes, "ShotSpotter Generated Over 40,000 Dead-End Police Deployments in Chicago in 21 Months, According to New Study," MacArthur Justice Center, May 3, 2021, <https://www.macarthurjustice.org/shotspotter-generated-over-40000-dead-end-police-deployments-in-chicago-in-21-months-according-to-new-study/>; Ed Vogel and Sarah Hutson, "Safety from Surveillance," *Inquest*, July 25, 2024, <https://inquest.org/safety-from-surveillance/>; Associated Press, "Confidential Document Reveals Key Human Role in ShotSpotter Tech," WBBJ TV, January 20, 2023, <https://www.wbbjtv.com/2023/01/20/confidential-document-reveals-key-human-role-in-shotspotter-tech/>.

How Community Input Might Shift Tech Procurement

For community input to shape the technologies governments buy and use, it must be integrated into perhaps its most complex and opaque processes: purchasing.²¹ Procurement — the process by which governments **purchase new products and services from private companies** called vendors — can often defy attempts to demystify and map it because the specifics vary widely, even within a given city or state government. One agency may be allowed to make micro-purchases below a certain amount without oversight, while another is required to ratify all spending by city council vote. One agency might use a scorecard to evaluate vendors based on multiple criteria, while another is forced to select the most competitive bid by price. The requirements the process must follow also vary widely, because it is common for government leadership (e.g., legal, IT) to improve standard practices by attaching new requirements to the procurement process. For example, when governments first became concerned with the cybersecurity implications of new hardware and software, information security assessments became an additional requirement for procurement. So, too, were privacy impact assessments later added to procurement processes in many jurisdictions. These accreted layers of requirements vary enough that it can be difficult for those outside — or even inside — the government to understand and shape the actual decisions made during procurement. Nevertheless, some features are common to all procurement processes.

21 Note that some technology might not go through a formal procurement process. Donations or pilot projects usually enable government uses of technology without the assessment or vetting processes attached to a formal procurement. See “Step 3: Drafting an RFP.”

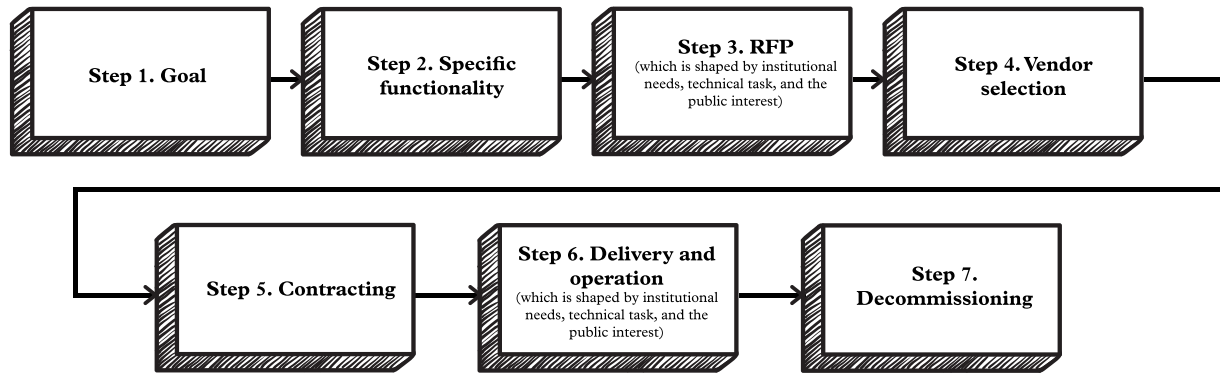


Figure 2. A simplified illustration of the procurement process

Step 1: Goal. Broadly, procurement begins with a goal to achieve: a specific technical (and often political) outcome, which sometimes balances one or more desired outcomes. For example, for EVV software, there were multiple stated goals: to enable digital payments, ensure clients receive services from workers, and to economize funding by preventing fraud. These goals were also linked to the premise that they could be achieved with a mobile app. This process of understanding a problem — and how to solve it — can take place over many years.

