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SOLVING
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TRUST

Innovations in
Smart Urban Governance

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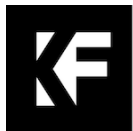**ERIC GORDON & TOMÁS GUARNA**

SOLVING FOR TRUST:
Innovations in Smart Urban Governance

WRITTEN BY **ERIC GORDON & TOMÁS GUARNA**

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KNIGHT FOUNDATION

EXECUTIVE SUMMARY

Like many institutions, city governments are experiencing a trust deficit, making it quite difficult to deliver the most basic of services. As a result, many are actively deploying digital tools and novel data-analysis techniques to build trust. This report explores multiple dimensions of the trust problem, from how institutions see it to the approaches they take to solve it. Our goal is to provide language and a conceptual framework to practitioners in order for them to understand seemingly disparate practices of trust building. Concerted efforts are being made by city leaders and technologists to enhance the credibility and/or reliability of public sector institutions. Understanding precisely how these efforts connect both in intention and execution is urgently needed in this time of considerable uncertainty within urban governance. The COVID-19 pandemic has exposed insufficient public health systems, abrupt transitions in work that have significantly increased office and restaurant vacancies, and raised consciousness (especially in the United States) of racial injustices. Cities have no choice but to solve for trust. But because those solutions are happening in silos, there is currently little capacity to learn from these novel practices. This report is an attempt to change that.

Through nearly 30 semi-structured interviews with technologists and city leaders in Argentina, Spain, and the United States, the report documents how technical solutions are being imagined and implemented to bolster the reputation and effectiveness of government organizations through gaining or retaining trust with constituents.

High-level findings include:

There are inconsistencies in how city leaders diagnose the trust problem. While nearly everyone sees lack of trust as a problem, they understand its root causes differently. For some, lack of trust is due to the perception that government is **incapable of facilitating reliable transactions.** And for others, it stems from the perception that the government **does not share values with constituents**. Interestingly, the diagnosis of the problem has little bearing on the solutions that governments pursue.

Technological solutions to the trust problem tend to fall into two categories: **bolstering the reputational value of the institution** (i.e. showing people that they can trust the city), or **bolstering the reputational value of human or non-human representatives of the city** (i.e. distributing trust relationships to human or non-human proxies such as social media influencers or blockchains).

Strategies for building trust all result in perceived proximity between the institution and the constituent. These strategies can be characterized as **reducing time** or **reducing distance**. The reduction of time includes a focus on efficiency and streamlined transactions. The reduction of distance includes a focus on creating relatable institutions or proxies that feel intimate and comfortable.

The goals of public engagement are better characterized as goals of better listening. Novel tech solutions are not simply focused on getting people to participate, but how that participation results in institutional action. We identify two primary modalities of listening: **closed-system listening**, where specific information is sought and then directed neatly to decision-making or actions, and **open-ended listening** where input and analysis is sought prior to establishing decision-making agendas.

Based on the insights gleaned from these common themes, we offer seven recommendations for **city leaders**, **scholars**, and **policymakers**.

1. Connect interventions to diagnoses.

Cities need to be clear in talking about the nature of the problem they're trying to solve before talking about how they're trying to solve it. Civic technology interventions will be more effective when they are part of broader strategies to foster trust in institutions.

2. Think critically about proxies.

Much more attention is needed in making the connection between the trust relationship developed with human or machine proxy and the institution. Also, cities should be mindful of the problems they might present.

3. Critically explore the use of AI in creating proximity.

As cities invest in digital concierge or human proxies, there is a need to understand what kind of relationship is desirable to achieve sustainable benefit for the institution.

4. All technology has values; know yours.

Cities should represent their values in digital interfaces so that users understand intentionality and the institution can be held accountable.

5. How data storage gets communicated matters.

How institutions talk about data storage and mobility will determine how and why people trust it. Institutional leaders working with technically complex solutions need to bring skilled communicators onto their teams.

6. Disaggregate "the public" carefully. And be wary of dashboards.

All smart governance efforts need to start with the premise that there is no one public. There is a need to better understand how disaggregation of data should be communicated and when. Public dashboards that communicate ineffectively can damage trust-building efforts.

7. Listen smartly.

The investment in pervasive listening to align institutional values with those of the constituency may lead to beneficial outcomes. Listening technologies should be understood as public goods, not as techniques that are monopolized by government officials.

RELATED INSTITUTION	PEOPLE	DESCRIPTION
City of Buenos Aires	**Melisa Breda**, Under Secretary for Evidence-Based Public Policies **Agustín Suárez**, Under Secretary for Smart City **Fernando Benegas**, Secretary for Planning and Management Coordination 2015-2018 and Secretary for Innovation and Digital Transformation 2019-2021 **Diego Fernández**, current Secretary for Innovation and Digital Transformation	Buenos Aires is the largest city in Argentina, with a population of over 3 million people. The city is actively engaging in several governance experiments and has a robust smart city agenda.
City of Philadelphia	**Mark Wheeler**, Chief Innovation Officer **Emily Yates**, Smart City Director (formerly) **Desarae Bradham**, Marketing Manager, Public Health Department	Philadelphia is the largest city in Pennsylvania (U. S.) with a population of over 1.5 million people. It has a vibrant smart city program, including several active partnerships and experiments in smart governance.
City of Barcelona	**Arnau Monterde**, Director of Democratic Innovation **Pablo Aragón**, Decidim	Barcelona is the capital of the Catalonia region of Spain and has over 1.5 million people. The city is widely recognized as a model of democratic participation, with successful and vibrant technology-enabled and analog participation efforts over the last several years.
City of Madrid	**Miguel Arana**, Decide Madrid **Lorena Ruiz,** Medialab Prado **Yago Bermejo,** Deliberativa	Madrid is Spain's central capital, with a population of over 3 million people. There are several open source experiments happening in deliberative democracy, such as the large-scale Decide Madrid and organizations like Deliberativa. The Medialab Prado is a quasi public arts and innovation organization that has established a unique model for external urban innovation units.
City of San Jose	**Chris Thompson**, Knight Foundation, San Jose Director **Andrew Lutzky**, Chief Communications and Marketing Officer (formerly)	San Jose is the third largest city in California (U.S.) with a population of over 1 million people. Located in the heart of Silicon Valley, San Jose is experimenting quite a bit with the role that technology plays in smart governance. Along with those in Philadelphia, San Jose's efforts have been supported by the Knight Foundation.
City of Charlotte	**Rachel Stark**, Smart Cities Program Manager	Charlotte is the largest city in North Carolina (U.S.) with a population of almost 900,000. Several of the city's smart city efforts are focused on private-public partnerships and local community engagement.
City of Reno	**Teddy Clapp**, blockchain developer	Reno is a mid-size city in northwest Nevada (U.S.) with a population of about 250,000 people. Its mayor, Hillary Schieve, launched "the biggest little blockchain" in 2021, which she claims to be the first city-run and resident-focused blockchain platform in the United States.
Guilford County, North Carolina	**Iulia Vann**, Director of the Department of Public Health **"Loon"**, Instagram influencer	Guilford County is the third most populous county in North Carolina, USA with a population of about 500,000 people. It garnered attention when it started using social media influencers as part of its COVID-19 vaccination campaign. Iulia Vann, the public health director, received national attention through her feature on The Daily Show with Trevor Noah in 2021.
InCitu	**Dana Chermesh**, Founder and CEO	InCitu is a technology startup based in New York City that provides augmented reality to planners and city officials to facilitate urban planning processes.
CityCoins	**Logan Lenz**, blockchain contributor	CityCoins is a distributed organization that seeks to set up alternative forms of exchange within cities. It is currently operating in New York and Miami in the United States.
Xomad	**Andy Lutzky,** Executive Vice President, Brand Partnerships **Rob Perry**, Founder and CEO **"Loon"**, Influencer, Guilford County, North Carolina **Melanie**, Influencer, North Dakota	Xomad is an influencer agency that works with "nano" and "micro" content creators to promote brands. They recently started to work with government agencies including San Jose and Guilford County (U.S.) on public health and other campaigns.
Zencity	**Eyal Feder-Levy**, Founder and CEO	Zencity is a startup based in Tel Aviv (Israel) that aims to connect governments to their residents through sophisticated data analysis.

ABOUT THE AUTHORS

Eric Gordon, Ph.D. is a professor at Emerson College in Boston, director of the Engagement Lab, and Assistant Dean of Civic Partnerships in the School of the Arts. He is also a research affiliate in Comparative Media Studies at MIT. His current research focuses on technology augmented trust in institutions and novel innovation arrangements in cities. He specializes in collaborative research and design processes, and has served as an expert advisor for local and national governments, as well as NGOs around the world, designing responsive processes that help organizations transform to meet their stated values. He has created over a dozen digital games and apps for public sector use and advised organizations on how to build their own inclusive and meaningful tools. He is the author of four books and over two dozen journal articles on digital media, civics, and social justice.

Tomás Guarna is a Ph.D. student at Stanford University, where he is a Knight-Hennessy Scholar. He has a S.M. in Comparative Media Studies from MIT, and is a research affiliate there. His research focuses on citizenship, trust, and legitimacy in the digital public sphere.

ACKNOWLEDGEMENTS

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INTRODUCTION

What makes a city smart? Academics and policy makers have paid a great deal of attention in recent years to answering this question. A smart city is often defined by the incorporation of information and communication technologies to support logistical enhancement, which allows governments to make decisions based on the collection, analysis, and sharing of data.[1] Governments have invested in enhancing how they use data in order to achieve immediately-responsive infrastructure and more accessible public services. However, one could argue that this vision of urban intelligence is limited. Endless resources can be devoted to the pursuit of higher efficiency. But if a city's residents do not trust the institutions that govern them, then cities simply won't be able to deliver services.

It is clear that people working within public institutions are acutely aware that they are operating in a challenging trust environment. From 2019 to 2022, the Edelman Trust Barometer (a survey that measures perceptions of trust in nonprofits, the media, business, and government in 28 countries) has identified a global decrease of trust in institutions and leaders. Edelman associates this decline in trust with the rise of misinformation, racial injustice, and growing inequality worldwide,[2] all exacerbated by the COVID-19 pandemic. Dr. Iulia Vann, the public health director of Guilford County, North Carolina, put it this way: "Throughout the pandemic, people's trust started eroding, to the point that when the vaccine came, we were at probably historical low levels of trust, and we had to regain it in a very short period of time. So the work that we've done for decades to build the trust of our community has eroded in 12 months or less."

As a result of this learned and felt reality, cities around the world are rethinking how to build trust with their constituents. As the Smart City Undersecretary for the City of Buenos Aires, Agustín Suárez, explained:

"[Governing] is a matter of trust. And it's a great deal of work to make government trustworthy enough." Trust-building efforts in cities range in strategy and tactic, and come with specific assumptions about how trust works and how to repair it. For some, distrust is primarily a consequence of inefficient systems and unreliable transactions, including antiquated computer systems and too much room for human discretion in the execution of programs and policies. And for others, distrust is due to a misalignment of values, including perceptions of elite politicians, racist institutions, and government offices as simply not caring about communities. In our view, what cities have in common is a shared mission to *solve for trust.*

This report examines how cities are using digital technologies to solve this "trust problem." Based on conversations with government officials, technologists, and civic leaders in cities in the United States, Spain, and Argentina, we explore how practitioners in a range of cities understand the trust problem, as well as why and how they are using technology to address it. These "smart governance" interventions, including new digital decision-making procedures, service provisions, or methods of institutional communication, involve the intention to (re)build trust in public institutions by augmenting the interface between the public and the institution. We employ smart governance to refer to any intervention in government decision-making or service provision with the envisioned capability of building trust between institutions and the constituencies they serve, either facilitated by digital technologies or linked to digital technologies as a source of knowledge or legitimacy. This definition is inclusive of Schuurman et. al.'s notion of enhanced rationality of government decision-making through new data sources and sophisticated analysis of such data,[3] as well as Gil-Garcia's notion of enhanced interconnection between data, technology, and

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1   Germaine R. Halegoua, *Smart Cities*, MIT Press Essential Knowledge Series (Cambridge, Massachusetts: MIT Press, 2020).

2   Edelman, "2021 Edelman Trust Barometer," 2021, https://www.edelman.com/trust/2021-trust-barometer; Edelman, "2020 Edelman Trust Barometer," 2020, https://www.edelman.com/trust/2020-trust-barometer; Edelman, "2022 Edelman Trust Barometer," 2022, https://www.edelman.com/trust/2022-trust-barometer.

3   Dimitri Schuurman, Lieven De Marez, and Pieter Ballon, "The Impact of Living Lab Methodology on Open Innovation Contributions and Outcomes," *Technology Innovation Management Review* 6, no. 1 (2016), https://doi.org/10.22215/timreview/956.

organizational structures.[4]

Considerable resources are being invested in smart governance initiatives to build trust, but there is a lack of a general understanding and a common language to frame these practices. This absence of understanding may lead to efforts appearing as isolated, when in fact such projects are oriented towards solving a common problem and have numerous commonalities. This report puts these projects in conversation with each other. Our goal is to provide practitioners, scholars, and funders with a clear understanding of how the trust problem is being diagnosed by municipal governments and technologists, how current interventions are attempting to address it, and how a smart governance agenda can take shape to strategically intervene into this crisis of legitimacy within democratic public institutions.

METHODS

The findings in this report are based on 28 interviews with civic technology and public sector practitioners, as well as secondary research on media reports of specific projects and interventions. We identified people to talk to based on existing connections of the research team and the Knight Foundation (the funder), and we asked interviewees if they knew other people with whom we should speak. Our interviews were localized in three countries: Spain, Argentina, and the U.S. Each of these countries has a distinct political culture and widely divergent relationships between institutions and constituents. In the case of Spain, our interviews concentrated on projects developed in the Medialab-Prado, a government-affiliated cultural space in Madrid, and in citizen participation departments in the governments of Catalonia and Barcelona in the aftermath of the "15-M movement" in Spain. The 15-M movement was generally described as a series of protests of previously politically disengaged individuals, critical of the political establishment and austerity policies.[5] The 15-M movement included "citizen assemblies," which were seen as the inspiration for civic technology tools that 15-M activists created when they assumed elected offices. Our interviews in Argentina were focused on the Government of the

City of Buenos Aires, where center-right Propuesta Republicana and its allies have governed since 2007. Argentina's institutions have had a historically troublesome relationship with its constituents, with the 2001 crisis (a conflict that led to uprisings against the political class) having an especially acute effect on the current generation of Argentines. Since this crisis, Argentine politicians have tried to present themselves as trustworthy in the context of the generalized mistrust towards the political class, yet generalized distrust remains latent. In Edelman's 2022 "Trust Barometer" Argentina was rated 45 in its "Trust Index," falling under the Distrust category; Argentina also ranked last in two categories: trust in government and trust of the Central Bank.[6] Lastly, our interviews in the U.S. are located primarily in Philadelphia, Pennsylvania, and San Jose, California. These cities include self-identified "smart districts," and are actively seeking to shift policies in the wake of the Movement for Black Lives and the social justice protests in the summer of 2020 prompted by the murder of George Floyd. Additionally, each of the localities in all three countries have been impacted by the uncertainty brought about by the COVID-19 pandemic and an increasingly destabilized global economy.

All interviews were approximately an hour long and took place in the videoconferencing system Zoom. Interviews in the United States were conducted in English. Interviews in Spain and Argentina were conducted in Spanish and translated into English. All transcripts were brought into the qualitative analysis software Dedoose and were coded for themes identified by the research team. The themes were then used to develop insights across projects, people, and national contexts.

