

A Report on the National Science Foundation Workshop

PARTICIPATORY PLATFORMS WITH A PUBLIC INTENT

Critical Reflections and Future Practices



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Participatory Platforms with a Public Intent: Critical Reflections and Future Practices was a day-long exploratory and dialectical workshop funded by the National Science Foundation and hosted by the Arizona State University, School of Public Affairs and Center for Policy Informatics on May 22, 2012 at The George Washington University in Washington, DC. The workshop brought together a diverse multidisciplinary and multisector group of about 65 people to engage in dynamic discussions grounded in specific case studies that critically reflected on and envisioned the future of participatory platforms research and practical applications. This report provides a synthesis of these discussions concerning the precipitating trends, potential opportunities, existing obstacles, and general lifecycle and design considerations of participatory platforms with a public intent.

Participatory Platforms with a Public Intent

Participatory platforms with a public intent are an emerging democratic innovation and governance mechanism that utilizes information, communication, and computation technology to create sociotechnical systems that engage, enlighten, and empower nontraditional sources of citizen participation in the process of legitimately, effectively, and efficiently addressing public issues.

Precipitating Trends

The emergence of participatory platforms is precipitated and supported by the recent convergence of several trends: the (a) heightening legitimacy crisis of democratic government, (b) information technology revolution and rising network society, (c) growing democratic surplus of citizens and their increasing civic participation in everyday life, (d) transition from government to governance, and (e) Open Government Initiative.

Potential Opportunities and Existing Obstacles

Participatory platforms provide public agencies with the enhanced opportunity to engage, enlighten, and empower the citizenry and simultaneously enhance the efficiency, effectiveness, and legitimacy of the public agenda-setting, policy development, and implementation process in an increasingly complex, interconnected, globalized, and resource-constrained governance environment. As an emerging complementary civic engagement approach to traditional governance structures and processes, there is much occurring in terms of its research and practice. However, a number of obstacles exist to their successful adoption. First, since there is a minimal history of researching and conducting participatory platforms, their successful design and execution is not currently well-understood. Second, the existing legal and operational infrastructure of government was not created with participatory platforms in mind and, therefore, pose constraints on and additional costs to adopting them in practice. Finally, the ordinary citizen is typically a novice in public policymaking and administration, so engaging their effective participation and contributions requires educating and empowering citizens with the knowledge and understanding of the people, policies, processes, and protocols involved.

The Design Imperative

Given these trends, opportunities and obstacles, it is imperative that researchers and practitioners systematically pursue, organize, and share their knowledge and understanding of how to articulate the success and design concerns of participatory platforms, and conduct them in a manner that produces these outcomes. The workshop discussions pointed to the various stages that exist in the lifecycle of a platform, key design considerations that permeate these stages, and research questions relevant to advancing their study and practice. As such, this report proposes and describes a broad lifecycle and design framework from which to begin the systematic study and successful practice of participatory platforms within and across contexts.

Diverse Participants

Workshop participants consisted of about 65 high-level public administrators, non-profit and private sector practitioners, academics and researchers, and students from government, industry, and academia from across the nation. Participants possessed considerable expertise and experience in participatory platforms, public policy and administration, and technology and innovation across a variety of content areas, such as education, energy and the environment, healthcare, agriculture, commerce, finance, public affairs, and science and technology. They represented a diversity of organizations involved in designing, executing, and studying participatory platforms with a public intent. This included 9 federal government agencies, 2 state and local government agencies, 15 universities, and 17 public, nonprofit and private sector organizations.

Government Agencies

National Science Foundation
White House Office of Science & Technology Policy
White House Office of Digital Strategy
U.S. Department of Agriculture
U.S. Department of Commerce
U.S. Department of Education
U.S. Department of Energy
U.S. Department of Health & Human Services
U.S. General Services Administration
State of Arizona
Alachua County, Florida

Universities

Arizona State University
Columbia University
Escuela Superior de Administración y Dirección de Empresas
George Washington University
Massachusetts Institute of Technology
Penn State Harrisburg
Saint Louis University
Seton Hall University
Syracuse University
University of Florida
University of Maryland
University of Texas – Austin
University of Virginia
University of Wisconsin – Madison
Virginia Tech

Organizations

Alliance for Innovation
Arizona Small Business Association
Ashoka Changemakers
Association of Public and Land Grant Universities
Bob Ramsey Executive Education at ASU
Center for Policy Informatics
AASCU Grants Resource Center
John C. Lincoln Health Network
Metropolitan Institute
MIT Center for Collective Intelligence
National Association of Schools of Public Administration & Affairs
National Academy of Sciences
New America Foundation
Purdue Foundation
Sterling Choice Health Lifestyle
USAID
World Bank

Dynamic Discourse

The workshop consisted of four sessions in which two to four expert practitioners and academics gave mini-presentations to the audience of attendees based on their experience and insight related to participatory platforms with a public intent, grounded in specific examples. These mini-presentations were followed by breakout discussions among the attendees and a collective question-and-answer session with the presenter and audience. There was also a keynote luncheon in which Thomas Kalil, Deputy Director for Policy at the White House Office of Science and Technology Policy, and Esteve Almirall, Associate Professor in the Department of Information Systems at Escuela Superior de Administración y Dirección de Empresas, offered their significant expertise and experience with implementing and studying participatory platforms with a public intent through the U.S. government and European OpenCities initiatives, respectively. This facilitated an environment of dynamic sharing, inquiry, and learning among a diversity of perspectives which this report synthesizes.