Step 2: Translating into functionality. Next, this goal is translated into a specific functionality that can be purchased from a vendor. However, the process of government workers’ translating from a goal to a functionality is both tricky and fraught. Often, different technical approaches offer the desired functionality but vary in other meaningful ways, like how they protect privacy or how user-friendly they might be. As a result, this translation from a broad goal, or set of goals, into a specific functionality is a critically important step. In the case of EVV, the translation from the app requirement put forward by the federal government²² into specific apps was left to each state. Public agencies that are still searching for more information about how to translate a goal into a specific functionality sometimes post a request for information, to which vendors write detailed responses on what they offer and can do.²³

Step 3: Drafting a request for proposal (RFP). Procurement requires drafting a formal RFP, circulating the RFP widely, open bidding to prevent corruption, and establishing processes for vetting bids. An effective RFP is shaped by numerous factors, which the former head of the Washington State Transportation Center, Mark Hallenbeck, categorizes into

22 The 2016 Cures Act required all states receiving Medicare to implement an EVV system that verifies the service performed, the identity of the people providing it and receiving it, the date, time, and location of the service. The law also required stakeholder consultation with impacted caregivers and families, but Mateescu (2021) found that this stakeholder consultation was initiated too late in the process to meaningfully shape system design.

23 Indeed, for some RFI or RFP, especially for large value contracts, many governments engage consulting firms to manage this process. This approach is intended to reduce risk, though it can also shift, and arguably diffuse, accountability.

institutional interactions, technical tasks, and public interest. First, institutional interactions describe all of the specifications for how a system must interact with relevant government agencies, such as how its business processes will change. It can also describe requirements for interagency data sharing. In turn, these interorganizational needs shape the technical tasks to consider, such as what specific functionality the system should have, what data formats it uses, its interoperability with other data and services, and any requirements it has to be compatible with legacy systems.

Meanwhile, an RFP²⁴ is also shaped by public interest considerations, including values like public buy-in, privacy, or security. Anne Washington and Joanne Cheung define public interest technology as “reducing the collective harm ... and accruing benefits for all.”²⁵ While community-based organizations can try to influence the exact specifications put into an RFP (e.g., by pointing out flawed assumptions, or arguing for privacy-by-design), in some sense, the RFP drafting phase is already too late for public input to be most meaningful: it is harder at that point to change the course of the system, its goal, or its core functionality.²⁶

Today, in many cases the stakeholder engagement work may be considered part of a project’s implementation plan and assigned to the vendor to deliver. However, conducting community engagement at the implementation step is likely to only afford small changes to how a project is executed. Whether (ideally) conducted before purchasing, or as part of a vendor’s scope of work, agencies should budget time and resources to community engagement work.

Steps 4 and 5: Vendor selection and contracting. Once an RFP is released, government agencies review responses from different companies and select the best, often balancing cost, technical fit, and sometimes statutory requirements (such as California’s requirement to select from among the lowest-priced bids). Once selected, a vendor system still must undergo a number of requirements that are managed through **contracting** negotiations about the vendor agreement, the specific list of commitments that a vendor makes to the city. A vendor agreement is a detailed list of deliverables, timelines, and standards that both parties must meet. Before a procurement is considered finalized, this process can also include steps to make sure that the system is compliant with established standards and internal policies, such as cybersecurity assessments, privacy impact assessment, or other reporting.²⁷

24 Note that when the requirements are well-defined and there’s little variation in how vendors would fulfill them, an RFP is often not necessary. Instead, an RFP stage is replaced or preceded by a formal request for quotes from vendors, called an RFQ stage.

25 Anne L. Washington and Joanne Cheung, “Public Interest,” In *Keywords of the Datafied State* (Data & Society Research Institute, 2024).

26 For example, in San Diego, activists famously raised privacy concerns with the Smart Streetlight program and protested after hundreds of smart light poles had already been installed. In this case, once a goal has been established to, for example, protect public safety, and that goal was translated into the specific functionality of increasing CCTV surveillance by hundreds of networked cameras mounted to light poles, the flywheel of the procurement process created momentum toward the Smart Streetlight program, long before there is any formal requirement for the government to notify the public that the purchasing is taking place.

