



**TOWN
+GOWN:
NYC**

**Participatory Design and Anthropology:
Toward a Unified Approach
Resilient People Places and Projects.4
DYCD, 2 Lafayette, 14th Floor
May 20, 2024, 8:45 a.m. to Noon**

AGENDA

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| 8:45 a.m. – 9:00 a.m. | Sign In |
| 9:00 – 9:10 a.m. | Welcome and Introduction Terri Matthews, Town+Gown: NYC |
| 9:10 a.m. – 9:50 a.m. | Evoking Equity Update Zehra Kuz, Pratt Institute Deborah Gans, Pratt Institute |
| 9:50 a.m.—10:30 a.m. | Immigrant Community-Building in Queens through the Use of Public Space Amina Tawasil, Columbia University Esther Fan, Columbia University Sidney Hacker, Columbia University Reid Pierce, College of William & Mary Erica Yardy, Columbia University |
| 10:30 a.m.—11:00 a.m. | Open Spaces, Inclusive Places: NYCHA's Connected Communities Program Vaidehi Mody/NYCHA and Pratt Institute |
| 11:00 a.m.—11:30 a.m. | Principles of Good Urban Design NYC Erick Gregory/Department of City Planning |
| 11:30 a.m.—Noon | Open Discussion and Conclusion |

Precis

This Event. At this event, Deborah Gans and Zehra Kuz, professors at Pratt Institute, will revisit research they completed in 2016 for NYC Department of Design and Construction (NYC DDC), under the Equity Lens RFP (@ [town-gown-rfps \(nyc.gov\)](https://www.town-gown-rfps.nyc.gov/)) issued under the Town+Gown Academic Consortium Contract, entitled *Evoking Equity*, which aimed at adding a focus on equity and “community capitals” during public project design, and provide their professional and academic experience with community engagement in public planning and design since then.

Amina Tawasil, a professor at Columbia University, and her graduate students will present on an anthropological study of recent immigrants’ use of public spaces in Queens, entitled *Immigrant Community-Building in Queens through use of Public Space*.

Vaidehi Mody, from NYCHA, who also teaches at Pratt Institute, will present on NYCHA’s experiences in participatory planning and design of their open space projects with NYCHA residents in *Open Spaces, Inclusive Places: NYCHA’s Connected Communities Program*. There have been several Town+Gown capstones focusing on aspects of NYCHA’s Connected Communities Program with the Columbia/SIPA capstone program.

The presentation segment will end with a presentation from Erick Gregory from the NYC Department of City Planning on its the recently released *Principles of Good Urban Design NYC*

At the conclusion of the presentations, there will be an open discussion of themes from the presentations focusing on articulating the benefits and costs of including community engagement and participatory design in public project development and design and developing ideas for a unified approach for public owners.

About the *Evoking Equity* Research Project. The De Blasio Administration’s OneNYC initiative had raised the bar for the City’s capital program and for NYC DDC, in particular, which is the design and construction manager of most NYC agency public building projects and the vast majority of City’s public right of way infrastructure projects. OneNYC reflected the City’s commitment to ensuring fairness and equal access to assets, services, resources, and opportunities simultaneously with increasing the City growth, sustainability and resiliency, and required agencies to plan for future growth and maintain and modernize the City’s aging infrastructure, all in a manner that protects the environment and advances equity across the City. NYC DDC commissioned this study to assess the potential of design of its managed

projects in all neighborhoods across the city for increasing equity, along with other project objectives including environmental sustainability and resiliency.

The sustainable—or triple bottom line—accounting paradigm was thought to provide an appropriate baseline to focus on the equity or social components. Sustainability accounting had developed sufficiently since the early 1990s to support LEED metrics on buildings and ENVISION metrics on infrastructure, with evaluation of built structures' impact on the environment. But work on social indicators necessary to evaluate impacts of public capital projects on equity within a neighborhood had lagged behind. This research with Pratt enabled the agency to explore the state of social indicators, which, along with environmental and economic indicators, constitute the “community capitals”.

Resilient People Places and Projects Working Group Research Project. Town+Gown:NYC (Town+Gown) initiated a collaborative inquiry into planning and designing resilient public spaces to support resilient communities with two events—the first, *Resilient Public Spaces and Communities: Data Driven Explorations* on October 31, 2018 (RP3.1), and the second, *Resilient Public Spaces and Communities.2*, on November 18, 2019 (RP3.2). For the precis documents related to both events, see under Symposia at https://www1.nyc.gov/site/ddc/about/Experiential_Learning.page.