Mini-Presentation Speakers



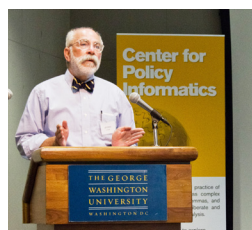
Jonathan Koppell, Dean, College of Public Programs, Arizona State University



Rob Laubacher, Research Scientist and Associate Director, Center for Collective Intelligence, Massachusetts Institute of Technology



Macon Phillips, Special Assistant to the President and Director, White House Office of Digital Strategy



Jeffrey Plank, Associate Vice President for Research, University of Virginia



Jacqueline Meszaros, Program Officer, Innovation and Organizational Sciences, National Science Foundation



Karen Trebon, Deputy Program Manager, Challenge.gov



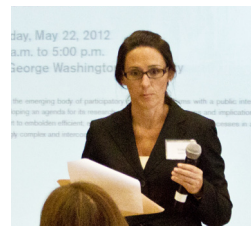
Adam Wong, Project Officer, Investing in Innovation, Office of the National Coordinator for Health IT, U.S. Department of Health and Human Services



Holmes Hummel, Senior Advisor, Office of Policy and International Affairs, U.S. Department of Energy



Brian Butler, Associate Professor, College of Information Studies, University of Maryland



Toni Shope, East Regional Director, Alliance for Innovation



Aaron Wachhaus, Instructor, School of Public Affairs, Penn State Harrisburg



Gerard Learmonth, Research Associate Professor, Department of Systems and Information Engineering, University of Virginia



Tim Scheu, Senior Project Manager, Ashoka Changemakers



Kevin Desouza, Director, Metropolitan Institute, Virginia Tech



Ines Mergel, Assistant Professor, Maxwell School of Citizenship and Public Affairs, Syracuse University

Luncheon Keynotes



Thomas Kalil, Deputy Director for Policy, White House Office of Science and Technology Policy



Esteve Almirall, Associate Professor, Department of Information Systems, Escuela Superior de Administración y Dirección de Empresas

Session Breakout Discussions and Q&A



MC, Erik Johnston, Associate Professor, School of Public Affairs and Director, Center for Policy Informatics, Arizona State University



Session Breakout Discussion



Q&A, Lisa Pino, Deputy Assistant Secretary for Civil Rights, U.S. Department of Agriculture



Q&A, Megan Cantwell, Senior Consultant for Special Initiatives, AASCU Grants Resource Center

Range of Platform Examples

The dialogue throughout the workshop was grounded in a wide range of examples of participatory platforms with a public intent with which the participants were either integral in conducting, researching, or familiar. It also highlighted some places for best practices in designing and executing participatory platforms with a public intent, such as DigitalGov University's howto.gov and the U.S. General Services Administration's Center for Excellence in Digital Governance. Below is a list of the participatory challenge platforms with a public intent represented at the workshop.

10,000 Solutions	Health Data Initiative Forum, Health Datapalooza	Peak Democracy
Apps for Development	HM Government E-Petitions	The Policy Challenge
Blue State Digital	Innocentive	Shift
Challege.gov	Investing in Innovation Challenge Program	Startup America Policy Challenge
Citizen Media Competition	Netflix Prize	Topcoder
Climate CoLab	Open Cities, Urban Lab Challenge	UVA Bay Game
Code for America Commons	Open Living Labs	We the People
Commerce Business Apps Challenge	Open Secrets	Wikipedia
Grand Challenges	Open-source software	X Prize
Haggle		

Findings

The dynamic discussion among the multidisciplinary and multisector group of practitioners and academics grounded in specific case studies illuminated the context and design of participatory platforms with a public intent, including the:

- Precipitating trends that gave rise to participatory platforms with a public intent;
- Potential opportunities of utilizing such platforms;
- Existing obstacles presented to the adoption of such platforms; and
- Lifecycle, design considerations, and relevant research questions of such platforms necessary to explore, understand, and successfully conduct them within and across contexts.

The remainder of this report provides a synthesis of the content expressed by participants throughout the workshop that elaborates on these findings. This synthesis was derived from a content analysis of the notes and recordings from the workshop as well as select participant interviews after the workshop. Our hope is that this will help provide an interdisciplinary and cross-sector place from which to pursue the systematic study and successful practice of participatory platforms within and across contexts.

Workshop participants highlighted several key trends that have recently converged to create a governance climate that supported the emergence of participatory platforms with a public intent. Over the past several decades, we have witnessed a series of cultural and technological trends that both challenge the traditional structures and processes of government as well as present opportunities to transform these practices through participatory platforms with a public intent.

Heightening Legitimacy Crisis of Democratic Government

Since the 1960s, there has been a steady decline in American citizens' trust in and perceived legitimacy of government as well as participation in formal traditional avenues of political participation (Nye Jr., Zelikow, & King, 1997; Pew Research Center for the People & the Press, 2010). The legitimacy crisis can be attributed to citizens' perception that government does not adequately represent their interests and address the issues that they experience (Catlaw & Hu, 2009; Hummel & Stivers, 1998). Citizens believe that government and its officials have not only an over-extended control of society, but are inefficient and ineffective because many are captured by a funding and reelection process that makes them more accountable to special interests, mires them in party polarization and decisional deadlock, and on a permanent campaign superficially based on rhetoric, overpromise, and a materialist agenda that is disjointed from the rising post-materialist values of its citizens (Lessig, 2011; Nye Jr. et al., 1997; Pew Research Center for the People & the Press, 2010). This is compounded by the fact that, by and large, citizens feel that, even if they were to participate in the political process through traditional mechanisms, it would not make a difference.

The IT Revolution and Rising Network Society

Beginning in the 1980s, virtual information, communication, and computation technologies emerged and proliferated throughout the world in everyday use. These web-based and mobile technologies have transformed former space-time barriers to human interaction and enabled individuals to imagine, connect, and work together in new and innovative ways through unlimited and spontaneous exchanges (Lessig, 2006; Malone, 2004). This explosion of virtual technologies have given rise to a globalized network society, characterized by the increasingly interconnected, interdependent, dynamic, and complex relationships among a global network of governments, markets, nonprofits, social organizations, and individuals that, intentionally or not, collectively govern the well-being of society (Castells, 2011). That is, governing is often occurring without government (Rhodes, 1996). Within government, there is a growing understanding that technology affords elected officials and public administrators the opportunity to shift the traditional dynamics of decision making to the public to make government more representative and relevant (Noveck, 2012).