We spoke to a range of different people and organizations in order to understand if or how seemingly disparate projects are connected. For example, we spoke to several people from Xomad, a technology company that organizes campaigns of social media influencers through their digital platform. They work extensively with brands such as Clorox and have only recently begun to work with the public sector to organize campaigns around vaccination or public insurance programs. We also spoke to two

4   J Ramon Gil-Garcia, "Towards a Smart State? Inter-Agency Collaboration, Information Integration, and Beyond," *Information Polity* 17, no. 3–4 (2012): 269–80.

5   "Tahrir Square in Madrid: Spain's Lost Generation Finds Its Voice," *Der Spiegel*, May 19, 2011, sec. International, https://www.spiegel.de/international/europe/tahrir-square-in-madrid-spain-s-lost-generation-finds-its-voice-a-763581.html; Robert Mackey, "Protesters Rally in Madrid Despite Ban," *The New York Times*, 1305753273, sec. The Lede, https://archive.nytimes.com/thelede.blogs.nytimes.com/2011/05/18/protesters-rally-in-madrid-despite-ban/.

6   2022 Edelman Trust Barometer.

people from the City of Buenos Aires, who were part of the development of Boti, a WhatsApp bot that functions as a digital concierge for the city. Xomad has created a platform and set of incentives for social media influencers to serve as trusted messengers, while Boti uses artificial intelligence to interact with constituents. Each of these two interventions are distinctive, but they have in common their pursuit of building trust with constituents by creating a novel communication mechanism for constituents to effectively interface with their local government. Our sample is intentionally wide ranging, in order to shed light on common discourse used by technologists and municipalities to describe the trust problem and the role that technology can play to address it.

Names and organizations have not been withheld because the professional position of the speaker matters to the outcomes of the report. We have taken great care to represent people honestly and have confirmed all direct quotes with the speakers.

THE TRUST PROBLEM

Without a baseline of trust, most basic activities of everyday life would be impossible: going to the store, going to work, interacting with family and friends. Trust is a relationship between two actors, the trustor and the trustee, in which the trustor is relied upon by the trustee to deliver a forecasted future. In some cases, we perceive to have little to no uncertainty about how the future will play out, generally predicated on our prior experiences with people and systems. In these cases, trust is based on **confidence**: we have confidence that people will generally follow the rules of the road, because they mostly do.[7] Outside of direct experience, however, the trust relationship entails considerable **risk**: we put money in a bank because we have assessed the risk involved to be acceptably low.

We might not have had previous experiences with that specific bank, but we understand the institution to be trustworthy. Here, trust is more reliant on **faith**, in that we have an abstract belief in the benevolence and capability of the trustee (the bank).[8]

When people interact with their close social circles, trust in each other is partly based on faith that each individual will do as expected. Informed by perception of the trustee's character and/or existing structures of family or community groups, the trustor takes some leap of faith. A child might have faith that her parents will pick her up from school, or a woman might have faith that her spouse will be monogamous. Similar dynamics take place in trust relationships with institutions, where one learns about, or has direct experience of, the actions and outcomes of an institution and therefore how to forecast the future. A resident might have faith that the city government will not double charge him for a parking ticket, or a voter might have faith that her vote will be counted.

This faith is always anchored in the perception of the trustee. The sociologist Anthony Giddens argues that institutional trust involves "blind faith" in exchange tokens (i.e. money) or expert systems (i.e. governments).[9] Faith involves non-cognitive, non-verifiable belief in a positive outcome and is typically informed by alignment of values, such as perceived integrity,[10] affinity with an institution's leaders,[11] and the strength of the trustor's community. People are more likely to trust public institutions when they trust others in their wider community,[12] and they are less likely to trust public institutions when trust is low with individuals outside their close social circles.[13]

In contrast, confidence is structured not on abstract perceptions, but primarily on a trustor's direct experience of transactions.[14] When one has confidence in an institution, there is an expectation that an institution will consistently perform a transaction in

7   Niklas Luhmann, "Familiarity, Confidence, Trust: Problems and Alternatives," in Trust: Making and Breaking Cooperative Relations, ed. Diego Gambetta (New York: B. Blackwell, 1988).

8   Anthony Giddens, The Consequences of Modernity (Cambridge, United Kingdom: Polity Press, 1990).

9   Giddens, The Consequences of Modernity.

10   Fabrice Murtin et al., "Trust and Its Determinants: Evidence from the Trustlab Experiment" (Paris: OECD, June 30, 2018), https://doi.org/10.1787/869ef2ec-en.

11   Rima Wilkes, "Trust in Government: A Micro–Macro Approach," Journal of Trust Research 4, no. 2 (July 3, 2014): 113–31, https://doi.org/10.1080/21515581.2014.889835.

12   Hans Christian Høyer and Erik Mønness, "Trust in Public Institutions – Spillover and Bandwidth," Journal of Trust Research 6, no. 2 (July 2, 2016): 151–66, https://doi.org/10.1080/21515581.2016.1156546; Nick Allum et al., "Re-Evaluating the Links Between Social Trust, Institutional Trust and Civic Association," in Spatial and Social Disparities: Understanding Population Trends and Processes: Volume 2, ed. John Stillwell et al., Understanding Population Trends and Processes (Dordrecht: Springer Netherlands, 2010), 199–215, https://doi.org/10.1007/978-90-481-8750-8_13; Murtin et al., "Trust and Its Determinants."

13   Francis Fukuyama, Trust: The Social Virtues and the Creation of Prosperity, 1. Free Press paperback ed, A Free Press Paperbacks Book (New York: Free Press, 1996); Robert D. Putnam, Bowling Alone: The Collapse and Revival of American Community (New York: Simon & Schuster, 2000).

14   Luhmann, "Familiarity, Confidence, Trust: Problems and Alternatives."

order to deliver a desired outcome. This confidence, however, does not always extend to other outcomes or transactions. For example, if one has confidence that their city government will not double charge them for a parking ticket, that confidence does not necessarily extend to trust that their vote will be counted. Confidence in a transaction does not imply a decision-making process where alternatives are weighed against each other: it involves the forecasting of future action absent the risk-taking endeavor of trust. For example, when one is considering whether to get vaccinated and the city government is encouraging people to do so, the individual consistuent's decision relies on institutional faith: it involves a component of perceived risk, and the individual is relying on an institution's word to reduce that risk. There is a choice being made to have faith in the benevolence of the institution or to reject the institution and not get vaccinated. On the other hand, using a city's website to pay a parking ticket is a matter of confidence. It is about the expectation of successful performance of a transaction, without the opportunity to choose one transaction over another. Faith-based trust and confidence are highly correlated: confidence is necessary for the everyday fulfillment of necessities,

and faith-based trust is necessary for the legitimacy institutions need to mediate interactions between individuals in a complex society.

This correlation has played out clearly in the tech sector. Scholars of human-computer interaction (HCI) and organizational psychology have focused on how technologies build trust by building confidence. Platforms like eBay, Craigslist, and Amazon generate confidence through reliable execution of transactions, and as a result these platforms are able to facilitate interactions between strangers.[15] The confidence generated in the transaction between the user and the system can generate confidence in additional transactions facilitated by the system. For example, after multiple transactions that result in a smooth experience purchasing goods from Amazon, users are likely more willing to use additional and unrelated services offered by the company, such as payment tools, identity verification, etc.

The same phenomenon applies to users of technologies in cities. Civic technologies, from problem reporting tools to municipal transaction apps, build trust through the creation of confidence in transactions: an institution will be perceived as trustworthy if it fulfills predictable responses and as

TRUST THROUGH **FAITH**	TRUST THROUGH **CONFIDENCE**
Involves a decision-making process where different alternatives are considered	Does not necessarily involve a decision-making process
Involves the prioritization and selection of risks	Risk is acknowledged as non-contingent
Is reliant on non-cognitive, non-verifiable factors	Is reliant on observable, material alternatives

15   Jens Riegelsberger and M. Angela Sasse, "The Role of Trust Cues in Interfaces to E-Commerce Applications" (Zurich, 2001), 17–30; Cynthia L. Corritore, Susan Wiedenbeck, and Beverly Kracher, "The Elements of Online Trust," in *CHI '01 Extended Abstracts on Human Factors in Computing Systems - CHI '01* (Seattle, Washington: ACM Press, 2001), 504, https://doi.org/10.1145/634067.634355

Florian N Egger, "Affective Design of E-Commerce User Interfaces: How to Maximise Perceived Trustworthiness," in *Proc. Intl. Conf. Affective Human Factors Design* (Citeseer, 2001).

undeserving of trust if it fails to do so.[16] But regardless of how reliable transactions are, public institutions cannot function if they are seen as illegitimate by the constituents they seek to serve. In this case, confidence in transactions does not necessarily translate to trust in institutions. If people are not predisposed to, or willing to trust the government, perhaps because of historical circumstance, political ideology, or personal experience,[17] even ensuring the most efficient transactions is unlikely to change things. For example, a Black resident in an underserved community in the U.S. who has little or no historical experience of city agencies serving their community will most likely not be willing to trust the government, even if their trash is picked up on time each week.

More than half the practitioners with whom we spoke looked to the lack of confidence in transactions as the root cause of distrust in public institutions. But there is a growing number of practitioners that are looking to address another root cause: the lack of faith spurred by a misalignment of values. This is a much more challenging diagnosis, insofar as solutions are not as clearly visible. If an institution's values do not align with those of its constituents, then the institution lacks legitimacy, defined as "a belief by virtue of which persons exercising authority are lent prestige."[18] And if it lacks legitimacy, then each action of that institution is brought into question by its stakeholders, even if the rules are clear and the transaction is seemingly flawless. According to Andy Lutzky from the social media influencer company Xomad: "Much of the mistrust between the public sector and people has to do with the misalignment of where and how the public sector is communicating to people." He goes on: "If you want to be trusted by a community, it follows a very separate set of rules of engagement and time."

Tactics cities are taking to counter such misalignment include greater emphasis on relationship building, investment in non-mediated human interactions that include neighborhood liaisons actually spending time at community meetings, forming new relationships not tied to specific government initiatives, and collaborative governance structures such as living laboratories[19] and participatory planning processes.[20] Citywide efforts aimed at aligning urban values demonstrate that doing this work in low-trust environments requires the creation of deliberative spaces where definitions can be negotiated.[21] From digital planning processes to personal relationship building, cities are exploring a myriad of ways to effectively communicate an alignment of values between institutional actors and constituents.

There are many ways that institutional values are perceptible by constituents, including public policies, personalities and profiles of elected officials, priorities in service provision, etc. But the tension caused by misalignment is often manifested through the anxiety over discretionary decision-making. Discretion can be defined as the capacity to make decisions relying on a decision-maker's values and judgment. Theorists of bureaucracy have argued that discretion should be eliminated or minimized to ensure effective governance. For example, Max Weber argues that "bureaucratization offers above all the optimum possibility for carrying through the principle of specializing administrative functions according to purely objective considerations," which are "calculable rules… without regards to persons."[22] But in practice, bureaucracies are never free of discretionary decision-making. All public organizations permit bureaucrats to exercise some independence and discretion since their

16 Armen Hakhverdian and Quinton Mayne, "Institutional Trust, Education, and Corruption: A Micro-Macro Interactive Approach," *The Journal of Politics* 74, no. 3 (July 2012): 739–50, https://doi.org/10.1017/S0022381612000412; Kenneth Newton and Pippa Norris, "Confidence in Public Institutions: Faith, Culture, or Performance?," in *Disaffected Democracies*, ed. Susan J. Pharr and Robert D. Putnam, What's Troubling the Trilateral Countries? (Princeton University Press, 2000), 52–73, https://www.jstor.org/stable/j.ctv39x5n8.8

William Ross Campbell, "The Sources of Institutional Trust in East and West Germany: Civic Culture or Economic Performance?," *German Politics* 13, no. 3 (September 1, 2004): 401–18, https://doi.org/10.1080/0964400042000287437

Qing Yang and Wenfang Tang, "Exploring the Sources of Institutional Trust in China: Culture, Mobilization, or Performance?," *Asian Politics & Policy* 2, no. 3 (2010): 415–36, https://doi.org/10.1111/j.1943-0787.2010.01201.x; Murtin et al., "Trust and Its Determinants."

17 Stephanie M. Merritt and Daniel R. Ilgen, "Not All Trust Is Created Equal: Dispositional and History-Based Trust in Human-Automation Interactions," *Human Factors: The Journal of the Human Factors and Ergonomics Society* 50, no. 2 (April 2008): 194–210, https://doi.org/10.1518/001872008X288574.

18 Max Weber, "Bureaucracy," in *From Max Weber: Essays in Sociology*, ed. Hans Gerth, Nachdr. d. Ausg. 1958 (New York: Oxford University Press, 1981), 382.

19 Mónica E Edwards-Schachter, Cristian E Matti, and Enrique Alcántara, "Fostering Quality of Life through Social Innovation: A Living Lab Methodology Study Case," *Review of Policy Research* 29, no. 6 (2012): 672–92.

20 John Forester, *The Deliberative Practitioner: Encouraging Participatory Planning Processes* (Cambridge, Massachusetts: MIT Press, 1999).

21 Eric Gordon et al., "Centering Values in Urban Transitions: A Novel Approach to Urban Innovation in Cluj-Napoca" (Fondation Botnar, 2022), http://ourcluj.city/.

22 Weber, "Bureaucracy," 215.

actions are guided by their interpretation of rules.[23] In fact, Lipsky argues that public servants *need* to exercise discretion in order to provide everyday public services.[24] He describes how "street-level bureaucrats," such as police officers and social workers, are constantly confronted with interpreting rules as they are implemented in real time. This implies more than just a straying from the rational norms of rulemaking; warmth and empathy are also at play. Political scientist Bernardo Zacka represents these street-level bureaucrats as sympathetic listeners who often rely on their moral agency in decision-making.[25] Discretion is the "human" component of public bureaucracies and the piece of the machinery that requires more than just confidence in transactions to build trust; it requires an alignment of values between the trustor and the trustee. The "human component" of institutions is both the solution and the problem, depending on how the problem is defined in the first place.

WHAT'S IN THIS REPORT

While everyone we spoke to discussed the need to manage distrust in government, two definitions of the roots of distrust emerged in our research: **lack of confidence in transactions** and **lack of faith in institutions because of the misalignment of values.** And while the articulated definition of the problem is not predictive of outcomes, it is an important lens through which to make sense of the contemporary landscape of smart governance.

Each of the chapters in this report looks at a dimension of how public institutions are solving for trust. Each chapter presents two poles in a dimension, which are not intended to be seen as a binary, but instead, as ends of a spectrum. In **chapter one**, we look at how cities are investing in building the reputational value of public institutions to be effective trustees on one end, and how they are investing in proxies so that the public institution does not have to solely serve as the trustee on the other. Investing in institutions looks like enhanced data collection and analysis strategies that allow institutional actors to make better decisions and appear more responsive. Investing in proxies looks like employing social media

influencers to effectively stand-in for the institution as a means of cultivating trust and communicating critical information. In **chapter two**, we explore the affective qualities of trust-building interventions. Technologies are being deployed to reduce time or distance. The reduction of time implies the creation of more efficient transactions and more streamlined decision-making (resulting in confidence). The reduction of distance implies more relatable institutions or more empathetic interactions (resulting in faith). In **chapter three,** we explore approaches to institutional listening, or the tactics used by cities to understand the needs and values of constituents. Listening tends to fall into one of two categories: closed-system or open-ended. Closed-system listening includes online surveys, town halls, 311 apps, and other tactics used to understand the answers to institutionally framed questions. Open-ended listening includes social media surveillance, online conversation tools, or other tactics that seek to involve the public in shaping questions.