Discussion sessions at RP3.1 and RP3.2 kept focusing on the City's capital program and the need to get ahead of the budget curve to focus on community resiliency. This focus on the city's capital program led to the city agency members within the Resilient People Places and Projects Working Group (RP3 WG) to develop an “in house” research project design with our academic partners, which include Pratt researchers. This project design applied the Neighborhood Activation Study (NAS) methodology,¹ changing the policy objective from reducing crime to increasing infrastructural and community resiliency, to analyze case study clusters of routine capital infrastructure projects in a holistic manner during September-to-January period of the budget process when agency capital projects emerge for the Preliminary Budget (the **capital budget planning period**) to identify ways to rethink them together to increase their infrastructural and community resiliency before their scopes and costs are hard-wired. This became known within the study team as the “cluster” analysis. Aging horizontal infrastructure, in particular subsurface infrastructure, is an unrecognized resiliency hazard in the literature and in practice. State of good repair capital infrastructure projects in each year's capital budget, however, represent multiple opportunities to optimize infrastructural and community resiliency. As one example, agencies could rethink how a park project running by or near a

¹ See <https://criminaljustice.cityofnewyork.us/reports/neighborhood-activation-study/>.

sewer project could include stormwater holding infrastructure, as is done in Rotterdam and Copenhagen,² to hold water during a storm and feed it into the sewer system over time but during dry days would be usable for park purposes (e.g., sitting, skateboarding, etc.).

The NAS methodology uses a collection of place-based planned capital investments within neighborhoods to identify potential synergies among them where collaborative planning can strengthen ongoing community initiatives and agency efforts. It envisions engaging and learning from community residents about their needs that could be met through these synergies so that intentional design could leverage the individual projects to be more than a sum of their parts. The methodology suggested collaborative capital project planning and design as a tool for to achieve policy objectives, noting that multiple NYC agencies should coordinate their projects among themselves and with the communities.³ The NAS focused, however, on the post-budget adoption design phase, when collaborative changes to project clusters are likely to increase costs and delay schedules, representing a significant weakness of implementing the NAS methodology in practice.⁴

The RP3 WG in-house research project identified the following knowledge transfer gaps during the capital budget planning period, which highlighted the weaknesses of the NAS methodology and pointed to ways to address them during the capital budget planning period. The two knowledge transfer gaps discussed below together constitute the **structural capital infrastructure project planning gap**.

- Public agencies do not collaborate closely with each other or with NYC’s central budget office, OMB, on planned capital projects that are closely co-located within neighborhoods during the capital budget planning period. While NYC’s existing capital budget process outlined in the City Charter would permit this type of interagency and OMB collaboration during the capital project planning period, there is currently no mechanism to support it. This is the **interagency knowledge transfer gap** during the capital budget planning period.
- Observed local infrastructural resiliency deficits within the capital portions of the Capital District Needs Statements (CDNSs) submitted during the capital budget planning period by

² See Rosemary Misdary, “Cloudburst Program Would Turn Parts of NYC into Floodwater Super Sponges,” Gothamist, October 12, 2022, at <https://localtoday.news/nj/the-cloudburst-program-would-turn-parts-of-nyc-into-floodwater-supersponges-61989.html>

³ NAS, p. 38. Another tool consisted of leveraging NYC agencies’ public space programs through their capital projects. NAS, p. 37.

⁴ After the capital planning process, agencies can and do learn more about other agencies’ projects in specific neighborhoods in order to rethink their individual projects to further policy objectives, but rethinking projects post-budget adoption would likely require additional funding for project re-designs and extend project schedules, which tends to discourage NAS methodology application for place-based multi-project optimization.

the 59 Community Boards (CBs) do not reach the agencies during the capital budget planning period in a way that can inform or influence agencies' planning for infrastructure projects within neighborhoods during this period. This is the **local community knowledge transfer gap** during the capital budget planning period.