Democratic Surplus and Increasing Civic Participation

Against the backdrop of a rising network society and the legitimacy crisis of democratic government, individuals are not necessarily less civically inclined in general, just with respect to engaging in traditional forms of political participation. In fact, individuals are increasingly and voluntarily participating in non-governmental collective activities through the network society that benefits the public good (Johnston & Hansen, 2011; Malone, 2004). That is, they are exercising their cognitive and democratic surplus and practicing democracy as a way of life (Rawlings & Catlaw, 2011) through the network society and technological mediums, rather than through the perceived illegitimate formal democratic institutions.

Cognitive surplus refers to the spare time and energy that individuals have above and beyond satisfying the daily necessities of life and can spend on voluntary activities (Shirky, 2010). Democratic surplus is a component of cognitive surplus. It is the “effort, goodwill, expertise, innovation, and leadership” that individuals possess and can voluntarily exercise within their spare time and energy (Kelley & Johnston, 2012). That is, the network society consists of citizens with both a latent and active cognitive and democratic capacity that, provided the appropriate participatory and enabling structures and processes (Fung & Wright, 2003; Gaventa, 2004; Schugurensky & Myers, 2008), may voluntarily and productively contribute to improving society (Johnston, 2010; Johnston & Hansen, 2011; Shirky, 2010).

By deploying online and social media platforms, individuals and organizations can tap into, mobilize, and crowd-source the participation and expert, experienced, innovative, and layman contributions from the democratic surplus of the public in addressing a particular purpose. It lends itself to an “internet-enabled collective intelligence,” whereby large groups of people from a diversity of backgrounds across vast geographic ranges can voluntarily collect and transform a number of tiny contributions into something meaningful for the world, such as open source software and Wikipedia (Brabham, 2008; Malone, Laubacher, & Dellarocas, 2010). Initially adopted by the private sector, crowd-sourcing and participatory platforms have proven to be an efficient and effective means for problem-solving and innovation (<http://www.ideaconnection.com>).

Transition from Government to Governance

The theory and practice of governing has been transitioning from that of traditional government to public governance largely since the 1990s. Government is focused on running society through the traditional formal top-down bureaucratic political institutions, practices, and persons (Goodnow, 1900; Gulick, 1965; Simon, 1947; Taylor, 1919; Weber, 1947; Wilson, 1887). Governance recognizes the democratic surplus of the public within the network society and seeks to adapt its traditional institutions and practices to work with and through this web of actors already governing it (Provan & Kenis, 2007; Rhodes, 2007; Sørensen & Torfing, 2007). However, these new modes of democratic network governance still operate under the primacy of efficiency and effectiveness to the exclusion of legitimacy as the criterion for governing well (Bevir, 2010).

For example, the New Public Management movement that emerged in the 1980s around the world and its reinventing government version initiated under the Clinton administration in the 1990s were focused on “making government work better and cost less” (Hood, 2007; Kettl, 2005; Osborne & Gaebler, 1992; Pollitt & Bouckaert, 2011). This was achieved by decentralizing its service delivery to citizen consumers and customers through incentivizing market-based competitive practices, such as grants and contracting. However, administering public services through a network of private industry and nonprofit organizations has hollowed out the capacity of government to govern democratically and legitimately (Milward & Provan, 2000).

The new collaborative public management literature acknowledges that government now regularly conducts its business through networks of individuals and organizations (O’Leary, Gazley, McGuire, & Bingham, 2009). Collaborative governance seeks to connect citizens, public and private stakeholders, and government together in collective spaces to engage in collaborative decision-making and action (Ansell & Gash, 2008). Co-creation is when the public plays an active role in the execution of governing activities, be it design, administration, or feedback. From neighborhood watches to volunteer firefighters to Code for America participants, the boundaries that separate the public from government are naturally eroding and governments at all levels have an option to either embrace or resist these changes (Johnston, 2010). Thus, a role of a legitimate government is to serve the public as a “civic enabler” (Sirianni, 2009) – fostering the engaged, enlightened, and empowered capacity of citizens to have a direct impact on the public decision-making and implementation process.

Open Government Initiative

In light of these trends - the legitimacy crisis of traditional democratic governance, proliferation of information technology and rise of the network society, increasing civic participation in everyday life, and transition from traditional government to public governance - platforms emerged and became a mainstay structure and process for governing under the Obama administration. Upon his inauguration into office in 2009, President Obama signed a presidential memorandum calling for all executive agencies to create an “unprecedented level of openness in Government.” This was to be achieved by increasing their accountability and transparency among citizens in what “Government is doing,” fostering public participation in decision-making, and advancing innovative means of collaboration among federal agencies and the networked society to efficiently, effectively, and legitimately address public issues, largely using innovations in virtual technology.

Building on this initiative, President Obama and the new U.S. Chief Information Officer issued a “Government-wide strategy to build a 21st century digital Government that delivers better digital services to the American people” (Obama, 2012, May 23). Among other things, this strategy called for all executive agencies to centralize and systematize the safe and secure virtual liberation and assessment of public service delivery data in digestible formats for the public to use and participate in through mobile and web-based technologies. To encourage innovation through the use of these virtual platforms, Congress extended the America Competes Act to grant broad prize authority to all federal agencies (“P.L. 111-358,” 2010). As such, the use of participatory platforms by government to efficiently, effectively, and legitimately address public issues emerged and proliferated.

Broadly speaking, the convergence of these trends have (1) precipitated the need to identify alternative networked human-centered governance structures and processes for governing that (2) connects with the human impetus and capacity for civic engagement through (3) the information, communication, and computation technological mediums used daily by the network society to (4) mobilize the democratic surplus and collective capacity of the public to (5) efficiently, effectively, and legitimately address emergent and persistent public issues. Participatory platforms with a public intent is a democratic innovation that emerged to address these trends.

The common belief of workshop participants was that participatory platforms with a public intent offer a plethora of potential opportunities to improve democratic governance. Participatory platforms are socio-technical structures and processes, an “internet-enabled collective intelligence” and “complex ecosystem,” that can both liberate and collect data concerning public issues, programs, and outcomes as well as directly involve the public in proposing, developing, and implementing ideas, products, and programs that address public issues.