The goal of this report is to put seemingly disparate interventions together in order to make sense of how practitioners are solving for trust. There is no doubt that cities are experiencing a crisis of legitimacy generated by dangerously low trust levels. It is our hope that by looking across urban and national contexts, we can understand how urban governance is being reimagined through the vehicle of novel technologies and how we might imagine a smart governance agenda that can demonstrably improve trust relationships between cities and their constituents.

23   W. Richard Scott, *Organizations: Rational, Natural, and Open Systems*, 5th ed (Upper Saddle River, N.J: Prentice Hall, 2003).

24   Michael Lipsky, *Street-Level Bureaucracy: Dilemmas of the Individual in Public Services*, 30th anniversary expanded ed (New York: Russell Sage Foundation, 2010).

25   Bernardo Zacka, *When the State Meets the Street: Public Service and Moral Agency* (Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 2017).

CHAPTER 01: WHAT DO WE TRUST?

How people within public-sector institutions understand the roots of distrust informs how they and their technology partners define and implement solutions. The two most common ways people understand distrust are, as defined in the introduction, untrustworthy transactions and the misalignment of values. There are a range of interventions we will discuss in this report that are directly responsive to each formulation of the trust problem. But encompassing these interventions are overarching strategies that do not necessarily neatly correlate to the perceived root of the problem. These strategies include: **1) bolstering the trustworthiness of the institution itself** (communicating the benevolence and capability of the government) and **2) incorporating proxies to support the trust relationship** (human or machine intermediaries that either circumvent the need for trust or support the trust relation with the institution based on their preexisting trust), possibly "bypassing" the institution altogether.

For the first strategy, government practitioners may try to align the values of the institutions with those of their constituencies and to increase reliability in the transactions that people engage with by presenting an image of institutional efficiency.[26] This is the most familiar approach: make public institutions better, both normatively and functionally, so that people can trust them. Civic tech tools,[27] such as 311 apps, are classic examples of investments in institutional reputation through the streamlining of service delivery. 311 systems allow people to report problems such as downed trees, skipped trash pick-up, sidewalk repairs, etc. The apps typically display a government's brand, for example BOS:311 in Boston or NYC311 in New York, to demonstrate that the institution is capable of streamlined transactions and clear user feedback. Problem-sourcing tools like 311, through responsiveness and demonstration of capability, seek to represent the institution as more deserving of trust. In addition to creating reliable transactions, cities seek to bolster their trustworthiness by creating personalized connections between government representatives and communities, emphasizing the empathic abilities of an institution to understand and/or care about outcomes. In essence, defining this first strategy is an investment in the reputation of the trustee, where "the city" and its identity is an important part of the communication strategy.

But many practitioners are actually turning away from investing in institutional reputation, often because the hurdles of repairing that reputation with particular constituents seems too high. With the second strategy, that we call *trust-by-proxy*, proxies are incorporated in the trust relationship to foster trust with the institution. A traditional example of a proxy is the *promotoras de salud* initiative, a government program in the U.S. where Mexican American women act as community health workers and share information to reduce risk of hypertension in Hispanic communities.[28] The *promotoras* enabled a public service provision: the government-created proxy enabled a distrusting public to include a trusted party in the trust relation and therefore create the conditions for trust. In these conditions, institutions are backgrounded and "invisibilized," as their role becomes more about facilitating the infrastructure for a network of trust relations rather than as an entity that needs to be trusted itself.

INSTITUTIONAL TRUSTWORTHINESS

As explained above, the rise in distrust of public institutions has been exacerbated by external factors such as COVID-19, social unrest, inflation,

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26   For a critique of the framing of "efficiency" in public institutions see Eric Gordon and Gabriel Mugar, *Meaningful Inefficiencies: Civic Design in an Age of Digital Expediency* (New York, NY: Oxford University Press, 2020).

27   Andrew Schrock, *Civic Tech: Making Technology Work for People* (Rogue Academic Press, 2018).

28   Hector G. Balcazar et al., "A Randomized Community Intervention to Improve Hypertension Control among Mexican Americans: Using the Promotoras de Salud Community Outreach Model," *Journal of Health Care for the Poor and Underserved* 20, no. 4 (2009): 1079–94, https://doi.org/10.1353/hpu.0.0209.

misinformation, and radical shifts in expectations of transactions introduced by networked technologies. Trust in institutions is heavily informed by the confidence users have in transactions and the satisfying of constituent expectations of immediacy. When using a government website, constituents have come to expect quality user experience and immediate feedback.[29] But because these transactions are always associated with or facilitated by data collection, analysis, and use, the trustworthiness of the institution matters. What data is being collected and why? How is that data being stored or shared? And how is the data being used for decision-making? Even if cities diagnose the distrust problem as a matter of unreliable transactions, there is need for them to invest in the institution's ability to **benevolently steward personal data** and to **align constituent needs to government decision-making**. As such, many government institutions are actually seeking to make transactions more effective by supporting the trustworthiness of the institution.

The first element is the institution's ability to **benevolently steward personal data**, including articulated respect for personal privacy, and streamlined use of data within government programming and decision-making. As Melisa Breda, the City of Buenos Aires' Chief Data Officer, told us, this should be translated to specific policies: for example, expressing the compliance with Argentina's data-use law[30] (which, she added, needed to be updated to fit new uses of data and to apply to private and public entities equally). She also expressed interest in more transparency in terms of algorithmic accountability.[31] She mentioned that the city already made an important effort in sharing its data publicly

and that the city could expand this effort to share the algorithms it uses in a publicly accessible repository.

In other areas of the City of Buenos Aires, institutional leaders are envisioning how these principles can be incorporated into the design of civic technologies that citizens use every day. The City of Buenos Aires introduced a "'smart assistant"[32] named Boti in 2018, which is a kind of digital concierge for the city.[33] As a digital representative of the city, it can handle a range of requests from where to get vaccinated to how to pay parking tickets. Fernando Benegas, who oversaw the design of Boti as Secretary for Planning and Management Coordination from 2015 to 2018 and as Secretary for Innovation and Digital Transformation from 2019 to 2021, pointed out that in an early iteration of the product that ran on the city government's website, Boti asked for the user's email before starting any conversation. Benegas identified this as a reason for distrust; he saw this mandatory identification as a barrier of entry but also as unnecessary and irrelevant to the conversation, which led users away from the tool. Further developments of Boti were designed to ask for and retain minimal information. Benegas explained:

> If I want to know the opening time of the community headquarters of Recoleta, the city has no reason to ask me for any data. The data that is requested through Boti is only the data that is relevant and absolutely necessary to be able to provide the solution that the user asks for. So for example, if you want to know how many tickets you have on your car, Boti is going to ask you for the car license plate to identify that car and tell you about those tickets.

29   See Kimberly Stoltzfus, "Motivations for Implementing E-Government: An Investigation of the Global Phenomenon," in *Proceedings of the 2005 National Conference on Digital Government Research*, 2005, 333–38.

30   National law 25.326 ("protection of personal data" or "habeas data") limits the collection and storage of sensitive data and allows individuals to rectify information. In addition, a municipal law in the City of Buenos Aires (law 1.845) applied to data of individuals in the City.

31   Algorithmic accountability refers to "the assignment of responsibility for how an algorithm is created and its impact on society; if harm occurs, accountable systems include a mechanism for redress," see Robyn Caplan et al., "Algorithmic Accountability: A Primer" (Data & Society Research Institute, April 18, 2018), https://datasociety.net/library/algorithmic-accountability-a-primer/.

32   Colin van Noordt and Gianluca Misuraca, "New Wine in Old Bottles: Chatbots in Government," in Electronic Participation, ed. Panos Panagiotopoulos et al., Lecture Notes in Computer Science (Cham: Springer International Publishing, 2019), 49–59, https://doi.org/10.1007/978-3-030-27397-2_5

Naomi Aoki, "An Experimental Study of Public Trust in AI Chatbots in the Public Sector," Government Information Quarterly 37, no. 4 (October 1, 2020): 101490, https://doi.org/10.1016/j.giq.2020.101490

Sayed Mahmood Adnan, Allam Hamdan, and Bahaaeddin Alareeni, "Artificial Intelligence for Public Sector: Chatbots as a Customer Service Representative," in *The Importance of New Technologies and Entrepreneurship in Business Development: In The Context of Economic Diversity in Developing Countries*, ed. Bahaaeddin Alareeni, Allam Hamdan, and Islam Elgedawy, *Lecture Notes in Networks and Systems* (Cham: Springer International Publishing, 2021), 164–73, https://doi.org/10.1007/978-3-030-69221-6_13

Aggeliki Androutsopoulou et al., "Transforming the Communication between Citizens and Government through AI-Guided Chatbots," Government Information Quarterly 36, no. 2 (April 2019): 358–67, https://doi.org/10.1016/j.giq.2018.10.001.

33   "Boti: El Chatbot de La Ciudad" (Secretaría de Innovación y Transformación Digital, Gobierno de la Ciudad de Buenos Aires, April 2022), https://www.buenosaires.gob.ar/sites/gcaba/files/caso_boti_-_abril_2022.pdf.

Boti's principle of resident control over data is core to how the city of Buenos Aires' smart city effort understands the incorporation of novel technologies. The Smart City Undersecretary, led by Agustín Suárez, has focused on finding new ways for residents to manage their personal data leading to more efficient and privacy-conscious interactions. The first of these efforts is miBA, a unique identifier[34] for residents across all government offices in the City of Buenos Aires. Suárez argues that city offices often demand documents from residents redundantly and excessively; different government offices ask for the same information, and they ask for information that they might not need. The goal of miBA is to contain, in a single application, the information of one resident and to notify them when this information has been accessed and shared with any public institution. In Suárez's words:

> We want documents to belong to the people and not to the government. We want to break with this paradigm of owning people's information, when people's information truly belongs to them. Why would I hold your birth certificate, if the one who was born and to whom the document corresponds is you and not me as the issuing government? This seeks to de-bureaucratize and make transparent all the paths and the bureaucracy that governments sometimes work with. We want to end with this idea of "I ask you for a document that I gave you myself." It's crazy, but conceptually it happens a lot.

Suárez sees miBA as the first step towards a vision of the city that allows residents to be in "full control" of their data. For him, the next step for this process is Tango ID, a project that aims to create a "self-sovereign" identity that potentially runs in the blockchain. Through this technology, users would be able to partially share information with institutions and private actors. For example, if an institution wanted to verify that a person is older than 18 years of age, the person would not need to share their identification card (which includes, for example, their home address) with the institution; rather, they would be allowed to share only a specific data point. Clear constraints on

government access to personal data is a strong theme in Argentina, related to the trustworthiness of cities.

This limited access to data only works to increase the trustworthiness of the institution if functionality is not negatively impacted. Institutions are investing in technologies that can anticipate the needs of constituents, showing they can understand their residents and provide solutions to problems before those problems emerge. In the words of Melisa Breda:

> I imagine a process that doesn't require much sophistication, but it does require having the correct and well-integrated data. The government could anticipate what you need, so that it doesn't need me to go and request an appointment to renew my driver's license when it's expired. Instead, understanding the channels through which I like to be contacted, the government could tell me "Hey, in a couple of months your license will expire; do you want us to make an appointment to renew your driver's license?" And if I already renewed my license or if I have voluntarily provided them with my corresponding data, then it could say, "This is the office that is closest to you," "These are the hours that are close to to the latest procedures you did," "This is the time slot that could be more comfortable for you." In truth, this doesn't require a sophisticated algorithm. We have the data, and we have it voluntarily provided by citizens. What you need is to build a good use case, integrate it correctly, and have you or me correctly or uniquely identified.

Per Breda's vision, government empathizes with residents by anticipating the transactions they seek. This entails much more than just confidence building, as the anticipatory qualities of the institution suggests that it is a reliable trustee, capable of showing constraints in its data collection and use as well as effectively understanding the needs of constituents. In this case, the goal is not just to improve specific transactions but to invest in sustaining the long-term relationship with public institutions.

This happens by **connecting articulated community values to government decision-making.** Listening tools (reviewed in detail in chapter three) are

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34 See Alan Gelb and Anna Diofasi Metz, *Identification Revolution: Can Digital ID Be Harnessed for Development?* (Brookings Institution Press, 2018)

Rainer Kattel and Ines Mergel, "Estonia's Digital Transformation: Mission Mystique and the Hiding Hand," in Great Policy Successes, by Rainer Kattel and Ines Mergel (Oxford University Press, 2019), 143–60, https://doi.org/10.1093/oso/9780198843719.003.0008

Ali M Al-Khouri, "Digital Identity: Transforming GCC Economies," Innovation 16, no. 2 (August 1, 2014): 184–94, https://doi.org/10.1080/14479338.2014.11081981.

especially useful for this purpose. For example, the City of Philadelphia uses Zencity, a tool that gathers conversation data from social media platforms and analyzes them through natural language processing (NLP) techniques.[35] Emily Yates, who served as the Smart City Director for the City of Philadelphia until April 2022, argued that this technology was key to her theory of "how to have people feel heard":

> What we expect to create here eventually is stronger alignment between community expectations and government decision-making and government messaging and government work. So in essence, people will feel heard by small increments of seeing their city aligned more and more in a trajectory with their expectations.

Yates' vision of aligning institutional decision-making with community expectations involves not just the accuracy of representing multiple community perspectives, but also the value of racial justice influencing how community perspectives influence decisions. For example, Yates discussed the challenge of the City of Philadelphia's efforts to understand the perspective of minority business owners. She shared an example of a public planning process where efforts to get feedback through a traditional town hall mechanism failed to reach the populations they were seeking. Through Zencity, Yates was able to look at social media chatter, specifically from minority business owners, and then incorporate specific insights from that dataset into the planning process. Without having to rely on calling a meeting and hoping "the right people" showed up, Zencity gave her a more targeted way of understanding what was on people's minds. Yates explains that the city's working process would follow this line of reasoning: "Okay, we're going to take the whole world and reiterate it back to you and say, this is what we heard, and this is how it led to this

decision, rather than saying, 'this is the decision,' which I think we tend to do."

This creates the perception of a trustworthy institution, according to Yates. The city, as trustee, is demonstrating its benevolence through transparency of data collection and clarity of representation. This theme came up again and again in our interviews. When we asked Yago Bermejo of the nonprofit Deliberativa in Madrid, which facilitates deliberative public conversations about policy issues, if the inclusion of opinions from the public changes the way the government communicates, he responded: "No, I wouldn't call that communication. I call it decision-making. In other words, we are not interested in encouraging participation which does not have to do with political decision-making." The important theme is that to enhance the reputational value of institutions, practitioners know that participation for its own sake is counterproductive. Institutions demonstrate that they are worthy of trust if they make a clear connection between citizen input and government decision-making.

TRUST-BY-PROXY

When there is a strong misalignment of values between communities and institutions, cities run into problems delivering the most basic of public services. Many cities are responding to this challenge by circumventing the institutional investment altogether and instead putting resources into including proxies in a network that can enable reliable interactions. **We define a proxy as a human or non-human intermediary that facilitates the relation between the institution and the constituent.** In this section, we will look at proxies that enable transactions through building on existing confidence in technology or by bridging interpersonal trust relationships to institutional transactions. We have seen that cities are making the decision to invest in proxies when other methods are not working. First, we will discuss the use

35 For other uses of NLP in the public sector, see William D. Eggers, Matt Gracie, and Neha Malik, "Using AI to Unleash the Power of Unstructured Government Data," Deloitte Insights (blog), January 16, 2019, https://www2.deloitte.com/us/en/insights/focus/cognitive-technologies/natural-language-processing-examples-in-government-data.html

Alfred Lee and Benjamin Kinsella, "How the Social Sector Can Use Natural Language Processing," 2020, https://doi.org/10.48558/NECS-FD38

Yudhanjaya Wijeratne, Nisansa de Silva, and Yashothara Shanmugarajah, "Natural Language Processing for Government: Problems and Potential" (Canada: International Development Research Centre, 2019)

Chih Hao Ku, Alicia Iriberri, and Gondy Leroy, "Natural Language Processing and E-Government: Crime Information Extraction from Heterogeneous Data Sources," in Proceedings of the 2008 International Conference on Digital Government Research, 2008, 162–70

Alicia Iriberri and Gondy Leroy, "Natural Language Processing and E-Government: Extracting Reusable Crime Report Information," in 2007 IEEE International Conference on Information Reuse and Integration, 2007, 221–26, https://doi.org/10.1109/IRI.2007.4296624

Loni Hagen et al., "Understanding Citizens' Direct Policy Suggestions to the Federal Government: A Natural Language Processing and Topic Modeling Approach," in 2015 48th Hawaii International Conference on System Sciences, 2015, 2134–43, https://doi.org/10.1109/HICSS.2015.257

of blockchain to build on trustors' existing confidence in technology. And then we will look at how cities are using social media influencers as trusted messengers that can facilitate or encourage government transactions.