The project design envisioned developing a two-level geospatial platform, with the first level to support an inter-agency and OMB holistic focus on closely located capital projects emerging during the capital budget planning period within neighborhoods to evaluate the potential for optimizing their infrastructural and community resiliency at the same aggregate—or lower—cost before projects entered the Preliminary Budget when individual project scopes and costs become hard-wired. The second level would include the local infrastructural deficiency observations from the CDNSs, permitting the capital agencies and OMB to consider them as part of the holistic optimization exercise during this period.

The RP3 Working Group went through four in-house iterations of a mock-up of the first level platform to identify a cluster of projects that could be rethought holistically in a project optimization exercise upon which a life cycle cost benefit analysis would be performed to create a “proof of concept”. After the last iteration, the RP3 WG concluded it could not do this without focused academic help requiring funding, and Pratt stepped up to the plate with its August 2022 NSF proposal that embedded the two-level platform idea. For a presentation of that NSF proposal, which received excellent reviews, from the *Optimizing Local Infrastructure and Community Resiliency* (RP3.3) event on November 3, 2022, please see [ZehraKuzRP3Presentation.pdf \(nyc.gov\)](#). Since August 2022, Town+Gown has sponsored several capstone projects related to this project design—see [MUCP Final Report \(nyc.gov\)](#) and [Capstone Project 13 Report v1.0 \(nyc.gov\)](#). Pratt recently submitted another Pratt NSF proposal, with this project design, under NSF's CIVIC program.

Focus on the Official “Community” Roles in NYC Budgeting and Planning and Citizen Committees. City capital agencies have incorporated, into their capital project planning, development and/or design work, some level of engagement with community members. While City agencies have experimented with various versions of community and end-user engagement during the planning, development and design stages of public capital projects—public buildings and infrastructure—it is important to note the roles of the official “community” in NYC budgeting and planning processes as a baseline. The 59 CBs representing their Community Districts, which are the smallest level of government in NYC, are the official means by which City agencies engage with communities in various public processes, such as land use

and the budget.⁵ CBs implement Charter-mandated roles in the City's land use process to bring community input for land use proposals and in the City's expense and capital budget process to bring community input reflected in annual CDNSs and from CBs' regular consultation with certain enumerated agencies with respect to their service provision.⁶

The goal embedded into this aspect of the City's governance structure, in part, reflects the adoption of Jane Jacobs's belief that the citywide processes need to know "the terms of the precise and unique places in a city with which they are dealing" by turning to "the people of the place" who "understand thoroughly" specific places.⁷ The term "locality coordination" describes a vertical communications mechanism that captures place-based expertise for "locality knowledge in planning, whether the planning is creative, coordinating or predictive."⁸ While Jacobs may have elevated the neighborhood to the subject and object of urban planning and the City Charter vests the CBs with locality coordinating powers in land use and in budgeting, the history of the City's CBs reflects impediments that have made it challenging for them to function and for individuals living in neighborhoods to feel they can play an effective role in Citywide processes from the neighborhood level.

NYC has had a reciprocal two-way communication process involving the 59 CBs, which is a form of the "citizen committee" mechanism in NYC's formal capital budget process that has been around since 1975. Social network analysis applicable to U.S. public budgeting has found the use of citizen committees to have "positive association and all but one of the stakeholder groups studied."⁹ The researchers found that "... the use of citizens committees had the largest effect size on the networking index. This finding was expected, since citizen committee processes are often designed to incorporate representative members of many groups."¹⁰ NYC's long-standing citizens committee framework is often overlooked, perhaps because we take it for granted. NYC's budget process, which has worked extremely well since the 1975 Fiscal Crises and its statutory work out, is head and shoulders above most local governments' budget processes, which includes this locality coordination function.

That said, while the Charter delineates the processes requiring the "community"—or community board—involvement and participation before final city-wide level decisions are

⁵ Robert F. Pecorella. *Community Power in a Postreform City: Politics in New York City* (New York: M. E. Sharpe, Inc, 1994), pp. 138-150

⁶ *Ibid.*, pp. 150-160.

⁷ Jane Jacobs, *The Death and Life of Great American Cities* (New York: Random House, 1993), p. 533.

⁸ *Ibid.*, pp. 543-545.

⁹ Brad Johnson, Peter A. Jones and Vincent Reitano, "Stakeholder networks and inclusive public participation mechanisms in the public budgeting process," *Urban Governance*, 1 (2021), 98-106, p.99.