27 For more on the costs and processes associated with procurement, see Elaina Faust, Reilly Martin, Conor Carroll, and Hayley Pontia, *Procuring Differently: How Colorado Used User Research and Active Vendor Management for COVID-19 Technology* (Washington, D.C.: Beeck Center for Social Impact + Innovation, Georgetown University, February 2021), <https://beeckcenter.georgetown.edu/report/procuring-differently-how-colorado-used-user-research-and-active-vendor-management-for-covid-19-technology/>.

Steps 6 and 7: Delivery and operation, and decommissioning. After an agency purchases a technology, it must also be implemented, operated, and maintained. Over time, as systems age or needs shift, **decommissioning** becomes necessary: a process that can involve data migration, infrastructure teardown, or transition to a replacement system. At the RFP stage, government workers also consider how a system might eventually be refined, replaced, or abandoned. For example, Washington State’s King County Metro had originally purchased sensors for riders to tap their transit cards; however, after many years of use, the database supporting the transit card system was dated and slow, and the sensors would not accept tap-to-pay from credit cards. The existing contract duration delayed the timeline for upgrades. In this case, the outdated system’s refinement and replacement required a new infrastructure purchase, which was ultimately designed to be modular to support refinement over time.²⁸

Outside procurement: pilots. The stakes of government purchasing have resulted in several strict requirements being placed on the procurement process. However, not all technologies the government uses undergo formal procurement. **To ostensibly foster innovation (and arguably to circumvent onerous controls enforced by procurement processes), public agencies sometimes also use new technologies for evaluation, via pilots.** Pilot projects can take place over an indeterminate amount of time, but may forgo the robust evaluations for data privacy, transparency, and other requirements introduced via procurement. Try-before-you-buy and freemium models mean that some government employees can begin testing new services and software without official approval; academic and research partnerships can also provide similar technologies that are not subject to purchasing processes. Pilot projects are usually celebrated for being novel and experimental, but rarely include public input as part of an evaluation process (and often do not critically evaluate a vendor’s stated claims at all).

Indeed, the fanfare surrounding new technology pilots often seems to model a spirit of innovation, but does not often follow through with the findings from the project’s research or evaluation period. As Sarah Fox, professor at Carnegie Mellon University, shared, “There are so many announcements about the pilot, and then you never hear how it goes.” Empirical evaluations of how a system fares against real-world conditions can often help to deflate the claims in a vendor’s marketing materials;²⁹ however, as this person pointed out, the results of a pilot are often far less-reported than the original rollout. Fox added that the timelines attached to pilots are also often both rushed and interminable: “There is such time pressure in the beginning to roll it out, but once it is deployed, there is no rush to end it.” For this reason, community-based organizations have often considered pilots to be the most likely way that high-risk technologies are adopted. They also seek to understand what grant funds make pilot projects possible.

28 Meg Young, “Access, Accountability, and Ownership in Government Use of Proprietary Systems” (PhD diss., University of Washington, 2020.)

29 Devon McAslan, Farah Najjar Arevalo, David A. King, and Thaddeus R. Miller, “Pilot Project Purgatory? Assessing Automated Vehicle Pilot Projects in U.S. Cities,” *Humanities and Social Sciences Communications* 8, no. 1 (December 14, 2021): 325.

The Importance of Pre-Procurement Participation

The rigidity of technology procurement, and the broader barriers to government seeking community input, have led to a status quo in which communities are often forced to react to new technology adoption in government, rather than about key problems and needs to which technology must respond. Our call to action is for a deeper gear shift, in which public sector technology adoption and problem formulation is driven by community input.

The shift we are arguing for is fraught and may not be appropriate in cases where a given technology is categorically harmful. At the in-person gathering on October 24–25, 2024 that led to the creation of this primer, opinions on this topic diverged. Some present were invested on a day-to-day basis in using participatory processes in government, or were themselves policymakers looking for ways to further ensure the public interest is reflected in technology adoption and governance. Others understood these forms of public engagement to be unfit for shifting power to communities — and instead considered them permission structures for justifying the adoption of harmful carceral or surveillance technologies by laundering (or participation-washing) them through inert public input.