Many of the practitioners with whom we spoke had at least imagined what it would be like to incorporate blockchain into their governance structures. Blockchain is a decentralized ledger technology, mostly used in the context of transactions of digital assets, that constitutes "a new infrastructure for the storage of data and the management of software applications, decreasing the need for centralized middlemen."[36] Blockchains like Ethereum can enforce smart contracts (computer programs which are automatically executed) and forecast future actions per smart contracts' code. Different from human organizations, blockchain is not "just auditable but also authenticated and nonrepudiable,"[37] as no single party is allowed to modify or halt the execution of a smart contract once deployed. Governments worldwide have expressed interest in incorporating blockchain technologies and have kickstarted projects for purposes spanning social security funds management to land-title registries.[38]

A central theme in the existing literature on public-sector uses of blockchain is its ability to "increase" or "facilitate" trust in government processes through the immutability of records and the redundant data verification process.[39] As such, the technology is often represented as "trustless"[40] because it bypasses the need for human actors to trust a mediating entity.

According to Teddy, a blockchain developer in Reno, Nevada, who was working with the mayor to implement some blockchain-based procedures: "The whole point of this is that it's supposed to be a trustless system, where you don't need to trust anybody to

follow through with their side of the deal, because it's automatically going to be executed by a smart contract. So the whole idea is that it is trustless. You don't need to trust anybody."[41]

This principle is echoed by blockchain developer Logan Lenz, a contributor to the CityCoins project. CityCoins aims to create a new economy of tokens around smart cities, where specific transactions in the city can be programmed by the city's residents themselves. Lenz would like to see governments engaging tokens themselves and participating in the transparent network of the blockchain, which, he argues, is trusted by its users:

> The trusting of the technology itself manifests its own new way of thinking about how we can govern bad actors [...] It's transparent. Like I guess the other way to look at it is the opposite: do you know what your government's spending money on? Like, where do you go to see what the government's spending money on now? I'm sure, maybe it's somewhere, but no one knows. And then secondly, all the other stuff that happens in the background that you don't have access to… If this was a means for all transactions, I'm talking about blockchain specifically, then you would be able to see it. And I think that transparency is the message that answers that question most.

Lenz sees blockchain as a tool capable of generating trust in the technology itself, in contrast to the opacity that he sees as generally afforded by governments. The concern with this opacity can be tied to discretionary decision-making: the existence of human-made decisions happening "in the background," "outside" their delimited scope. What the blockchain offers by transparency is both the recorded,

36   Primavera De Filippi and Aaron Wright, *Blockchain and the Law: The Rule of Code* (Cambridge, Massachusetts: Harvard University Press, 2018), 33.

37   De Filippi and Wright, *Blockchain and the Law*, 37.

38   Nir Kshetri, "Will Blockchain Emerge as a Tool to Break the Poverty Chain in the Global South?," *Third World Quarterly* 38, no. 8 (August 3, 2017): 1710–32, https://doi.org/10.1080/01436597.2017.1298438; MyungSan Jun, "Blockchain Government - a next Form of Infrastructure for the Twenty-First Century," *Journal of Open Innovation: Technology, Market, and Complexity* 4, no. 1 (March 2018): 7, https://doi.org/10.1186/s40852-018-0086-3.

39   Ahmed Alketbi, Qassim Nasir, and Manar Abu Talib, "Blockchain for Government Services — Use Cases, Security Benefits and Challenges," in *2018 15th Learning and Technology Conference (L T)*, 2018, 112–19, https://doi.org/10.1109/LT.2018.8368494; Svein Ølnes, Jolien Ubacht, and Marijn Janssen, "Blockchain in Government: Benefits and Implications of Distributed Ledger Technology for Information Sharing," *Government Information Quarterly* 34, no. 3 (September 1, 2017): 355–64, https://doi.org/10.1016/j.giq.2017.09.007; Kevin Werbach, *The Blockchain and the New Architecture of Trust*, *The Blockchain and the New Architecture of Trust* (MIT Press, 2019), https://doi.org/10.7551/mitpress/11449.001.0001, Jun, "Blockchain Government - a next Form of Infrastructure for the Twenty-First Century."

40   Primavera De Filippi and Samer Hassan, "Blockchain Technology as a Regulatory Technology: From Code Is Law to Law Is Code," *First Monday*, November 14, 2016, https://doi.org/10.5210/fm.v21i12.7113; Dominik Harz and Magnus Boman, "The Scalability of Trustless Trust," in *Financial Cryptography and Data Security*, ed. Aviv Zohar et al., Lecture Notes in Computer Science (Berlin, Heidelberg: Springer, 2019), 279–93, https://doi.org/10.1007/978-3-662-58820-8_19.

41   For a critique of "trustlessness" in blockchains, see Gili Vidan and Vili Lehdonvirta, "Mine the Gap: Bitcoin and the Maintenance of Trustlessness," New Media & Society 21, no. 1 (May 2019): 42–59, https://doi.org/10.1177/1461444818786220.

visible transactions, and the forecast that these transactions will be done in an expectable manner.

Furthermore, Lenz's enthusiasm about blockchain's capacity to generate trust in the technology itself and reverberate throughout the system is echoed by Agustín Suárez of the Tango ID project. He sees blockchain as a necessary "bet" that the government needs to take in order to respond to society's expectations:

> The most important thing is that there is a trust behind this technology that we want to bet on, because we want to take these benefits to a larger plane. The government is behind in many things, but at the same time it always has to push the limits. Because if it doesn't, it remains at a great disadvantage with respect to the private sector.

Suárez sees the blockchain as the trust infrastructure needed to go forward with a vision of an interconnected government that at the same time offers guarantees that privacy and autonomy are prioritized. Unlike investments directly in the trustworthiness of institutions, investing in blockchain enables a leapfrogging of the messy complexity of public institutions and relies heavily on users' trust in the technology.

Tango ID represents a kind of "distributed trust," where trust is distributed to the different parties that are involved in a blockchain.[42] This emphasizes the collaborative nature of trust enabled by the blockchain. As explained by Diego Fernández, Secretary of Innovation and Digital Transformation of the City Buenos Aires, Tango ID proposes a system of identity validation where government would still be a key trusted party that emits identifying credentials. Tango ID would work as a decentralized infrastructure that would act as a public good, reducing what Fernández described as the "operative cost" of society: he explains that digital silos are key obstacles in government, and that a common identifier would simplify the need for individuals to have different organizational identities. However, despite the government's role in the development of Tango ID, its implementation would not be controlled by the government, as it would run on a series of distributed blockchains. In Fernández' words: "The government is *promoting* its development. But it's going to be just a user of that protocol, not its owner. The government can't own the users' wallets or the way people verify their identities. It just has the power to issue those credentials."

While non-human proxies emphasize high confidence in transactions, cities are also investing in **human proxies** (aided by network technologies), where the relatability of the proxy and their discretionary judgment is what makes them effective. An example of this is social media influencers. Social media influencers are microcelebrities, individuals who deploy and maintain an online identity as a branded good[43] and who create content in social media platforms for an audience beyond close social ties. They are often seen as capable of advancing messages, like promoting products, as well as of contributing to setting conversational agendas in social media.[44]

Public institutions have relied on social media influencers to advance messages. During the COVID-19 pandemic, governments and international agencies sought partnerships with influencers in promoting positive practices, understanding audiences' uncertainty and reliance on social media platforms for entertainment as well as influencers' messaging capacity to promote vetted information.[45] In 2021, the U.S. government worked with social media influencers to encourage vaccination and combat misinformation, and in 2022 it "briefed" TikTok influencers on the Ukraine war to promote its messaging priorities

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42   Rachel Botsman, *Who Can You Trust? How Technology Brought Us Together -- and Why It Could Drive Us Apart*, Updated edition (UK: Penguin Business, 2018); Yves Caseau and S Soudoplatoff, "The Blockchain, or Distributed Trust," 2016; Marc-David L. Seidel, "Questioning Centralized Organizations in a Time of Distributed Trust," *Journal of Management Inquiry* 27, no. 1 (January 1, 2018): 40–44, https://doi.org/10.1177/1056492617734942.

43   Theresa M. Senft, "Microcelebrity and the Branded Self," in *A Companion to New Media Dynamics* (John Wiley & Sons, Ltd, 2013), 346–54, https://doi.org/10.1002/9781118321607.ch22.

44   Kevin Roose, "Don't Scoff at Influencers. They're Taking Over the World.," *The New York Times*, July 16, 2019, sec. Technology, https://www.nytimes.com/2019/07/16/technology/vidcon-social-media-influencers.html.

45   Crystal Abidin et al., "Influencers and COVID-19: Reviewing Key Issues in Press Coverage across Australia, China, Japan, and South Korea," *Media International Australia* 178, no. 1 (February 1, 2021): 114–35, https://doi.org/10.1177/1329878X20959838; Elvira Bolat, "Why the UK Government Is Paying Social Media Influencers to Post about Coronavirus," *The Conversation*, no. 9 September 2020 (September 9, 2020), https://theconversation.com/why-the-uk-government-is-paying-social-media-influencers-to-post-about-coronavirus-145478.

against Russian-supported messages.[46]

The instrumentation of social media influencers was further enabled by the emergence of companies like Xomad. Xomad is a platform that organizes nano (1,000-10,000 followers) and micro (10,000-100,000 followers) influencers into specific campaigns. It uses its algorithm to determine the reach of each influencer, including the given audience's demographics and geography, and facilitates paying each influencer for their individual posts. This allows government clients working with Xomad to rely on the trustworthiness of social media influencers and achieve effective messaging while bypassing the government's trust deficit. Furthermore, Xomad's team argues that a key benefit of messaging through social media influencers is the possibility to reach residents in their preferred social media platforms, using the conventions of

Xomad has had marked success in mobilizing influencers for COVID-19 vaccination campaigns, including in Guilford County, North Carolina, and the City of San Jose. In San Jose, as represented in the above chart, the company points to a correlation between vaccinations and heavy engagement with influencer content. Lutzky explains it this way: "People want to be more informed. [People in San Jose told us]: 'I didn't know this information, thank you for sharing it; I'm now going to get vaccinated, I'm going to share this with my friends or loved ones or family or whoever.' They're open to hearing it as long as you know the rules of the playground." The rules of the playground, as Lutzky puts it, include the style and tone of communication, the necessary distance from institutional affiliation, and having a messenger that is relatable–indeed trustworthy. By becoming involved

DATA EFFICACY

The campaign impressions **strongly correlate** with COVID-19 vaccinations in greater San Jose

Weekly Impressions v.s. Count of Vaccinated Residents (with 1+ Doses)

A high volume of PSA content went live on IG Stories helping drive vaccination rate

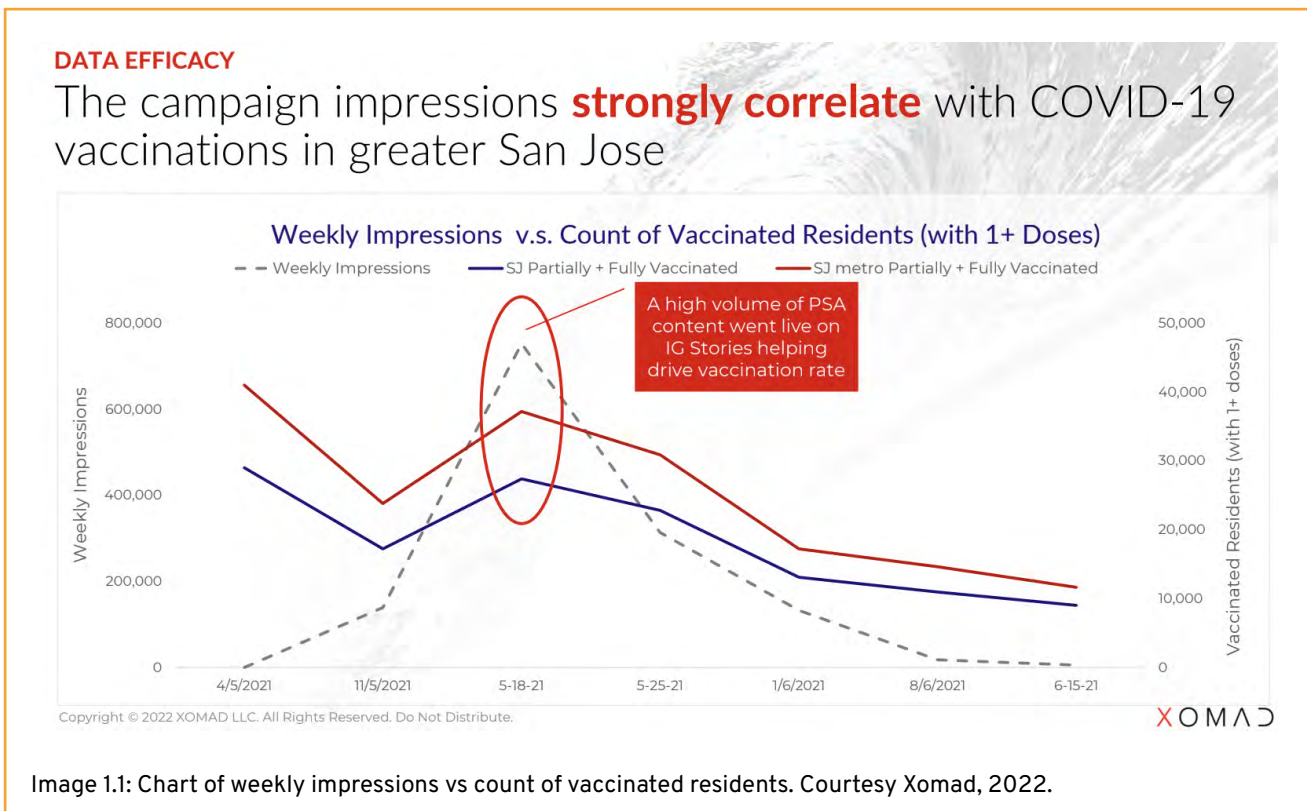Copyright © 2022 XOMAD LLC. All Rights Reserved. Do Not Distribute.