The Evolving Social Contract

Ultimately, platforms possess the power to positively transform the relationship between government and the public. Platforms suggest an evolving conceptualization of the social contract and organizational design for public problem solving and innovation. The traditional hierarchal relationship between government and society largely relies on the former to develop and implement policy directives that address challenges experienced by the latter through analytical methods and politically negotiated processes that presume knowledge and understanding of the challenge without explicitly seeking or including the diverse perspectives of the citizenry who experience and/or possess expertise of the issue. Platforms reformulate this relationship by resituating the structures and processes of public agenda-setting, policymaking, and implementation around the perspectives, experiences, expertise, and innovative ideas directly expressed by a public actively engaged in governing their own society. That is, platforms can facilitate a more open, transparent, accountable, representative, equitable, responsive, and participatory democratic government; engage, enlighten, and empower the citizenry; and enable the capacity of democratic governance to legitimately, effectively, and efficiently to address public issues. As several workshop participants stated,

“We believe participatory platforms are superior to mathematical models in representing complex systems and public governance challenges ... by involving multisector stakeholders ... and releasing hard problems from ideological stalemate. They throw into stark relief the need for adaptive management institutions.”

“When big issues connect with the daily lives of the public in meaningful ways, they are prompted to action.”

“Participatory platforms are like seeing a huge flow of capital moving through your thought leadership stream and then running a magnet over it. Not every ion is going to flip up on its head and be interested. But enough of them will take their existing capacity and orient it to a productive problem that is inspiring to them and that gets you results.”

“Participatory platforms can help us raise the public’s attention to urgent and intractable public issues and problems that need creative and unruly thinking ... open to the field of possibility not confined by the inconveniences of jurisdictional limitations And, with the indignation that only American citizens can have about the lack of performance of their government to solve the problems that they can see right in front of them, to communicate their ideas and solutions to other citizens and government, and work with them to get things done.”

Designing to Maximize Opportunities

In particular, these potential opportunities can be achieved by designing and executing participatory platform structures and processes that:

- Reduce time and space barriers for the public to participate in the political process by tapping into virtual technology mediums already in use by the public, and thereby increasing civic engagement in government.
- Enable the public to voluntarily contribute their cognitive and democratic surplus to address public issues in a manner that is beneficial for both the citizen and government.
- Elicit citizens' perspectives, opinions, and local knowledge about their everyday experiences with public issues.
- Solicit the public to propose and develop innovative and pragmatic ideas and solutions to pressing public issues.
- Facilitate collaborative partnerships and the process of co-creation between government, markets, nonprofits, social organizations, and citizens to collectively address public issues.
- Actively and dynamically include a diversity of perspectives, experiences, and expertise that are multi-disciplinary and cross-sector in the public agenda-setting, policy development, and implementation process of programs to address public issues.
- Expand the universe of individuals examining and grappling with public issues.
- Cultivate a sense of empathy among diverse participants and facilitate more respectful discussions and mutually-beneficial solutions to public issues.
- Foster communities of practice, drive innovation, and engender democracy as a way of life to sustain the exchanges among the diversity of individuals in the public in productively contributing to addressing public issues beyond the life of the platform.

Workshop participants believed that participatory platforms with a public intent will not achieve their potential without a lot of growing pains, particularly for public agencies, as it urges us to fundamentally rethink the meanings, structures, and processes of democratic governance. As a new approach to governance, it agitates the traditional institutionalized relationship of regulations, rules, norms, and persons. Yet, it offers us a window of opportunity to re-imagine the way we live together and govern ourselves in a manner that is compatible with the values, preferences, attitudes, and capacities of twenty-first century citizens.

Successful Platform Design

Participatory platforms with a public intent have a minimal history of existence. Although there is a growing number of platforms that have been designed, conducted and researched, our knowledge and understanding of how to design and execute a successful platform both within and across contexts is limited.

Of those platforms that have been conducted, the majority are essentially in beta phase – although most of the design elements are present, the structures and processes are not yet wholly understood or proven. The empirical evidence that does exist is largely bound to singular platform incidences. Furthermore, the existing evidence demonstrates that there lacks a uniform knowledge and understanding of the fundamental platform design structures, processes and persons, their implications for designing and executing a successful platform, and what a “successful” platform even means. As such, the lessons learned from anecdotal stories and descriptions of previously conducted beta-platforms largely drive the current study and practice of platforms in a haphazard and exploratory fashion.

Consequently, we heard from public agencies who were hesitant to overinvest in participatory platforms until they can be proven as an efficient, effective, and legitimate governance mechanism with successful models and principles to guide their design and execution. As several workshop participants put it,

“Since participatory platforms are a new concept and idea, you see a lot of noise around them. If you don’t resolve these tensions, you are going to see them die.”

“Thought needs to go into understanding the design of participatory platforms throughout their entire lifecycle.”

Some of the biggest design considerations of participatory platforms involve having “clear input-output expectations,” “if you do this, we’ll do that,” “aligning the motivations of participants with the incentives offered by the platform,” and “identifying the nexus between idea and action” such that participants’ contributions meaningfully satisfy both the intended purpose of the platform and their objectives for participating.

“What we’re doing is learning how to do this. Doing it wrong, you learn a lot from it. Doing it right, you learn a lot from it. The question is, ‘How do we get better at this faster?’ ... To be successful by any measure, we are trying to intervene in a very complex innovation ecosystem. We are coming to realize how much we need to understand this ... and having the conversation is really important. We are having the conversation. So that’s a success.”

As such, we must not only continue to share and learn from the successes and failures of beta-platforms, but be willing to engage in a rigorous and ongoing conversation concerning the systematic study and practice of participatory platforms within and across contexts.

Nontraditional Participation in Government

The public policymaking and administration process consists of a complex landscape of laws, rules, norms, markets, and negotiated stakeholder interests that is often a black box to even the most educated and connected citizen. Thus, platforms engage a diversity of people who may not be familiar with, understand, or have access to the public policymaking and administration processes, analytical and implementation tools, and relationships required to realistically address a particular public problem. This disconnect may prohibit the public from offering contributions that can be utilized in practice and affect real change. As several workshop participants explained,

“Washington, D.C. and the public policy process is a black box to many citizen problem solvers, and so there is a gap between the identification of challenges and connecting it with plausible solutions.”