To hold this tension between the desire to follow communities' lead, and the harm of inserting them into broken processes, we find that **the most strategically important time to elicit community input is before a procurement process begins**. Before an RFP is drafted or a pilot process is initiated, there is an important preparatory phase that formulates the key problem. Community-based organizations and local advocacy groups should play a central role in this phase, because of the insight they are likely to have into the sources of the problem and how to effectively address it. Whereas many ACLU CCOPS laws failed to roll back the use of surveillance technologies already in use, they also introduced many process-related barriers to the adoption of surveillance technologies that have not been procured yet.

Our call to action is for a deeper gear shift, in which public sector technology adoption and problem formulation is driven by community input.

Government employees, elected officials, advocates, activists, and members of the public must correct the misconception that data scientists and engineers should lead conversations about data and technologies like AI. In fact, our work with community groups has taught us that **the public has deep expertise in data collection systems**, especially as it relates to their lived experience with law enforcement, access to housing, employment, benefits, or public services. Data scientists usually ignore the everyday conditions in which data is collected and used, but the gaps between a goal, how a system operationalizes that goal, and its consequences on the ground can lead data systems to be inequitable, unreliable, or unusable.³⁰

Finally, we find **relationship-building between government and community-based organizations is valuable**.³¹ For a government employee, being able to call a community leader to ask for advice or seek input can help identify their blind spots. They may also call on a community leader when important moments arise, such as in a public hearing, to ensure public interests are adequately represented. For community-based organizations, relationships with government can provide **early insight into emerging problems, pilots, and proposals** being considered. This helps community organizations anticipate and address problems before they arise. Both government and community leaders might also value relationship-building with academic researchers for similar reasons; academics can help bridge these gaps and support more bottom-up metrics and system design.

Taken together, this vision calls for government, academics, and nonprofit organizations to push for community engagement at the **problem formulation stage**, before pilots or procurement. It emphasizes **acknowledging and enrolling local expertise**, using methods that will support the **formation and duration of relationships** between people serving in government and community leaders.

30 Mateescu, "Electronic Visit Verification."

31 Data & Society, "What's Trust Got To Do With It? | 'Trust Issues' Workshop Public Panel," Data & Society Podcast, March 28, 2024, <https://listen.datasociety.net/episodes/trust-issues-workshop-public-panel>.

Opportunities and Tactics

Following this call to action, we outline some concrete opportunities and tactics that public employees, community advocates, activists, and researchers can use to move it forward.

- 1. Public agencies should embrace early stage announcements and informal post formats to increase transparency.** Typically, a government memo or report undergoes many stages of review before publication. However, pre-procurement announcements of intermediate outputs — such as priorities, pilots under consideration, or new directives from a city council — can help increase the likelihood that external stakeholders have time to weigh in. Public employees can work with their public information manager or communications team to proactively announce works in progress.
- 2. All stakeholders should seek opportunities to foster cross-sector relationships.** We learned that relationships between government workers, academics, and residents from community-based organizations are essential for protecting residents’ digital rights. People working in public agencies, academia, and advocacy groups should not discount the importance of events and opportunities that cultivate relationship-building between different sectors, in recognition of the powerful alliances that happen downstream of those ties. Organizations like Data & Society should use their resources and capacity to create more opportunities to this end, including dedicated forums where government officials and community members can engage in structured dialogue outside the constraints of formal procurement processes. It is also essential for organizers to recognize the power asymmetries between government and nongovernment guests, and to strive for facilitation or other strategies that address this power asymmetry (e.g., taking care in who sets the agenda, or who is speaking).
- 3. Encourage agency leadership to “just try.”** There’s a common myth that effective community engagement requires extensive resources and expertise. In reality, simple outreach efforts like phone calls to community leaders, small focus groups, or basic surveys can yield valuable insights. “The perfect is the enemy of the good” in this context. Unfortunately, the labor of civic engagement is often devalued

when compared to technical work like data science or software development, despite being equally critical to successful outcomes. Encourage public agency leadership to recognize and allocate appropriate resources to this work, while starting with whatever engagement is feasible now rather than postponing indefinitely.