Image 1.1: Chart of weekly impressions vs count of vaccinated residents. Courtesy Xomad, 2022.

each medium, which is compatible with influencers' authoritative voice. "Influencers are people who look and sound like their target audience, who are considered trusted messengers, on Instagram and Tiktok," according to Andy Lutzky of Xomad. "People opt in to receive communications from these people by following and liking their posts."

in a communicative network between the institution and the constituent, the influencer is relaying a reliable message because they look and sound like their audience, which coincides with the constituent. Take the analogous example of a school giving a book as assigned reading. If a school assigns summer reading to the 10th grade class, a student's incentive to read

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46   Taylor Lorenz, "To Fight Vaccine Lies, Authorities Recruit an 'Influencer Army,'" *The New York Times*, August 1, 2021, sec. Technology, https://www.nytimes.com/2021/08/01/technology/vaccine-lies-influencer-army.html

Taylor Lorenz, "The White House Is Briefing TikTok Stars about the War in Ukraine," *Washington Post*, March 11, 2022, sec. Technology, https://www.washingtonpost.com/technology/2022/03/11/tik-tok-ukraine-white-house/.
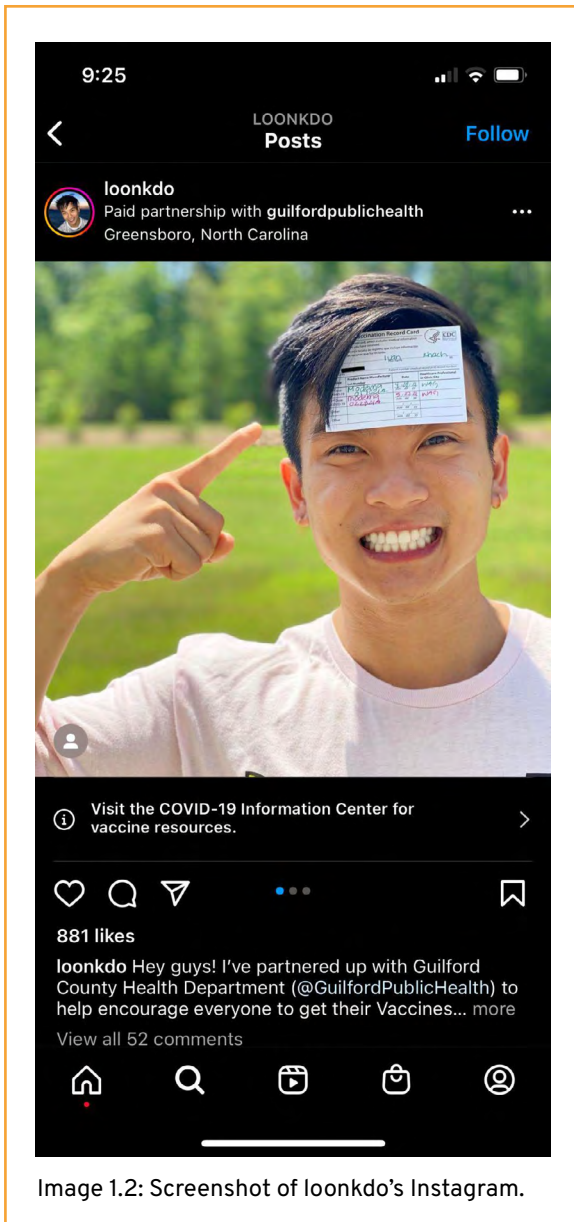
Image 1.2: Screenshot of loonkdo's Instagram.

cities, especially in times of crisis (such as a pandemic), where there simply is no time to invest in institutional reputation. But this is difficult terrain for cities, because the tactic necessarily requires institutions to substantially relinquish control behind their messaging strategy. Lutzky explains how this is sometimes an issue for city government:

> Influencers are incentivized to do a good job on these campaigns, whether it's governments or brands signing them up to do something. And a lot of companies underestimate that and overestimate the amount of control that they need to hold on to these influencers' posts. In my experience, we can give influencers information; we can give them the messaging and the calls to action that we want them to share with their audiences. But once we provide them the messages and the content we want them to say, we have to back off. Otherwise, it's going to be a bunch of really interesting young people sharing government press releases.

Human proxies are effective because they are relatable, because they are markedly different from the rational functioning of the institution. Influencers like Loon, a YouTube and Instagram content creator and podcaster hired by Xomad in the Guildford County vaccination campaign, saw this as a benefit and used this freedom to create his own concept. "I love brands like this, because they give you some form of creativity. (...) I came up with the concept: I'm gonna slap this little vaccine card on my head because it's goofy, and I'm a goofy guy." This kind of personalization is precisely what makes this tactic effective. Notably, it has an opposite logic from machine proxies. Whereas proxies through blockchain, for example, promise to reduce human variability and provide a reliable trustee through high confidence in transactions, human proxies embellish human variability and provide a reliable trustee by creating high levels of faith in the benevolence of the influencer.

CONCLUSION

In the pursuit of building trust with constituents, cities are investing in the reputation of their institutions, and/or they're enhancing institutional trustworthiness through investing in proxies. These strategies are not mutually exclusive. Indeed, cities are investing in both. While one department or

is premised on obligation and personal movement through a structured educational system. But if a friend recommends the book, the student is much more likely to read it because she feels an immediate and emotive relationship with the person recommending it, rather than an obligation. The end result is the same: the student reads a specific book. But the mechanism to create motivation to do so is different because she trusts her friend. That does not mean, however, that she is more likely to trust that school assigned books in the future are going to be worthwhile. In this example, the friend serves as a proxy to the school and facilitates interaction but doesn't necessarily lend any trust to the institution.

Influencer campaigns make good tactical sense for

program might establish proxies, others are cultivating relationships between constituents and institutional representatives.

These strategies have very different implications for the institution that should be considered in long-term planning. Investment in proxies can be seen as a more immediate pathway to getting things done. For example, it can enable institution-led transactions without the need to address the underlying distrust that results in diminished faith. However, there is no evidence that trust-by-proxy, either through enhanced confidence in technology-facilitated transactions or manufactured faith in an influencer, lends legitimacy to the government institution. In other words, one's confidence in reliable transactions (enabled by machine or human proxies) may not influence one's perception that the government does not share their values. But as cities find themselves in the midst of battles over education, public health, voting rights, displacement, and crime, the urgency of what they need to do sometimes cannot accommodate the longer-term approaches of institutional reputation. Cities need to invest in both strategies, and they need to have a clearer understanding of why.

Relying on proxies as a strategy can also pose other normative problems. If institutions become "invisible," accountability becomes harder to direct to institutional leaders. This is especially problematic when these positions are elected offices. And as proxies like influencers are implemented to reach specific populations, this might lead to a differentiated electorate, one that receives messages from public institutions and can hold their leaders accountable, and another one that receives them from proxies and does not know to whom to direct their demands. Other practical issues with proxies will be discussed in chapter 3.

In the next chapter, we dig into the question of how city leaders believe that trust is experienced by their constituents and how they are designing programs and processes to increase proximity, either through the shrinking of time (efficiency creates confidence) or the shrinking of distance (intimacy creates faith).

CHAPTER 02: HOW DO WE TRUST?

What are the affective qualities of constituent trust? And how do institutions understand those qualities and seek to translate them into programs and processes that have an effect on trust? This chapter focuses on what it feels like to trust an institution and what institutions are doing to create the conditions for that feeling. According to Chris Thompson, director of the San Jose office of the Knight Foundation, everything comes down to distance and time. "I ask what I can do to eliminate the barriers of each: the barriers to getting people collaborating, exchanging information, building trust, making decisions. How can I eliminate those barriers, the two barriers of distance and time?" Thompson invokes these two dimensions to describe the experience of proximity that one might feel about an institution, which leads to a sense of reduced risk in the trust relationship. That feeling is generated either through **the reduction of time**, which suggests seamless interactions and efficient responses, or through **the reduction of distance**, which suggests perceived intimacy and relatability. Regardless of the strategy cities are pursuing (institutional investment or investment in proxy, as described in chapter one), or even what their working definition of distrust is (unreliable transactions or misalignment of values, as described in the introduction), every trust-building program or process is guided by the pursuit of one of these experiential goals: **reduced time** or **reduced distance.**

REDUCING TIME

Much of the academic and professional discourse around civic technology has focused on the pursuit of making public services more efficient.[47] By reducing the time of a given transaction, the amount of people involved in facilitating a transaction, or the ability of a trustor to understand the information that informs government decisions, perceived risk on the part of the trustor is reduced. Metaphorically, the smaller the temporal gap, the less opportunity there is for that transaction to play out in an unanticipated way or the more reasonable it is to have faith in a trust relationship.[48]

Novel technologies are being put to work to actively build trust through a vision of what might be called **ubiquitous government**. In 1991, the computer scientist Mark Weiser introduced the concept of ubiquitous computing as "a new way of thinking about computers, one that takes into account the human world and allows the computers themselves to vanish into the background."[49] This conception of government was quite common across our interviews with government workers in Argentina, where, as described in the introduction, trust in public institutions is particularly low.[50] Melisa Breda from the City of Buenos Aires told us that the city uses Diego Fernandez' metaphor of "wifi-government": "Wifi is everywhere, invisible, and you only notice it when it does not work. When we access the Internet, we don't think about wifi. The connection between what we do in our computer devices, how the information travels via radio waves, and how this information is connected to a broader network is inconsequential for us." This is ubiquitous government.

To achieve this vision, people described the importance of the **seamless interoperability of parts**. To perform invisibility, information needs to be shared among agencies in the background, without residents needing to understand the path that their

47 Schrock, *Civic Tech.*

48 Mingyue Fan et al., "The Effects of EGovernment Efficiency on Subjective Wellbeing," *Frontiers in Psychology* 13 (2022): 768540, https://doi.org/10.3389/fpsyg.2022.768540.

49 Mark Weiser, "The Computer for the 21 St Century," *Scientific American* 265, no. 3 (1991): 94–105, https://www.jstor.org/stable/24938718, 94.

50 In Edelman's 2022 "Trust Barometer" Argentina was rated 45 in its "Trust Index," falling under the Distrust category; Argentina also ranked last in two categories, trust in government and trust of the Central Bank (Edelman, 2022).

information follows.[51] Agustín Suárez from the City of Buenos Aires contrasts the classic government model where residents are expected to facilitate the movement of their information themselves by filling out new forms with every new department with which they interact ("stand in this line to get this form, then move to another line to drop off the same form") to a vision where information is shared across government agencies and the system picks up the burden of moving information. This is why Suarez created miBA, a digital portfolio of government-issued documents that residents can use to engage in different transactions throughout different public agencies in Buenos Aires.

Through the sharing of information between parties, Suárez is seeking a kind of government that vanishes into the background in order for constituents to accomplish their goals with little cognizant awareness of the technology's involvement. In this line of thinking, one doesn't need to, or want to, have a relationship with the government to pay a parking ticket. They just need and want to pay the parking ticket.

This vision also includes how governments share information with third parties, or how they **streamline processes of interaction**. This is represented in Ciudad 3D,[52] a digital simulation of the city meant to streamline certain transactions. As Melisa Breda explained:

I truly believe that the city can be infinitely more intelligent and efficient if we understand that citizens rarely engage with the city government, much less than one thinks. By employing data and technology, it is possible to create a much more efficient, a much faster experience and without the need for bureaucracy, paperwork, and long processes. The government needs to understand that it is a *means* for whatever the person wants to do.

We 3D-modeled the volume of the built surface of each plot. This was usually a bureaucratic procedure you'd do with the city. So we said "let's take all these rules that are written in the urban code and let's model them with algorithms." So that when a person wants to look up information about a plot, they don't have to go through a bureaucratic procedure. Instead, they can consult the information right there.

Image 2.1. Rendering of a 3D model in inCitu that one might see through their phone's camera.
https://www.mas.org/events/walk-in-the-future-of-nyc-explore-upcoming-new-york-city-developments-on-site-in-augmented-reality/

51   See Benoît Otjacques, Patrik Hitzelberger, and Fernand Feltz, "Interoperability of E-Government Information Systems: Issues of Identification and Data Sharing," *Journal of Management Information Systems* 23, no. 4 (May 1, 2007): 29–51, https://doi.org/10.2753/MIS0742-1222230403 https://www.mas.org/events/walk-in-the-future-of-nyc-explore-upcoming-new-york-city-developments-on-site-in-augmented-reality/ https://www.mas.org/events/walk-in-the-future-of-nyc-explore-upcoming-new-york-city-developments-on-site-in-augmented-reality/

Eric W. Welch, Mary K. Feeney, and Chul Hyun Park, "Determinants of Data Sharing in U.S. City Governments," *Government Information Quarterly*, Open and Smart Governments: Strategies, Tools, and Experiences, 33, no. 3 (July 1, 2016): 393–403, https://doi.org/10.1016/j.giq.2016.07.002 https://www.mas.org/events/walk-in-the-future-of-nyc-explore-upcoming-new-york-city-developments-on-site-in-augmented-reality/

F. Harvey and D. Tulloch, "Local-government Data Sharing: Evaluating the Foundations of Spatial Data Infrastructures," *International Journal of Geographical Information Science* 20, no. 7 (August 1, 2006): 743–68, https://doi.org/10.1080/13658810600661607.

52   Ciudad 3D is an example of a "digital twin" project, or a digital simulation of a city. See Li Deren, Yu Wenbo, and Shao Zhenfeng, "Smart City Based on Digital Twins," *Computational Urban Science* 1, no. 1 (March 29, 2021): 4, https://doi.org/10.1007/s43762-021-00005-y.

Breda describes Ciudad 3D as a way to reduce transaction time with developers.[53] Other 3D modeling efforts take a similar approach but are focused more on constituent-level interactions. inCitu is a startup based out of New York City that uses augmented-reality for public planning. The concept behind inCitu is that instead of attending a planning meeting where a representative or developer shows a rendering of a new development, one can stand in a city space and see the proposed development simulated virtually in place. Looking through the camera on their phone, users can get a sense of the scale and location of a proposed building from the sidewalk perspective. Dana Chermesh, the founder of the company, explained:

> As an architect, you're kind of in the middle of this fight between the different stakeholders of the city: the city agency, the developers, and the residents. To me, I felt that the poor engagement with, or the failure of, engaging people and explaining to them what the future could or will look like is one of the biggest hurdles in making the whole process more responsive, respectful, working, and efficient. Because when people don't understand, they are afraid. They are just opposed to anything.

Reducing the bureaucratic noise, excluding inefficiencies of townhall meetings or hearings, and making user-friendly interfaces (i.e. well-designed digital portals and tools) are all ways of streamlining processes of interaction. Emily Yates of Philadelphia explained the city's efforts in this way:

> We are building a suite of tools from online listening through rapid random-sampling surveys, all the way to more classic online engagement. All of them geared to lower the bar for people to participate, make it really easy for people to share their voice with the community and make it really easy on the government side to understand the clear narrative out of that engagement and take that input and really take action with it whether it's shaping policy, allocating resources, reshaping messaging.

Ease of use crops up in nearly every one of our interviews. Perceived trust is diminished when one's focus is on the system that manages the transaction, as opposed to the need fulfilled by the transaction. When there is lag in a system, the system becomes opaque. This is true for technology just as it is true for institutions.[54] Eyal Feder-Levy, CEO & Co-Founder of Zencity, is very aware of this tension. Zencity is in many ways a tool whose primary purpose is to reduce unneeded transaction lag or complication in order to create a sense of seamless government operation. He uses the example of any government-led engagement process. As he says, it is hard for the government to do well.

> [They] need to invest a lot of effort in setting things up, and finding the right vendors, and designing questionnaires and processes, and inviting the people, and actually collecting the data, and analyzing the results, and getting some meaningful takeaways out of them, and then presenting that internally. It's a lot of hassle. And that's why this tool is not often used. So in essence, our goal is to really build a toolbox that makes it easy for both sides of the equation, both for people to really effortlessly give feedback. That's why we started with online listening, because it's data that's literally already out there. Nobody needs to do anything more proactive to share their input.