“Good ideas can influence the public policy process but, I’m sorry to say, do not always determine policy outcomes. There may be other things like the relative power of interest groups that wind up having an impact on the policy process other than who has the best idea.”

“We need to distill and synthesize the advice that would be most useful to and increase the understanding that people have who are not doing this for a living of how the policy process works and what are the tactics that policymakers use to get things done.”

Therefore, the question is how participants outside the traditional public policymaking and administration space can be included so that their contributions penetrate these system dynamics to affect positive and tangible change. This requires that platforms equip nontraditional participants with the information, tools, and relationships necessary to intelligibly contribute in a manner that innovatively and pragmatically addresses public issues.

Furthermore, engaging a diversity of participants inherently means inviting a diversity of motivations as well as contributory capacities to examine and respond to public issues. People have different reasons for feeling compelled to participate in platforms. Of those motivated to participate, not everyone is innovative, skilled, experienced, connected, thoughtful, or objective. Therefore, the question is how to align the diverse motivations among potential participants with the incentives offered by the participatory platform as well as build the capacity of all participants in ways that maximizes the value of their diverse contributions to address the public issue. Finally, engaging a diversity of nontraditional participants may invite noise along with the expression of countervailing views to the established goals of the political regime or public agencies. As one workshop participant put it,

“There’s a need for us to think about the way in which these participatory platforms are inclusive and exclusive because they do require large investments of time and substantive knowledge They need to be designed in a manner that acknowledges people’s motivations to engage; educates them about the public issues and policy process; values and provides feedback on their contributions; and points them in a place where they might make constructive progress on and implement their idea. If participatory platforms are not design in this manner, it’s not going to appear to those who participate as a routinely successful strategy because policies will continue to be made through the overt muscle-up negotiation among constituencies”

Existing Legal and Operational Infrastructure

As participatory platforms with a public intent are a new governance mechanism, their adoption requires deviating from or adapting the previously established structures and processes of public policymaking and implementation. Generally speaking, there exists the question as to whether these platforms offer an efficient, effective, and legitimate mechanism for democratic governance. So far, beta-platforms often do not produce tangible outputs and outcomes for which public representatives can easily justify public expenditure. As such, public platforms are scrutinized for waste, fraud, and abuse. Thus, it is important to consider how to design and execute platforms to efficiently, effectively, and legitimately produce outputs and outcomes that can be immediately and publicly justified.

Furthermore, public policymakers and administrators exist in a world of competing priorities among a diversity of stakeholders within election cycles where the time, attention, and resources they are able to dedicate to a singular activity is extremely small. As such, it is important to understand how to prime public agencies with the capacity to successfully design and execute platforms.

Finally, the existing infrastructure of legal regulations and rules developed before platforms emerged currently constrain the possibilities of its design and use by public agencies. Design constraints concern the avenues for solicitation, processes of implementation, offered rewards, and analysis of contributors. For example, the America Competes Act that regulates how public agencies can conduct competitions and offer prizes to spur public innovation is difficult for public agencies to implement with respect to platforms. ACA constraints include the federal register notice that requires the publication of actions being taken; guidelines and restrictions on who can review and evaluate submissions; intellectual property rights and considerations (e.g., if a challenge results in the creation of an application or other tangible solution, who owns that piece of intellectual property?); and user privacy issues regarding personally identifiable information of participants during the platform and when working with datasets to evaluate the platform. As a one workshop participant explained,

“The government has a fairly large megaphone, but there are a lot of restrictions on what they can do The existing rules and regulations weren't created with participatory platforms and prizes in mind. So as platforms become more mainstream within the federal government, we need to figure out ... what we need to change from the inside to make them as appealing as possible in the future.”

As a new field of inquiry and practice, there is more to be discovered than is already known about the design and execution of successful participatory platforms with a public intent. The workshop discussion among participants stressed the imperative that “thought needs to go into understanding the design of participatory platforms through their entire lifecycle” and developing an agile model that ensures participant contributions successfully address public issues. This is “design thinking for social innovation and inclusion” (Wyatt, 2011). Furthermore, as platforms are an inherently interdisciplinary and cross-sector concept and exercise, design thinking should necessarily transcend contexts. In an effort to give semblance to the conversation and provide a foundation for the systematic study and successful practice of participatory platforms within and across contexts, we offer a preliminary design framework that identifies and elaborates on the platform lifecycle stages, key design aspects, and critical questions that transcend stages for researchers and practitioners to pursue. (See Figure 1.)