4. **Advancing the principles of design from the margins.** Centering the needs and perspectives of those most marginalized by existing systems often results in solutions that work better for everyone.³² This approach involves actively seeking input from communities historically excluded from decision-making processes and prioritizing their feedback when designing technology solutions. Public agencies should establish specific mechanisms to elevate voices from marginalized communities and ensure technologies address their unique needs rather than reinforcing existing disparities.
5. **Internalize community critiques into more robust assessment frameworks.** Public agencies should develop robust impact assessment processes that systematically capture community concerns even when direct community input is limited. These frameworks should anticipate potential harms based on documented community experiences with similar technologies. Additionally, thorough assessment processes can intentionally slow project implementation timelines, creating more opportunity for community members to become aware of and respond to proposed technology adoptions before they become finalized. Regular post-implementation reviews should also be conducted to evaluate whether community concerns materialized and how they were addressed.
6. **Begin massive-scale public education efforts on AI 101.** Public agencies should invest in accessible education about emerging technologies like AI to educate residents.³³ These efforts can serve as an entry point to broader discussions about what technologies the government is using or considering, and how residents feel about them. By building technology literacy, agencies can foster more meaningful community relationships and open channels for residents to contribute substantively to technology decisions that will affect their lives.
7. **Provide more visibility into government decision-making and project funding.** Community-based organizations often work to identify and map the people who hold influence over key decisions. However, this work is often constrained by a lack of accessible information. Public agencies can support this work by sharing information about a project lead and point-of-contact for every project, other collaborating agencies and elected officials, and especially any grants

32 Afsaneh Rigot, *Design From the Margins* (Belfer Center for Science and International Affairs, 2022). See also Collective, Combahee River, Demita Frazier, Barbara Smith, and Beverly Smith. *The Combahee River Collective Statement*. Gato Negro Ediciones, 2017; Sangtin Kisan Mazdoor Sangathan, "SKMS Code of Conduct," *AGITATE!* 1 (2019), <https://agitatejournal.org/article/skms-code-of-conduct/>.

33 Based on unpublished presentations and work by Sareeta Amrute and Emnet Tafesse, "AI 101: An Incomplete Brooklyn Public Library Reading List," our team is leading the creation of public AI 101 materials for use by librarians and public agencies (forthcoming in 2025).

or funding that made the project possible. In the case of public-private partnerships, it is important to share the same information about project partners. Documenting and sharing information about the agency through org charts, project timelines and decision-making processes, and decision-making criteria help external stakeholders identify the best ways to get involved.

- 8. Support community-based organizations with strong questions to ask.** Too often, ordinances and public-facing commitments appear strong in name only. A practical step forward is to equip communities with effective questions to pose to government technology, via a short, public-facing list of common pitfalls and critical questions, such as “Does this ordinance include carveouts for law enforcement?” or “How long is this data retained, and who can access it?” Resources like these can support residents and organizations to spot red flags early and organize in response.³⁴

34 See the American Civil Liberties Union (ACLU) of Washington Algorithmic Equity Toolkit, <https://www.aclu-wa.org/AEKit>.

Conclusion

The path forward for equitable government technology requires a fundamental gear shift, prioritizing community input before procurement processes begin rather than as an afterthought. When technology decisions proceed without input from affected communities, we risk creating systems like EVV that cause real harm through misguided assumptions. Pre-procurement engagement acknowledges residents' critical expertise on how technologies will affect their lives — expertise that technologists and government employees often lack. Despite numerous challenges, from resource constraints to legitimate concerns about cooptation, the stakes of this moment (and the pressure on government agencies to unlock new efficiencies) demand that we instead prioritize the people most affected by government adoption of new technologies. Specifically, if practitioners (1) foster genuine relationships between government, community organizations, and researchers; (2) be transparent about works in progress, and (3) recognize that even imperfect engagement is better than none, governments are more likely to adopt technologies that genuinely serve the public interest and are less likely to surveil, harm, and punish vulnerable communities. Ultimately, this challenge is not technical but democratic, and requires a reconfiguration of how power is distributed in decisions about the technologies that shape public life.

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