"Seamless interoperability of parts," "streamlining processes of interaction," and "ease of use" compose practitioners' conception of ubiquitous government, which can be compared to Weiser's now-famous example of a pair of eyeglasses: Eyeglasses are a technology that serve a purpose and, unless they are pinching your nose or failing to work well, go unnoticed – they fall into the background. The actual mechanics of this ubiquitous government include user-friendly feedback tools, alternatives to the physical meeting space, reduction of bureaucratic layers, and a well-functioning backend that actually does not need to be fully transparent. In other words, in the service of efficiency, people only need to see what they need to see. The bureaucratic stuff should be left to the bureaucrats.

Mark Wheeler, the Chief Innovation Officer for the City of Philadelphia, underlines this point with the example

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53   For a review data-sharing practices between government and the private sector, see Bertin Martens and Néstor Duch-Brown, "The Economics of Business-to-Government Data Sharing," SSRN Scholarly Paper (Rochester, NY, February 19, 2020), https://papers.ssrn.com/abstract=3540122.

54   D. Harrison McKnight et al., "Trust in a Specific Technology: An Investigation of Its Components and Measures," *ACM Transactions on Management Information Systems* 2, no. 2 (June 2011): 1–25, https://doi.org/10.1145/1985347.1985353.

of identity verification. The challenge in this case is that the burden of proving one's identity generally falls on the constituent. Every time a new transaction is initiated, the user needs to sign in and prove that they are in fact who they say they are before they can do anything.

> It's the ability to streamline the attestation of "I am who I say I am," and therefore I should be given under your code or regulations, the right to have a license to do X…I think we have the potential to simplify a lot of that system because we haven't developed in governments a frictionless process for permitting and licensing an identity attestation that makes it simple to use everywhere and use in the frameworks that we're all much more accustomed to, no matter what economic level you're at.

When we asked him if the use of blockchain would address this problem by creating a self-facilitating identity management system, he responded by saying that the technology is far too onerous for the average user at the moment.

> People should never have to know that they've got a blockchain or self-sovereign ID or something behind this that's new and innovative. It should just be this is a really great easy-to-use app, I get my business license a lot more quickly. I'm able to go to my clients and prove to them that I've got my licensing.

So, unlike the blockchain enthusiasts that look to the promise of trustless systems as the solution to the distrust problem, Wheeler specifies that the ease of use, even of the most fortified digital systems, is what will build people's confidence and ultimately faith.

While the reduction of time is clearly a top priority for practitioners, efficient systems are not the only means of cultivating a sense of proximity. As it turns out, one is less likely to pay a parking ticket if one feels that the institution behind the transaction is untrustworthy or illegitimate. In the next section, we look at trust-building efforts that are focused on the reduction of distance or the creation of relatable, more intimate connections with institutions or proxies.

REDUCING DISTANCE

Being able to relate to an institution is an abstract phenomenon as institutional identity is a complex assortment of factors. It includes personal relationships, perceived values of the institution writ large, and the pleasantness of transactions. These are all characteristics of reduced distance, or the experience of being "close" to an institution such that it is trustworthy.

One of the ways through which distance is reduced is through **creating empathy**.[55] Melisa Breda explained that Boti, the digital concierge in Buenos Aires,
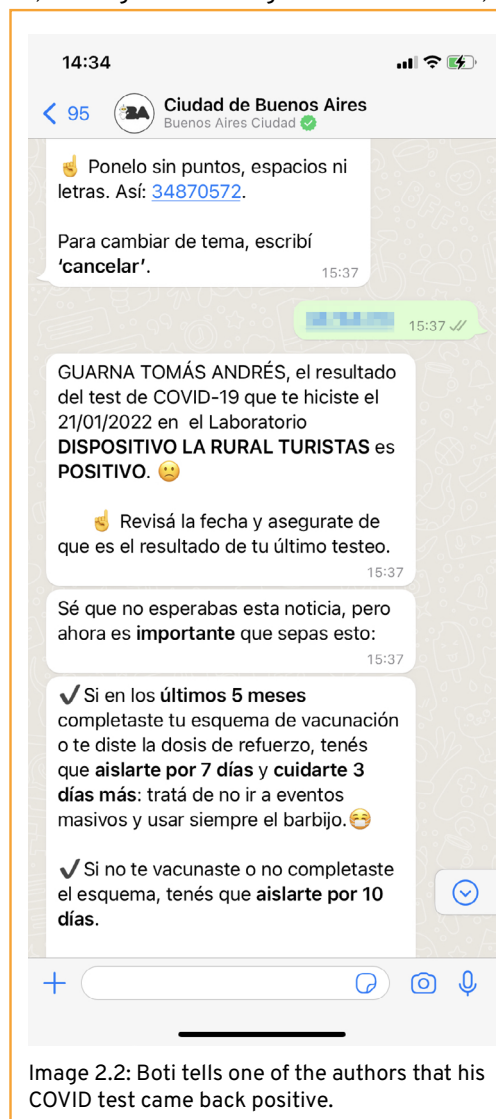

Image 2.2: Boti tells one of the authors that his COVID test came back positive.

"allowed us to be available 24/7. But also, in addition to using artificial intelligence so that each time the chat learns and can respond better, there is also a team

55   The experience of empathy in digital media has been researched in the context of virtual reality, see Grant Bollmer, "Empathy Machines," Media International Australia 165, no. 1 (November 1, 2017): 63–76, https://doi.org/10.1177/1329878X17726794 https://www.mas.org/events/walk-in-the-future-of-nyc-explore-upcoming-new-york-city-developments-on-site-in-augmented-reality/

See a critique in Robert Hassan, "Digitality, Virtual Reality and the 'Empathy Machine,'" Digital Journalism 8, no. 2 (February 7, 2020): 195–212, https://doi.org/10.1080/21670811.2018.1517604.

that is specifically dedicated to customizing those messages. So that you feel much more comfortable talking to a chatbot and to be able to generate precisely that feeling of closeness or warmth." Breda paints her vision of government as being both efficient *and* relatable. Her team devotes significant resources to the development of Boti's personality, making sure they have that perfect balance of cleverness and utility. She refers to Boti as both the city and a citizen, meaning that it is not designed as a proxy to the government but rather an affable representative of the government that makes people feel good about their interactions. According to Breda, once they were able to refine the personality of the bot, "people stopped talking to the Ministry of Education, the Ministry of Security, and they started talking with Boti."

Creating this relatable personality involved working with an entire team of User Experience (UX) and conversational designers. Boti went through a series of iterations before the version that most users have come to know presently. Fernando Benegas, who led the design of Boti and now leads a chatbot design agency, Bleett, that markets to companies and city governments, explained that the design of Boti's conversational tone was tailored to the "values" of the City of Buenos Aires. In his view, maintaining consistency in tone and values is key to growing empathy with the user:

> I could see many possibilities in digital channels, tools to make a platform, a website, or an application more beautiful. But until now, we had never found an empathetic digital solution. A conversation is the way that humans create empathy with other humans. And conversations allow for this possibility, which of course has to do with values and with who the user imagines on the other side, the physical figure of Boti, for people to explain themselves. And beyond the way that Boti speaks, this is much more a matter of product design rather than platform design. In fact, in 2018, when we launched Boti, no platform accepted emojis as part of the dialogue, since it was assumed that bots spoke by entering a certain word or group of words. But if you have a good semantic interpreter, the right solutions will come. And incorporating emojis allowed us to put Boti's personality into practice.

Benegas' outline of Boti's strategy is twofold. Boti reduces distance by incorporating values and personality traits into the bot, allowing users to relate to the entity "on the other side." But the relatability of a bot doesn't happen in a vacuum. Boti is deliberately built on WhatsApp, because relatability is enhanced through the **incorporation of familiar technologies**. Building on the comfort level of existing technologies generates a sense of security, of being at home, a kind of colloquialism that is typically not found in formal institutional interactions.[56]

This incorporation of technological familiarity into institutional processes is a tactic we saw across a range of efforts. Creating relatable AI like Boti is an effort to humanize the government institution, giving it the effect of being **almost human**. But even when actual humans are centered in transactions, like through the proxies of social media influencers, the familiarity of the technology platforms on which they exist is an important component of their ability to create a sense of closeness. Familiar technology platforms are used to make the human feel **almost machine** and as a result make the institution feel closer, more relatable.

A defining characteristic of social media influencers is the relation of intimacy they have with their audiences. Institutions partner with influencers to capitalize on these relationships for public messaging. The resulting effect is making the public institution seem genuine, like the influencers, and ultimately trustworthy.[57] But it is not enough to partner with influencers: institutional leaders must engage fully with the conventions of the media and not decontextualize the influencers from the medium in which they operate. Andy Lutzky of Xomad explained:

> There is a large mismatch between the channels [public institutions] use, the trusted voices they employ, and how they employ those voices to better reach people. A great example is when [U.S. President] Biden brought in [pop artist] Olivia Rodrigo at the start of his presidency to talk about the [Covid] vaccine. What did Biden do? Biden marched her to the podium in a press conference and used her as a photo opportunity. Guess how many Olivia Rodrigo fans tuned into Biden's press conferences and checked out his photo ops? A big fat zero. Well, what would we have

56 Yuqi Liu et al., "What Influences the Perceived Trust of a Voice-Enabled Smart Home System: An Empirical Study," *Sensors* 21, no. 6 (March 13, 2021): 2037, https://doi.org/10.3390/s21062037.

57 The effect of influencers has been studied in the context of private companies, see David Jiménez-Castillo and Raquel Sánchez-Fernández, "The Role of Digital Influencers in Brand Recommendation: Examining Their Impact on Engagement, Expected Value and Purchase Intention," *International Journal of Information Management* 49 (December 1, 2019): 366–76, https://doi.org/10.1016/j.ijinfomgt.2019.07.009.

Engagement practitioners like to talk about "meeting people where they're at." This often refers to the tone of conversation, the location of physical meetings, and in some cases the technology platforms on which communications take place.[58] The general idea is

Image 2.3. Olivia Rodrigo at the White House in fall 2021. Photograph by Adam Schultz / White House Photo.

that the institution should not be the one to invite communities into its space but that it should do the necessary work to be invited into community spaces, where people feel more comfortable and where the terms of engagement are set by the community rather than the institution. For example, instead of hosting a meeting at City Hall about an upcoming development, the City might work with a community organization and ask for some time on their schedule. This same phenomenon extends to technology platforms. Instead of introducing a new platform, increasingly, **cities are building on existing platforms and incorporating established rules and norms into institutional interactions.** The example of Olivia Rodrigo going to a White House press conference, instead of simply speaking to her followers on Instagram, is a cautionary tale. The norms and familiarity Rodrigo's fans have with her presence on Instagram were ignored in favor of an institutional platform that was foreign to the Gen Z audience Biden was attempting to reach. The institutional lens was intended to build legitimacy (Olivia Rodrigo speaks at the White House), but that strategy only works if the institution already has legitimacy. According to Lutzky:

The trend over the last decade or so has been that people of that age cohort, they trust each other. Those are the trusted messengers of that generation…they're just not going to trust the people that look like the people in City Hall. They're going to trust the people that look and sound like each other. *The mechanics of how they follow and how they grow their audience* is a really deep relationship built on trust and credibility.

More than just trusting people that look and sound like you, the mechanics of the platform influencers use to cultivate those trusting relationships are key. We spoke to several social media influencers, and they talked about the intimacy of the relationships they had with their followers as a matter of brand cultivation on Instagram. Influencers are incentivized to protect their brand, and they make decisions on what causes to promote by balancing monetary gain, "authenticity," and their own values. We asked Loon, an influencer in Guilford County, North Carolina, about how he decides to work with specific institutions.

It depends on the mesh, the authenticity. You want it to fit your channel or your page, because you don't want people to be like "Oh, he's just promoting anything now, hmm." But then at the same time, it's also about values. I've known friends of mine who I have offered to be a part of [the vaccine campaign] as well. And they didn't believe in it at the time. And so they were like "oh," and I was like "alright."

Likewise, Melanie, a conservative social media influencer from North Dakota, said that she would not promote causes that were against her values, especially because her followers would be able to notice the inconsistency: "If I were to go, as an influencer, on my personal page and talk about how I'm into green energy and that I don't support fossil fuels, people will look at me knowing, who had been on my page for a while, knowing that it's opposite. And they would, you know, they would know that I'm lying. […] So then, why would I promote something that I don't believe in?"

Brand preservation is a mechanism that influencers use to maintain their credibility. For example, on Instagram, they know how many posts are too many; they know when and how to respond to commentary on sponsored posts;

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58   Charles McNeely, "Communication and Citizen Participation: Blending Old Tools with New Technology," *Public Management* 89, no. 9 (October 2007): 16–20, http://www.questia.com/library/1G1-170115465/communication-and-citizen-participation-blending.

and they understand how personal brand is connected to visual aesthetics, comedic tone, etc. The conventions of the platform are the bedrock of brand cultivation. Users trust the conventions before they trust the influencer, which is a phenomenon that is very well understood by influencers themselves and those organizing influencers through local government and Xomad.

The reduction of distance is achieved through the relatability of the institution or the proxy. In the case of Boti, the machine is presented as almost human by simulating personality traits, communication of values, and the incorporation of WhatsApp's familiarity as the context of interactions. And in the case of social media influencers, humans are presented as almost machine. They are authenticated through the representation of unique personalities that stay on brand and use the familiar conventions of the given platform.

CONCLUSION

The reduction of time and distance are the affective qualities that practitioners are seeking in their smart governance procedures. The goal of reduced time, or what we have called ubiquitous government, is to make the user feel close to the institution by streamlining and speeding up transactions, such that they do not need to be cognizant of the institution at all. The goal of reduced distance is to generate a sense of relatability in the institution or the proxy by communicating through "almost human" machines or "almost machine" (in other words, reliable and consistent) humans that share values and sensibilities with constituents.

The goal of the reduction of time is a long-standing component of smart city initiatives, but the prominence of the performance of invisibility by the government is novel. While this approach empowers residents by giving them the ability to focus more on their everyday lives and not too much on bureaucracy, it is important for governments to create safeguards so that residents have the tools and knowledge to be in control over their data. This includes not only policies and legal provisions but communicative strategies. Governments need to tread a fine line between becoming invisible for streamlined transactions and communicating to their residents what is happening underneath this invisibility.[59] If governments work purely in the background, the ability for residents to hold governments accountable is diminished.

Reduction of distance is a relatively new phenomenon and should be approached with caution. In every city, there is a diversity of values and even desirable characteristics in a human or almost-human interface. As a result, the smart governance programs we are looking at are able to understand with significant precision what particular communities and groups want and then cater the message and interactions to those desires. This is not unlike outreach efforts where government offices hire specific people to listen to and interact with a given community. For example, according to Lutzky, formerly of the City of San Jose, the effort to rebuild trust with the Vietnamese community there requires changing a damaging history of exploitative development by hiring more Vietnamese speakers and showing up more often to community meetings. But when technology is introduced as a means of scaling the reduction of distance, interactions can be designed to create the experience of intimacy focusing on any number of micro communities. Xomad, for example, can target very specific demographics through social media and then create messaging that appeals to that group through identified nano or micro influencers. But what creates perceived reduction of distance with one group might be very different from what creates a reduction of distance with another group, and what is relatable to one group is not necessarily relatable to another. The long-term challenge of such tactics is that if every community has a different reason to trust the institution (or its proxies), then the authenticity of the institution will inevitably be challenged. In other words, **what is the city if it's exactly what everyone wants?** As smart governance procedures advance the mechanisms to reduce time and distance, it is important that practitioners consider the long term-impacts of scalability or reproducibility and, in the pursuit of the affective qualities of trust, not to lose sight of institutional consistency.

In the next chapter, we explore how cities are seeking to define their value positions and justify their actions through listening or incorporating sentiment from constituents into decision-making. We explore how practitioners are adopting digital tools for either "open" or "closed" listening, each of which is directed towards building constituent trust.