Overview of the Participatory Platform Lifecycle and Key Design Aspects

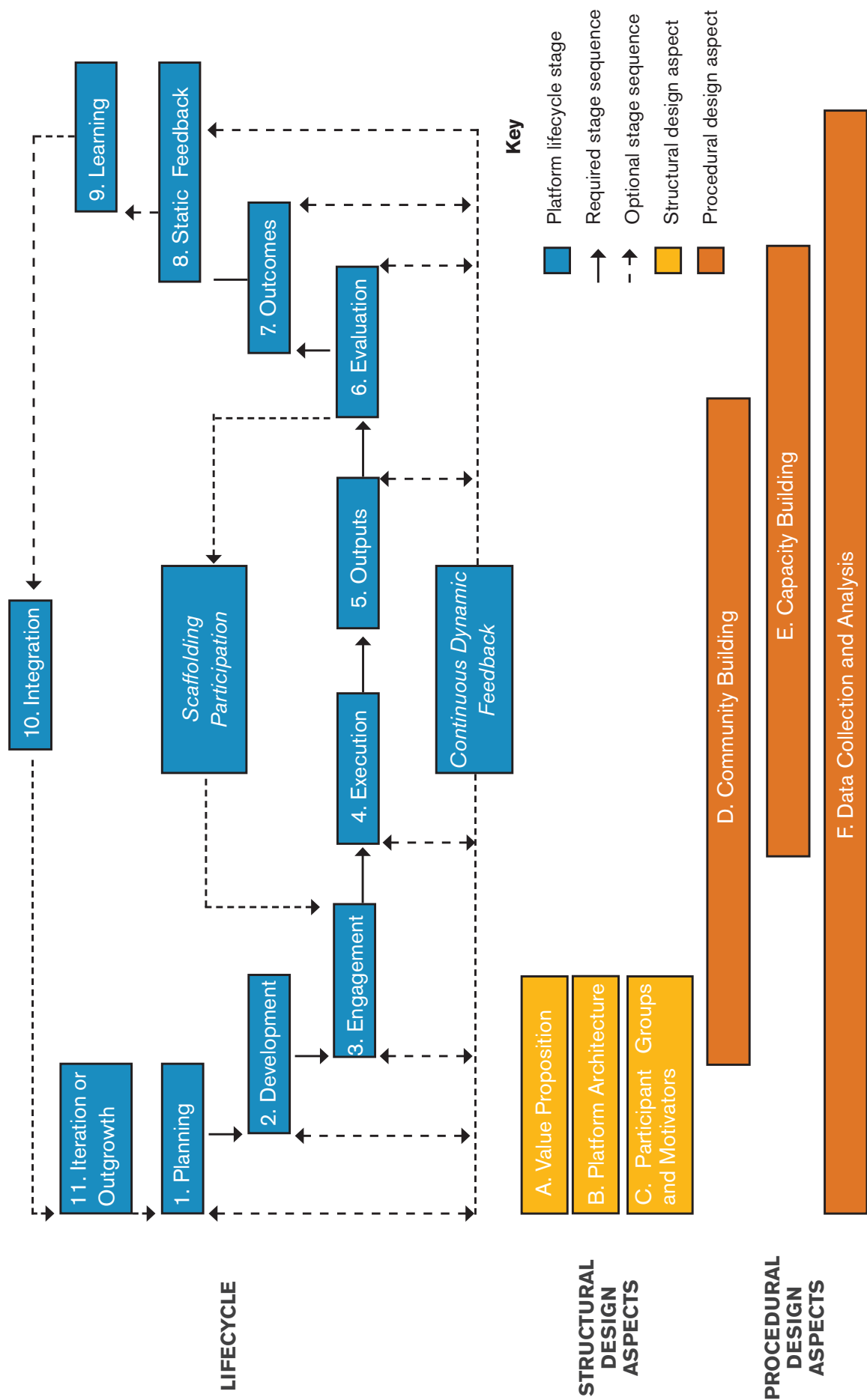
Participatory platforms involve engaging, enlightening, and empowering nontraditional participants through a technologically-facilitated space to exercise their democratic surplus to productively contribute to efficiently, effectively, and legitimately addressing public issues. How this is executed is a matter of design considerations concerning the structures and processes that comprise the stages of the lifecycle of a platform.

The lifecycle of participatory platforms proceed through the following sequential, yet overlapping and interdependent stages: (1) planning, (2) development, (3) engagement, (4) execution, (5) outputs, (6) evaluation, and (7) outcomes. *Continuous reiterative feedback* received from all participants informs and improves the general design and operation of the platform from all participants. It is possible to enhance the capacity and resulting contributions of participants through platforms by *scaffolding participation*. This consists of multiple iterations of engagement, execution, outputs, and evaluation to further develop the final outcomes of participation. The platform lifecycle will either terminate at outcomes, proceed through the exercise of gathering feedback and collecting and analyzing data for the sake of evaluating the lifecycle design and execution itself, or continue on to generate another iteration or outgrowth by integrating the feedback-learning loop. These are three available codas to the platform lifecycle, where the immediate outcome must occur, but the feedback-learning and integration for future iterations and outgrowths are optional conclusions.

The key design aspects of participatory platforms are both structural and procedural. Structural design aspects focus on the facilitative structure of the participatory platform and include the (a) value proposition, (b) platform architecture, and (c) participant groups and motivators. Procedural design aspects focus on processes within the facilitative structure by which participants engage in the participatory platform and include (d) community building, (e) capacity building, and (f) data collection and analysis. The different groups of actors that populate the platform can be broadly categorized as the initiating platform stakeholders, platform administrators, partners, platform users, and capacity builders. Design aspects facilitate participation through the platform lifecycle. This means that each participatory platform is uniquely based on choices made about design.

The remainder of this report offers a germane description of the platform lifecycle stages, key design aspects, and relevant research questions necessary to explore, understand, and successfully conduct participatory platforms within and across contexts. Although this discussion identifies and provides an introductory description of the platform lifecycle and design aspects, further research and exploration is needed for a deeper understanding of their dynamics and impacts on successful platform function.

Figure 1: A Participatory Platform Lifecycle and Key Design Aspects Framework



Platform Lifecycle

Stage 1: Planning

The first stage develops the strategic plan for the design and execution of the platform. This involves envisioning and explicitly identifying the structures, processes, and persons concerning the key design aspects of the platform as they play out throughout its lifecycle. At this point, it is worth considering implementing mechanisms to foster *continuous dynamic feedback* and collect data on the general design and operation of the platform from the different participant groups throughout the required lifecycle stages to be incorporated in the current platform and future iterations and outgrowths.

Stage 2: Development

The second stage develops the platform architecture and supporting materials to facilitate the effective engagement and contributions from participant groups as set forth in the strategic plan. The platform architecture includes the technologically-facilitated platform infrastructure that contains the essential structure and instructive content to foster effective participation throughout the platform lifecycle. Supporting materials encourage engaged participation for each stage of the active platform. Sometimes participation is focused only on the specific stage of the platform, while other times participation also primes platform users for subsequent stages. These should all be designed in a manner that enables platform administrators to observe and collect useful data to analyze the success of the platform.

Stage 3: Engagement

The third stage explicitly solicits and engages the target participant groups – initiating platform stakeholders, platform administrators, partners, platform users, and capacity builders – identified in the strategic plan to actively pursue their respective roles and expectations as participants in the platform. In particular, the platform administrators (1) reach out to the targeted participant groups; (2) communicate the general value proposition, potential roles and expectations, as well as the incentives that align with motivations to participate; (3) engender their commitment to participate in the platform; and (4) offer supporting tools, materials, specific guidance, and resources that orient them to the platform, its architecture and other participant groups, as well as encourage them to actively participate in pursuing their respective roles and expectations. As such, marketing, outreach, communications, public relations, and community building are integral components to this stage.