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59   Dourish and Bell levy this critique on the field of ubiquitous computing more generally. See Dourish, P., & Bell, G. (2011). *Divining a digital future: Mess and mythology in ubiquitous computing.* MIT Press.

CHAPTER 03: HOW DO WE LISTEN?

As Andrew Dobson argues in *Listening for Democracy,* dialogue is at the foundation of any trust relationship.[60] For the relationship of trust to exist, the trustee needs to know what the trustor wants to achieve. And likewise, the trustee needs to know what the trustor considers to be trustworthy. Trust necessarily involves two-way communication, where trustors are *listened to* and the trustee demonstrates that they *have listened.* In the context of institutions, the extent to which this two-way communication exists has historically varied. As infrequent as they are, elections are examples of moments of listening: constituents give their input on who the leaders of institutions should be. Public engagement processes[61] are also moments of listening: through facilitated workshops, online surveys, community-based conversations, etc., residents express their views about services, policies, programs, or general grievances.

In this chapter, we look at the communicative relationship between trustor and trustee: specifically, **how institutions are actively listening to constituents.** Effective listening is contingent on a trust relationship. Calls for input from cities will likely not be heeded unless the speaker believes that they will be heard and that cities can make sense of what they say. And likewise, cities will not invest in capacity if they don't believe they can effectively act on what they hear.

We unpack how cities are employing novel digital technologies for effective listening. We look at a variety of motivations for listening, from the performative to the strategic, and contextualize different interventions as they relate to their intended outcomes. For example, specific listening tools like online surveys are used when incoming data has to be clearly categorized and mobilized and where there may not be room for messiness or interpretation in data analysis. Whereas in other situations, the city might want to understand general priorities and sentiments and have a greater tolerance for data that doesn't fit neatly into prescribed categories. What's happening in cities right now can be seen through what Leonard Waks defines as two categories of listening: cataphatic (or closed system), wherein the content and structure of the input sought is predetermined, and apophatic (or open system), wherein the content and structure of input is not predetermined by the institution, but formative input serves to establish the parameters of institutional priorities.[62]

CATAPHATIC (CLOSED-SYSTEM) LISTENING

Cataphatic listening is a familiar form of institutional listening, where the city provides clear parameters for what they want to hear. It includes methods like surveys, where residents answer based on a set of limited options, and town halls, where the institution, through clear rules or through the role of a facilitator, limits the form and scope of input.

Cataphatic listening is necessary for the proper functioning of institutions, even if some listening scholars criticize it, sometimes equating it to "not listening at all."[63] Cataphatic listening is, in fact, useful for gaining scoped input on topics related to a predefined agenda and for demonstrating connections between inputs and outputs as a crucial component of the trust-building strategy. Emily Yates of the City of Philadelphia described the problem with listening is not that it is a closed system, but that it is not transparent. The city takes in data but doesn't go through the process of clearly connecting the dots between data collection and decision-making.

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60   Andrew Dobson, *Listening for Democracy: Recognition, Representation, Reconciliation*, First Edition (Oxford, United Kingdom ; New York, NY: Oxford University Press, 2014).

61   See Caroline W. Lee, *Do-It-Yourself Democracy: The Rise of the Public Engagement Industry* (Oxford ; New York, NY: Oxford University Press, 2015).

62   Leonard J. Waks, "Two Types of Interpersonal Listening," *Teachers College Record: The Voice of Scholarship in Education* 112, no. 11 (November 2010): 2743–62, https://doi.org/10.1177/016146811011201109.

63   Dobson, *Listening for Democracy*, 67.

> No one is making the connection between saying "These are the decisions we made" and "here's why." "This is what overall came out of the surveys" and "this is why we're doing this." [The public] is demanding that we be more transparent in our process. And the city is not being as transparent as it can be. They're holding closed-door meetings with community members, holding closed-door meetings with businesses.

This process of **performing transparency** came up often in our interviews. The tension is not in how governments are using data for decision-making but how they are communicating their uses of data. "When we talked to mayors and city managers and CIOs and people working on public participation in different ways," Yates told us, "the challenges of really leveraging input to make decisions are almost always similar." City representatives need to be better at making sense of data *out loud,* so that constituents understand the value of their input. This is what makes current smart governance efforts different from previous trends in civic technology that tended to focus primarily on engaging people in sharing their data, with little attention to decision-making.[64]

In our conversations, nearly all interviewees spoke of the need for transparency in decision-making. The public engagement paradigm,[65] where the quantity of inputs equals quality of process, is out of favor with most government leaders and technologists.[66] Many cities are adopting digital technologies in order to listen better, not just amplify voices more efficiently. That said, what it means to listen better is still very much contested. Tools like coUrbanize, which is a popular planning platform for developers and municipalities that allows for customized surveys and user-friendly data visualization, emphasizes the frictionless nature of the process: more listening equates to a higher degree of consensus and friendly decision-making. Its website criticizes community meetings, quoting a piece of research that says that those who attend meetings tend to be more privileged than most residents. It also argues that community members from lower socioeconomic backgrounds tend to be more open to "change": "These community members outweigh the NIMBYs [Not In My BackYard]

but are overlooked and unheard." Per its framing, coUrbanize empowers residents to show their agreement with proposals uploaded to the platform, as 90.1% of comments in projects used in the tool were "positive or neutral." So while coUrbanize engages in cataphatic listening, its value proposition, especially for developers, is that by creating more opportunities for "less privileged" residents to speak, there is likely to be less friction to proposed developments. When listening is instrumentalized to support political or economic gains, as would be the case if a developer deployed coUrbanize to justify a development, then not only are questions predetermined, but so are the answers. The value of coUrbanize for developers, according to their website, is that the system enables greater likelihood of support for projects than does more traditional forms of public engagement.

But the value of cataphatic listening is not always the predictability of outcomes. Some closed-system listening processes actively encourage dissent, when there is **flexibility in data infrastructure**. A good example is the open-source planning tool Decidim in Barcelona, Spain. Decidim is seen by people inside and outside of government as a way of breaking down barriers. Ismael Peña-López, director of the School of Public Administration of Catalonia and Director General of Citizen Participation at the Government of Catalonia between 2018 and 2021, explained how "Decidim's mere existence changed things":

> Right now there's a conflict we have in education in Catalonia, where there's at least 5 or 6 factions pitted against each other and none goes near the other. The Department of Education on one side, unions on the other side, professors who feel more or less represented by unions, school principals, families who also have an opinion about the issue, family associations… We have an ecosystem of actors, where we might sometimes agree with each other and other times not, and right now we're in an explosive moment where we don't agree with each other. For example, it's about whether kids have to do an intense school day from 8 to 3, and then go home, or from 9 to 12 and then from 3 to 5 and go home to have lunch or have lunch in school. And in all of this mess, the big federation of families decided to open

64   Eric Gordon, Jessica Baldwin-Philippi, and Martina Balestra, "Why We Engage: How Theories of Human Behavior Contribute to Our Understanding of Civic Engagement in a Digital Era," *SSRN Electronic Journal*, October 22, 2013, https://doi.org/10.2139/ssrn.2343762.

65   Lee, *Do-It-Yourself Democracy*.

66   Tina Nabatchi and Matthew Leighninger, *Public Participation for 21st Century Democracy*, Bryson Series in Public and Nonprofit Management (Hoboken, New Jersey: John Wiley & Sons, Inc, 2015).

Unlike coUrbanize, Decidim is characterized as a tool that can be used to deliberately enable dissent. Decidim can be configured to enable different ways of participation, including "top-down" consultations or "bottom-up" citizen initiatives. In the former case, it is still cataphatic: in some instances, like the one from the City of Barcelona, the tool functions like an online survey where users input text-based responses to questions, where these parameters of input were defined by the institution. But the difference, guided by how data gets distributed, is the motivation to seek the input in the first place. It is not to fast track a policy change or new development but rather to open the debate and apply pressure on institutions to use the collected data to justify any future decisions. The business models of the two tools reflect an important distinction. coUrbanize is a private company that uses a fee-for-service model, and all of the data collected is managed and maintained by the private company. Decidim is an open-source tool, wherein an instance is managed by an organization or institution, but the data is public and transferable. The flexibility of the data, indeed the physical infrastructure in which the data is housed, has bearing on how the data is likely to get used and what might motivate an institution to initiate the process in the first place. Peña-López describes the cataphatic process as catalyzing because, even though the conversation was started outside of government, it was able to be easily transferred to governmental processes.

The infrastructure for data storage is an important element of listening, but so is the **precision of data collection**. Zencity is a private company that works with cities all over the world to help them gather insights from constituents for better decision-making. But unlike the blunt instrument of online surveys, Zencity deploys very precise rapid online surveys, which the founder and CEO Eyal Feder-Levy, describes as a "technology that we've developed that allows us to target any subset of the population, get a representative sample of them via digital ads, like social media ads, banner ads, mobile app ads,

and therefore reach a representative sample of the community really, really quickly and effectively." Through precision targeting, cataphatic listening can satisfy the needs of the institution to justify decisions with data, while also effectively demonstrating to a range of publics that they have been "listened to."

A very similar process is apparent in Xomad's targeted listening to influencers' followers. When an influencer posts a government-sponsored message, there is often interaction that happens with a particular post. People might express their distaste or enthusiasm for a message, and the influencer then decides if and how to respond. But according to Rob Perry, the founder and CEO of Xomad, this is where their company has really enhanced the listening process. Governments struggle with "how to use and digest the data." The value Xomad adds to government listening is the way they frame questions very specifically and narrowly.

Perry points to the company's deep experience working in the private sector with brands such as L'Oreal and Clorox, where they are able to get quick, precise input about new product ideas from very targeted groups of people. When something comes out of the chemistry lab at Clorox, Perry explains, they are able to take that idea to a group of consumers who are likely to be interested. This has clear implications for government, he argues. "We're digesting the qualitative data and presenting it in such a manner that is meaningful to the government official." All of Xomad's government partners we spoke to were enthusiastic about the possibilities. Many used this precision data to refine their messaging around the COVID-19 vaccine, specifically to reach communities of color who government officials described as "much more difficult to reach."

Cataphatic listening is an important and achievable

technique for cities to understand constituents while they actively seek to build trust. Through effectively representing transparency, flexible data infrastructure, or precision data collection, cities are exploring ways to clearly collect and act on citizen-produced data. These approaches can be effective when there is an extant baseline of trust, but they do little to challenge the power structures that have created distrust among constituents. As a result, some practitioners are experimenting with more open-ended procedures, or what is called apophatic listening, as a means of cultivating emergent trust relationships.

APOPHATIC (OPEN-ENDED) LISTENING

Aphophatic (or open-ended) listening refers to the co-creation of public policies through unstructured dialogue.[67] It is employed to "shape" questions, as opposed to only receiving answers to existing questions. The spirit of this sort of listening is that the listener does not start the interaction with questions but instead allows the speaker to speak on their own terms without predetermining the use of the resulting data. In many ways, this approach is counter to traditional institutional structures, and it presents real challenges for institutions to make sense of the unstructured data. Apophatic listening procedures are sometimes less instrumental and more representational, in that they are not necessarily geared towards data-driven decision-making but instead as a means of aligning institutional priorities with those of constituents. As we discussed in the introduction, the misalignment of values is a common understanding of what causes distrust. Those who see the distrust problem this way are likely to engage in apophatic listening, as cataphatic approaches might be seen as reinforcing existing divides. In previous work, we have referred to these open-ended processes as "meaningful inefficiencies" or multi-sectoral arrangements that prioritize the discursive and the relational aspects of institutional interactions.[68]

Apophatic listening, or at least the desire to achieve it, was a clear priority to many of the people with whom we spoke from Spain. Madrid Escucha is an initiative carried out in Madrid in 2017 where municipal employees worked with citizens to identify shared priorities[69] and identify opportunities for **collaborative production**.[70] According to Lorena Ruiz,

> There were different areas of the Madrid City Council that were involved in the project, since we tried to make it a project that thematically had not defined any axis, it was not "Let's think about projects on mobility, or on the environment." In fact, what seemed interesting to us was asking the question to citizens: "What would you like to work on with municipal employees?" Or if you were a municipal employee, "What would you like to work on with citizens?" It was like a way of detecting which issues each considered relevant, where being able to sit at that same table would contribute something. So we did not define the questions.

The idea is that stakeholders from different sectors could organically arrive at shared priorities, while at the same time create the conditions for actually working together on creating something. Ruiz adds:

> It is a way of listening to what issues are disturbing, worrying people or what issues are motivating them. Another way to think about this is what is worth *doing*, like building together. Whether they are technological, social, or cultural, I think that this idea of building, that is, of listening, not only in a discursive way, but listening while doing, is the way to generate things creatively.

We heard this theme from others in Madrid as well. Yago Bermejo from the Spanish nonprofit Deliberativa, shared a similar sentiment. "It's not just listening," he told us. "It's acting. It is a commitment to act, according to what the citizenry needs." Apophatic listening, in this case, implies clear and immediate feedback in the form of shared action-taking. This distinguishes apophatic listening from something that

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67   See Emma Blomkamp, "The promise of co-design for public policy: The promise of co-design for public policy," *Australian Journal of Public Administration* 77, no. 4 (December 2018): 729–43, https://doi.org/ 10.1111/1467-8500.12310.

68   Gordon and Mugar, *Meaningful Inefficiencies.*

69   Cecilia Güemes, "Neoliberal Welfare Policy Reforms and Trust: Connecting the Dots, *Journal of Iberian and Latin American Research, 23:1, pp. 18-33.*

70   See Taco Brandsen, Trui Steen, and Bram Verschuere, eds., *Co-Production and Co-Creation: Engaging Citizens in Public Services*, 1st ed. (New York, NY : Routledge, 2018.), https://doi.org/10.4324/9781315204956; Francis Gouillart and Tina Hallet, "Co-Creation in Government," *Stanford Social Innovation Review*, Spring 2015; Katerina Cizek et al., "'We Are Here': Starting Points in Co-Creation," in *Collective Wisdom*, 2019.

would look like an open bulletin board or comment system that takes in data but does not structure a system of reciprocal action. And while people describe cataphatic listening as resulting in clear connection between input and government action-taking, apophatic listening similarly needs clear connection between input and collaborative doing.

While people spoke of these efforts with considerable enthusiasm, they also were quite aware that they are resource-intensive and are hard to scale. Beyond the collection of data, the collaborative doing is largely analog, requiring significant social infrastructure and face-to-face relationships for it to be effective. While our Spanish interviewees concluded that apophatic listening is better served unmediated, several examples of smart governance approaches, especially in the United States and Argentina, are seeking to digitize the process. In fact, the conclusion from many practitioners is that digitization is necessary because institutions need more efficient mechanisms of **structuring unstructured data**.
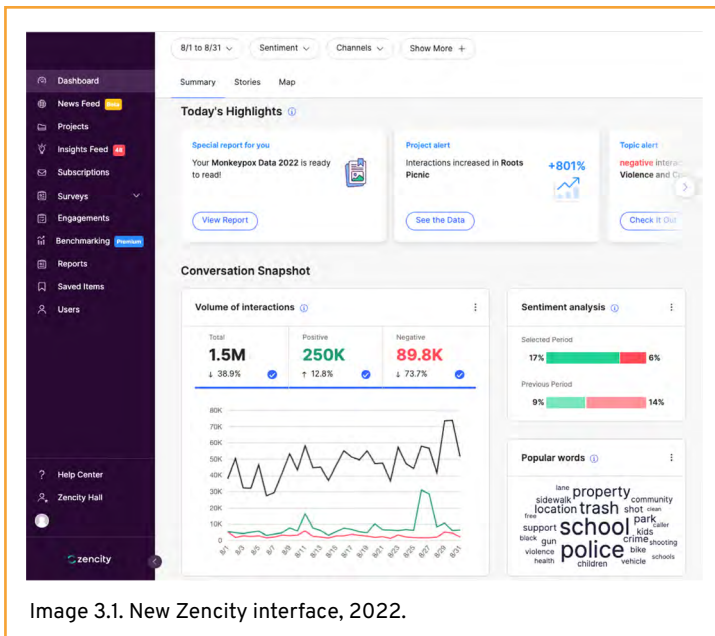

Image 3.1. New Zencity interface, 2022.