Stage 4: Execution

The fourth stage mobilizes the targeted participant groups to effectively fulfill their respective roles and expectations through the platform. The objective is to maximize informed and empowered participation so that individuals personally experience value from their efforts, produce effective outputs, and contribute to meaningful outcomes as it relates to satisfying the value proposition through the platform architecture. As such, community building and capacity building are integral to emboldening this stage – connecting participant group members with one another, resources, and materials in a manner that enhances their capacity to effectively navigate, utilize, and contribute to the platform.

Stage 5: Outputs

The fifth stage generates outputs. Outputs are the artifacts directly contributed by platform users to satisfy the value proposition. Their production is structured by the platform architecture, guided by the platform administrators, and enhanced by capacity builders, when utilized.

Stage 6: Evaluation

The sixth stage critically analyzes and provides feedback on the outputs directly contributed by platform users by capacity builders. The objective of this stage is to identify the outputs that will most effectively contribute to generating meaningful outcomes that address the value proposition through the platform architecture. The capacity builders are the primary participants in this stage.

The evaluation stage is either terminal or reiterative. Terminal evaluation results in the identification of the final outputs that will result in the following outcomes stage. Reiterative evaluation occurs when analysis and feedback reinvigorates the platform system. The results are essentially re-invested in repeating the previous four stages – engagement, execution, outputs, and evaluation – in a modified manner that develops the capacity of participants, particularly platform users, and improves the caliber of their contributed outputs in an effort to maximize the quality of platform outcomes. This is a means of *scaffolding participation*.

Stage 7: Outcomes

The seventh stage concerns the outcomes of the participant contributions and outputs. Outcomes include the impact or influence of the outputs on fulfilling the value proposition, platform design, and motivations of the participant groups. The value proposition explicitly identifies the intended outcomes, and the platform architecture maps out the structures and processes by which participants can contribute to realize these outcomes. The platform administrators and initiating platform stakeholders are the primary participants in this stage. They work together to translate outputs to outcomes and communicate them to all participant groups.

Stages 8-11: Static Feedback, Learning, Integration, and Next Iteration

To help solidify the nexus between idea and action, sustain the momentum generated by the platform beyond its current iteration and help contribute to the success of future participatory platforms, platform administrators and initiating platform stakeholders can extend and capitalize on the platform lifecycle through the following stages: static feedback, learning, integration, and future iterations or outgrowths. These stages may involve gathering feedback from participants groups as well as assembling and analyzing the collectable data to assess the design and execution of the platform; sharing the outcomes in terms of success stories, best practices, lessons learned, and other metrics to the participants groups; and integrating the lessons learned into building on or bridging out into future iterations.

Structural Design Aspects

Aspect A: Value Proposition

The value proposition takes place at the onset of the planning and development process for the platform. The value proposition is the fundamental premise for conducting the participatory platform. It provides the call to action (the hook) that includes a statement of:

- the issue to be addressed through participation;
- the context of the issue, why it exists, and who is proposing the platform;
- the type of participation requested (e.g., deliberation, competition, etc.);
- how participation in the platform will engage the issue;
- the incentives for participating; and
- the desired outputs and outcomes of participation.

The framing of these statements have significant implications for the remaining design considerations and successful execution of the platform throughout its lifecycle and ultimately structures the process and quality of participants' contributions.

Relevant research questions *focus on fleshing out the various contexts in which platforms are conducted, interests, issues and problems that platforms address, and value propositions to which participants respond; understanding how these variables interact with one another; and exploring the implications of different design combinations on the efficiency, effectiveness, legitimacy, and “success” of the platform within and across contexts.*

Aspect B: Platform Architecture

The platform architecture is the technical design of the platform that provides the structure and instructive information to facilitate participants' access to and interaction with the platform and others to fulfill their roles and address the value proposition throughout the lifecycle. The technical design includes the platform infrastructure, virtual environment, and instructive content. The **platform infrastructure** is the technological medium that facilitates participation, such as a website, social media, or simulation. The **virtual environment** is the internal structural design and tools of the platform with which participants interact. The **content** is the instructive information necessary to guide participants' interaction with the platform and one another to fulfill their roles and address the value proposition. This may include the value proposition, eligibility requirements, rules of participation, role descriptions and expectations, evaluation process, and timeline for contributing outputs, etc. The platform architecture can be open (any) or closed (targeted) to participants; facilitate competition, collaboration, or both among participants; engage participants in static or scaffolded (staged or iterative) activities; through a loose and general or rigid and specific physical and instructive environment.

Relevant research questions *focus on fleshing out the various structural and procedural components of the platform architecture; understanding how these variables interact with one another; and exploring the implications of different design combinations on the “success” of the platform within and across contexts.*

Aspect C: Participant Groups and Motivators

Participants comprise different target groups of individuals and organizations that are integral to the design and execution of platforms. Although these groups and their participants may overlap, they offer distinct value-added roles that permeate the stages and design aspects of the platform lifecycle that carry with them different motivations for participating. As participation is voluntary, there are a variety of intrinsic and extrinsic motivations that can encourage participation, and different participant groups may possess and respond to different ones. Motivations may include a sense of or desire for personal civic duty, public service, or connection with the value proposition; social connection; making a difference; winning; professional or organizational development; and/or financial compensation or non-monetary reward. Thus, it is important to identify these relevant participant groups, determine their participation roles and expectations, and identify and align their motivations with platform incentives for participating at the beginning of the lifecycle.

Initiating platform stakeholders are the individuals and organizations prompting the development of the platform and value proposition to engage a nontraditional source of participants to address an issue that is relevant to their mission and activities. They include private institutions, public agencies, academic institutions, and social and citizen organizations and their persons who face public issues that are relevant to the health of their organization or society, but who are unable to efficiently, effectively, and/or legitimately address them through traditional participants, structures, and processes. Their value-added role is general strategic oversight and utilizing outputs.

Platform administrators are the individuals and organizations charged with managing the design and operation of the platform throughout its lifecycle. They serve as the fulcrum for effectively engaging other participant groups to satisfy the value proposition. Their value-added roles include strategic planning and oversight, development and management of the platform architecture, marketing and communications, community building, event planning, and legal matters, among others.

Partners are the organizations and individuals who formally support the design and execution of the platform. They can serve in multiple capacities throughout the platform lifecycle, such as to provide platform administrators feedback on the strategic plan as well as the design and execution of the platform architecture, assist with publicizing the platform, serve as a conduit of information for different participant groups, actively engage participant groups, connect outputs to people and organizations that can materialize them into successful outcomes, and offer resource support.

Platform users are the individuals and organizations that participate in the platform to directly address the value proposition through the platform architecture. They are the people who individually or collectively respond to the value proposition, choose to participate in the platform, and deliver the requested outputs. Platform users are either experts, entrepreneurs, citizen scientists, or layman. Usually these participants are nontraditional in that they are not commonly or formally involved in the operations of the initiating platform stakeholders.

Capacity builders are the individuals and organizations who serve as a resource for and actively assist the platform users in maximizing the value of their participation. They offer complementary and value-added assets of expertise, entrepreneurialism, experience, and perspectives to the platform users by providing support, feedback, and/or evaluation as collaborators, mentors, reviewers, and/or judges. They can come from within or without the platform community. Individuals within the community, such as the platform stakeholders or capacity builders, are familiar with the issue that the platform is trying to address. Individuals or groups like the platform users increase capacity by bringing fresh new perspectives or alternatives into the deliberation within the participatory platform environment.

Relevant research questions focus on fleshing out the various roles, characteristics, motivations, and incentives of these different participant groups; understanding how these variables interact with one another; and exploring the implications of different design combinations on the “success” of the platform within and across contexts.

Procedural Design Aspects

Aspect D: Community Building

Community building is the process of enabling the development of an identity and feeling of collective commitment among participants to the platform, their respective roles, their responsibility for addressing the value proposition, and solidarity among one another throughout the lifecycle. Community building involves the avenues, processes, and materials for soliciting the engagement of and interaction among the different participant groups that:

- Ensures that they understand the value proposition, participant groups' roles expectations and motivations, and platform architecture;
- Allows them to provide feedback concerning the platform design and execution (multi-directional feedback-loops);
- Generates a sense of commitment to the platform architecture and value proposition;
- Engenders a sense of trust, responsibility, accountability, identification, and empathy within and across their groups; and
- Builds on and sustains the momentum of participation throughout the platform lifecycle.

Relevant research questions focus on fleshing out the various aspects of marketing to, engaging, and building community within and across participant groups; understanding how these variables interact with one another; determining how community building is best developed within and across participant groups; and exploring the implications of different design combinations on the “success” of the platform within and across contexts.

Aspect E: Capacity Building

Capacity building is the process of improving the ability of individual participants to engage in the platform and address the value proposition in meaningful ways throughout the lifecycle. The purpose of capacity building is to maximize the personal value of the experiences of participants and the quality of the outputs they produce. This involves assessing and leveraging the differences and commonalities among the participants' motivations, roles, and potential strengths and weakness to enhance the capacity of all participants to collectively address the value proposition through the platform architecture. Capacity building processes may include connecting (a) experts, entrepreneurs, and enthusiasts with one another to contribute outputs that are both innovative and pragmatic; (b) participant groups with the information, resources, and directives necessary to better know, understand, and critically engage with one another, the platform architecture, and the value proposition; and (c) platform users with evaluators to critically analyze and provide constructive feedback on their contributions and outputs.

Relevant research questions focus on fleshing out the various capacities or competencies for the different participant groups; understanding how the variables interact with one another within and across groups; determining how capacities are best developed within and across participant groups; and the exploring implications of these different design combinations on the “success” of the platform

Aspect F: Data Collection and Analysis

Data collection and analysis concerns operationalizing, measuring, collecting, and evaluating metrics for the different design determinations made for the aforementioned categories to inform and improve the current and future platform design and execution efforts. The purpose of data collection and analysis is to not only evaluate the “success” of the immediate platform, but contribute to an emergent collection of data used to systematically study and “successfully” practice participatory platforms with a public intent.

Thus, central to this proposed project is an understanding of “What does success mean and what is it describing?”. For example, the success of a platform could be the answer to “Did the outputs that the participants contributed through the platform meet the value proposition?” Additional metrics of success include: levels of participation in the existing platform; diversity of participation; changed perspectives and attitudes of participants toward the public issue, peer participants, and other participant groups; changed behaviors of participants; improved capacity of participants; impact on the public issue; and willingness to re-engage in future platforms.

Data can be collected in qualitative and quantitative form, including stories of successes and failures; participant feedback at various points throughout the lifecycle; participant group composition and contributions; platform user output evaluations; and participant outputs to platforms outcomes; among others. Data analysis can yield insight and artifacts concerning the different platform design considerations; its influence on participation, outputs, and outcomes; best practices, lessons learned, opportunities, and limitations concerning the design and execution of a particular platform; and gaps in understanding the research and practice of participatory platforms with a public intent.

Relevant research questions focus on operationalizing what “success” means and how can data can be collected and analyzed in a manner that contributes to best evaluating the “success” of a platform and informing the systematic study and practice of platforms within and across contexts

Concluding Remarks

Participatory platforms are an emerging complement and civic engagement approach to traditional democratic governance. Platforms offer the potential to generate more innovative, efficient, effective, and legitimate decisions, products, and actions to address public issues. It encourages us to operate in a manner that is consistent with highly dynamic, complex, interdependent, technologically-connected, and resource-constrained realities of the twenty-first century by engaging a public eager to contribute their vast array of expertise, experience, entrepreneurial enthusiasm, and democratic surplus to making a difference. As such, platforms fundamentally invite us to critically reassess the social contract and re-imagine how we participate in governing our shared lives. This requires a holistic understanding of platform design within and across contexts. Although there is much occurring in terms of its research and practice, there is little in the way of its systematic study. As such, this report synthesized the content expressed by the multidisciplinary and multi-sector participants of the NSF workshop on *Participatory Platforms with a Public Intent* in an effort to offer a basic framework from which to pursue the systematic study and successful practice of participatory platforms across multiple contexts.

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