This is clearly represented in the example of Zencity. We already discussed their rapid survey tool as a mechanism of structured listening; their main affordance for government clients is their social media surveillance. Zencity allows public institutions to "track" keywords and themes in social media platforms like Twitter and then collect insights to inform agendas. Yates spoke clearly about the paradigm shift of the government not having to ask people to come to them with a set of questions they want answered. Lots of conversation is already taking place in a number of digital channels. Instead of having to ask for input, the city is able to gather data it did not ask for, as a means of identifying the topics most important to constituents. Through qualitative (such as highlighted comments or "trending topics") and quantitative insights, Zencity provides institutional leaders with "talking points" that are emerging from residents, beyond ideas of approval and disapproval. For example, the city government of Long Beach, California used Zencity to better understand communities' attitudes towards vaccines.[71] The company claims its tool includes privacy protections and does not collect sensitive data, but this does not mean it is a "neutral" tool: for example, the mayor of Pittsburgh, Pennsylvania, was criticized for utilizing Zencity to track police brutality-related issues while the acquisition of Zencity was framed as limited to Covid response.[72] These episodes highlight how tools like Zencity can be used to build trust by aligning institutional priorities, but they can also hinder trust if they don't adequately perform transparency. Since this controversy in Pittsburgh, Zencity strongly encourages its city clients to put out press releases at the start of any engagement to stave off perceptions of a hidden agenda.

At the end of the day, the listening represented by Zencity, while open-ended, has only some elements of responsiveness or interactivity. Institutions can gather data unobtrusively from constituents in order to realign its values to better reflect their priorities; however, the actual reciprocity between listener and speaker might go undetected.[73] In other words, the process can successfully reduce time but not distance (see chapter two). Rob Perry from Xomad imagines that the "councils" of influencers, or the platform that influencers use to talk to each other about their campaigns, is a two-way street. From this perspective, it is **dialogical.**

The whole vision for the future of governance is to make, even policymaking, a two-way street using these councils. That's what will

71   Anthony Pignataro, "Long Beach Using AI Software to Monitor How Residents Feel about COVID-19 Policies," *Long Beach Post News*, May 18, 2021, https://lbpost.com/news/zencity-artificial-intelligence-social-media-monitoring-covid-long-beach.

72   Brian Conway, "Pittsburgh's Mayor Acquired a Social Media Monitoring Tool to Handle COVID—He Used It for Pet Projects Instead," The Daily Dot, October 19, 2021, https://www.dailydot.com/debug/zencity-pittsburgh-bill-peduto/.

73   The company has recently launched its Engage Platform (https://zencity.io/solutions/zencity-engage-collaborative-community-input/engagement-management-dashboard/) which is focused on creating more opportunities for meaningful interaction.

> add credibility, ultimately, to the government officials, the fact that they are getting feedback from the citizens. So these council members, these local influencers, are all talking to their communities. In some cases, they're asking and they're polling them on certain issues. They're getting feedback, even on specific policy issues, and bringing that to the council. So if we can use social media technologies to connect the mass public to the government officials and have the mass public's input on specific issues be integrated into policymaking, the credibility naturally is going to go way way up. That's the big vision for the future is really to make this a two-way street. And when we created this platform, we created it for Clorox because they had this philosophy of not wanting to market to consumers, but market with consumers. And so that's what we've implemented at the government level too.

Perry is imagining a dialogic mechanism, where policy and programmatic categories are porous and can be co-designed with an informed and interested public. What differentiates his vision from what we heard in the Spanish examples is that this deliberative codesign happens within the structure and norms of social media. The two-way street would go from the influencer (the proxy) to the constituent (the user) and then would have to be cycled back up to the institution in such a way that was legible. Andy Lutzky of Xomad put it this way:

> It really comes down to showing the public that the government officials truly care about their opinion and their feedback. So that's the starting point. Asking the questions through all these people that they naturally talk to anyhow, you know. So in other words, somebody could be posting about some environmental issue and say, "Look, I want to speak for you what ideas you have on this specific issue, please DM me or reach out to me about those issues," then those issues are shared back with the council. So the beauty of the council is you've got the different stakeholders, all in one platform. The influencers, presumably, are speaking for the broader public. And then you've got in this case, in my hypothetical, you've got the environmental officials, you've probably got some government officials, you may have

> another agency involved. But the idea is through that process of working with different stakeholders, making sure that they are all integrating sentiment and ideas from the public, I think that'll add an enormous amount of credibility to the process.

Lutzky's imaginary is informed by multi-stakeholder collaborative governance[74] but contained within a social media context that enhances the legibility and legitimacy of the process. Unlike collaborative governance procedures that are deliberative and relational, wherein the content of deliberation is primarily a vehicle for interpersonal trust building, the conversations in Xomad's councils are always already digital, structured within familiar social media conventions, where participation is legitimized by metrics.[75] Influencers become unelected spokespeople who have legitimacy in representing their networks to decision-makers because they interact with followers on Instagram and decision-makers through the Xomad councils.

Apophatic listening is often employed as a means of building faith in an institution or proxy. There are three primary components of this kind of listening: collaborative production, the structuring of unstructured data, and dialogue. Collaborative production suggests that this kind of listening tends to be action-oriented, where the outcome of listening is not simply a decision but a shared action. Structuring unstructured data suggests that mechanisms are put into place to translate unstructured data into forms that an institution can comprehend. This is typically done through data analysis, where specific queries of open-ended datasets produce actionable insights. And dialogue suggests that apophatic listening is deliberative. Listening happens not by taking something in but by interacting and building. As we discussed, the context of interaction is often facilitated within structured social networks, making it so the data that emerges from dialogue gains legitimacy through extra-institutional means.

CONCLUSION

Institutional listening is the interface between institutions and their constituents. It is the way that

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74   Chris Ansell and Alison Gash, "Collaborative Governance in Theory and Practice," *Journal of Public Administration Research and Theory* 18, no. 4 (2008): 543–71, https://doi.org/10.1093/jopart/mum032.

75   See Angèle Christin and Rebecca Lewis, "The Drama of Metrics: Status, Spectacle, and Resistance Among YouTube Drama Creators," *Social Media + Society* 7, no. 1 (January 1, 2021): 2056305121999660, https://doi.org/10.1177/2056305121999660.

governments seek to understand what people want and how they feel. The act of listening has grown increasingly complex as many municipalities have acknowledged the plurality of the publics they serve. There is no such thing as public sentiment but rather a radically diverse set of views that are deeply stratified by socioeconomic divisions. Historically, listening to *the public* has been associated with dominant points of view (i.e. middle class white people); smart governance trends point to the expressed need among municipalities to "listen better" to those voices rarely heard (i.e. BIPOC communities). This has particular urgency in the United States after the murder of George Floyd and concurrent with the ongoing Movement for Black Lives, as many cities eagerly represent themselves as antiracist, as well as cognizant of past injustices exacerbated by effectively ignoring the life experiences of BIPOC individuals. There is still urgency in Argentina and Spain, but the language used and the social context of exclusion is different.

In this chapter, we described two forms of listening that cities are adopting to cultivate trust with their constituents. The first is cataphatic, or closed-system, listening that focuses on creating clear pathways between input and output. This form of listening is widely used and is mostly aligned with building confidence in institutions and proxies. This form of listening is structured by the institution, suggesting that there is a specific agenda to the listening encounter. As we discussed above, cataphatic listening, if not critically considered, can function to mask inequalities by creating convincing performances of transparency. As a counterpoint to cataphatic listening, we introduce apophatic listening, which is open ended and non-deterministic. Ideally, this form of listening does not have an agenda but is guided by the pursuit of a collaborative understanding of issues: what do specific communities want and what can the institution realistically respond to? We describe several mechanisms of achieving this kind of listening, some of which are relatively unmediated and others which are highly structured by social media platforms.

Even with the best designs and the best of intentions, it is very difficult for institutions to actually cede control to an open-ended listening procedure. It is possible that much of the open-endedness of these kinds of interactions is still performative, as organizational structures remain too rigid to be responsive. There is a latent opportunity in finding concrete ways for these open-ended structures to lead to impact in public service provision. However, for cities to effectively invest in growing institutional faith, it is key that publics are involved in translating data collected through open-listening techniques to actionable insights that are common to the sensemaking mechanisms of smart cities. One example of this sort of approach is the Real Talk for Change project developed by MIT's Center for Constructive Communication in collaboration with local organizations in Boston.[76] In this project, community leaders led conversations that were captured by a special device, which were analyzed by natural language processing methods with help from community members. These conversations became accessible through a website that allowed users to navigate those conversations, and which reporters used to source questions for mayoral candidates. Institutions can incorporate this sort of approach to listen in a way that allows them not only to anticipate actions, but also to grow constituents' faith in them.

Whether cities are employing cataphatic or apophatic mechanisms, our hope is that practitioners become more cognizant of what their listening approach is communicating, how they are using it as a trust-building tool, and what kind of responsiveness is probable and possible.

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76   See https://realtalkforchange.org/ for more information and to browse the conversations that took place in the City of Boston.

CONCLUSION

We started in the introduction with an explanation of how cities diagnose the trust problem: either as a problem of confidence, where a city's residents are wary of an institution's ability to produce transactions reliably, or as a problem of faith, where a city's residents choose not to rely on an institution since the institutions' values are misaligned with theirs. The first step in understanding novel practice is to understand what the practitioner views the novel practice as addressing. If the problem, for instance, is that BIPOC communities don't trust the city government because of historical harm, then it is likely that simply creating more efficient transactions will not be sufficient. We want to encourage city leaders, and the technologists they work with, to examine the problem diagnosis prior to designing solutions.

In the first chapter, we examine the kinds of strategies cities are taking to solve for trust, and we highlight two major categories. The first strategy is bolstering the trustworthiness of the institution by communicating the benevolence and capability of the government, which may present the government as more capable and reliable. The second is human or machine proxies that stand in for the institution, therefore bypassing the distrust that people may have in government. We make clear that each of these strategies can accommodate either of the diagnoses described in the introduction. Trustworthy institutions can build faith through value alignment or confidence in transactions. Likewise, proxies can do the same. Being able to connect the dots between diagnosis and city strategy will be key to our ability to learn from these efforts.

The second chapter is focused more on the mechanics of trust building. In other words, how are institutions thinking about the experience of trusting an institution? We borrow the metaphor shared with us by Chris Thompson of the Knight Foundation: building trust is a matter of reducing time or reducing distance. The reduction of time is linked to the growth of confidence: the idea of an ever-present government that executes tasks automatically in the background communicates to residents an idea of immediacy. Constituents feel "temporally close" to their institutions because transactions are streamlined and

sped up. On the other hand, the reduction of distance is linked to the growth of faith. Reduced distance is to generate a sense of relatability in the institution or the proxy, which leads to the alignment of values.

And finally, chapter three explores the mechanics of listening, or how institutions go about making sense of the people they represent. Connected to every smart governance initiative is a deliberate kind of listening that goes well beyond traditional smart-city data collection. Two ways of listening are salient here: closed-system (cataphatic) listening and open-ended (apophatic) listening. Closed-system listening is structured, and it creates clear pathways between input and output. This is one way of building trust: the city needs to know what citizens expect from it, and gaining scoped input through asking for opinions on specific topics and in predefined ways is an accessible way to achieve this goal. Open-ended listening is more useful to build faith in institutions: in this instance, listening is unstructured and geared to "go where residents are" to engage in dialogues. To tackle the challenge of scaling these initiatives, technologies are key to structuring unstructured data and turning conversations into workable insights.

For cities to fulfill their public roles, they need to invest in trust building. The efforts described in this report shed light on the different dimensions and strategies that are involved. The challenge facing institutional leaders and civic technologists is to think about the implications of any smart governance intervention on institutional sustainability. By solving one problem, are you creating a new one? By inviting influencers to communicate controversial messages, are you stripping away at the trustworthiness of the institution itself? Or, by continuing to invest in the efficient functioning of a distrusted institution, are you simply reinforcing damaging power dynamics that people are already rejecting?

The space of smart governance is nascent, but the urgency to answer these questions is significant, as there may not be opportunity for a second chance (at least one that preserves democracy) if cities get it wrong this time around. With that rather dire warning, we conclude this report with a list of recommendations for practitioners, researchers, and policymakers.

RECOMMENDATIONS

1. Connect interventions to diagnoses.

Too often, smart governance interventions are imagined and executed without intentionally making the connection to what motivated them in the first place. Is distrust a matter of unreliable transactions or a misalignment of values? Or both? In any case, make sure to talk about the nature of the problem you're trying to solve before talking about how you're trying to solve it. Civic technology interventions will be more effective when they are part of broader strategies to foster trust in institutions.

2. Think critically about proxies.

Proxies can be a very effective way to address institutional distrust and get things done by including third parties in a trust relation. But it is unclear what impact they have on long term trustworthiness of the institution. Much more attention is needed in making the connection between the trust relationship developed with the proxy and the institution. Institutional leaders should also assess the risks and implications of authorizing non-government voices as official ones. Nonhuman proxies, like distributed-trust blockchains, should also be assessed critically. Careful research into the normative implications of Distributed Autonomous Organizations (DAOs) in the public sector, for example, should be a priority.

3. Critically explore the use of AI in creating proximity.

Empathy and relatability can be virtues for government institutions and their proxies. Creating bots that feel "almost human" can cultivate trust among constituents. It can also generate skepticism if it becomes too human or inauthentically mechanical. What level of relatability is "too relatable"? As cities invest in digital concierge or human proxies, there is a need to understand what kind of relationship is optimal to achieve sustainable benefit for the institution.

4. All technology has values; know yours.

Whether a data dashboard or an online survey tool, all technology has values. Consistency between those of the institution and those of the technology it employs deserves attention. How does it communicate that you care about privacy or that you intend to be transparent about decision-making? Who created the technology? Consider representing these values and details in the interface itself so that the user understands and the institution can be held accountable.

5. How data storage gets communicated matters.

Where and how data is stored will determine how a process works. How institutions talk about data storage will determine how and why people trust it. Flexible data storage can lend itself to open ended approaches, where proprietary data limits options. There are reasons for different technical approaches, but it is important to be deliberate and transparent. Institutional leaders working with technically complex solutions need to bring skilled communicators onto their teams.

6. Disaggregate "the public" carefully. And be wary of dashboards.

All smart governance efforts need to start with the premise that there is no one public. Trust-building efforts should be directed to groups that have meaningful connections (i.e. neighborhood, race, class, ethnicity, gender) in order to avoid setting the default to white and middle class. The danger in this approach is that the government is seen to behave like a nimble campaign instead of a persistent institution, which can actually result in perceived inauthenticity. There is a need to better understand how disaggregation of data should be communicated and when. Public dashboards that communicate ineffectively can damage trust-building efforts.

7. Listen smartly.

The investment in pervasive listening to align institutional values with those of the constituency may lead to beneficial outcomes. However, institutional leaders need to be wary of the implications of surveillance. Institutions must listen transparently and collaboratively, opening up listening tools to the media and to community organizations and making sure that they are audited and legitimate. Listening technologies should be understood as public goods, not as techniques that are monopolized by government officials.

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