¹⁰ *Ibid.*, p. 103.

made, structural issues remain for CB effectiveness, such as their general lack of co-terminality with other local jurisdictional sub-boundaries, which can negatively impact all governmental community outreach efforts.¹¹ In addition, demographic changes over time continue to affect the alignment of actual communities and neighborhoods with their designated CBs. The local community knowledge transfer gap exists during the capital budget planning period, and the RP3 WG's two-level platform solution may all that is needed to "activate" the citizens committee approach represented by the CBs as envisioned by the 1975 Charter Revision.

Focus on Projects and Project Governance. On a private project—residential, commercial or industrial—the owner hires a designer (architect and/or engineer) to design what the owner—and possibly what the owner thinks its customers, users, purchasers (residential)—wants within the envelope of what the private owner can afford to construct. On public projects, the public owner does much the same thing, but the users of public projects not only include governmental agency users and members of the public whom the agency serves, but also the members of the general public. The public aspect of public projects means that designers are designing for the owner and the public, with community members within the area of the project as further disaggregated members of the public.

In addition to designers discerning owners' and their public users' needs, designers must design functional public projects consistent with the public purposes they were authorized for and with a level of durability and overdesign beyond a typical private project lifespan that results in higher costs compared to private projects, reflecting the reality that it may be a long time before the public owner goes back to that particular completed project. The designer must also deal with laws of nature, including physics, and actual laws such as the zoning code, building codes, the American Disabilities Act, and a host of local laws related to increasing environmental sustainability and resiliency. The design must reflect construction costs in a construction market with costs, such as for labor and transportation logistics, that are the highest in the nation.

Once, it was assumed that the public owner and its designer, as a professional, could discern all user needs within the functional design. Since then, however, concerns that this assumption was not sufficient has resulted in many public owners exploring issues of community engagement and experimenting of participatory planning and design of their public projects. But all the information garnered from these processes must work within the budget and finance of the final design and construction, which serve as an ultimate constraint throughout the process.

¹¹ *Ibid.*, pp. 161-169.

The engineering discipline, which has been focusing on multi-disciplinary approaches to their practices to expand their viewpoint during project planning, design and execution, has recently added a focus on governance. “As systems come under increasing stress, the need for inter- and trans-disciplinarity to address complex issues of resilience and sustainability has been recognized in conjunction with systems-thinking and an associated call to expand thinking beyond disciplinary silos has emerged.”¹² The concept of Social, Ecological and Technical Systems (SETS), which is still relatively new, “suggests the need to better integrate technology in [the older Socio-Ecological Systems [SES] governance approach to natural resources management] and is aimed at the “‘wicked’ problems around climate and population changes, and the increased uncertainty this brings to future infrastructure needs.”¹³ SETS is “an interdisciplinary approach [that] places infrastructure as a mediator between ecosystems and society, and draws on examples of infrastructure failures and disasters . . . using SETS to better understand issues such as infrastructure lock-in and vulnerability.” SETS uses infrastructure as “as a mediator between the environment and society [and explores] how that infrastructure distributes assets and burdens (environmental and social) to address vulnerabilities becomes a live justice issue.”¹⁴ The SETS perspective builds on the SES perspective “by describing human environments as consisting of natural, built, sociocultural, and virtual systems that occur at varying temporal, geographic, and social scales.”¹⁵ SETS can define “social systems as a broad domain that includes both human actors and their roles and activities, such as cultural and institutional values, tacit knowledge, public discourse, policy, economics, governance, public health, financing, citizens, regulators, managers and the institutions in which these reside.”¹⁶

While it has been applied to infrastructure systems, SETS is also applicable to buildings as typologies and with their internal systems engaging with public infrastructure because they both are “complex social, ecological and technological systems (SETs) where feedback from humans, infrastructure, and the environment dictate failures and their consequences (or the lack thereof).”¹⁷ NYC’s sustainability and resiliency guidelines and practices apply to both its infrastructure and its buildings—public and private. A multi-disciplinary strategy based on the

¹² Elizabeth A Shrimpton, Dexter V L Hunt and Christopher D F Rodgers, “A Governance Framework of Implementation of Scientific and Engineering Innovation in Buried Infrastructure Systems,” *Frontiers in Sustainable Cities*, March 2022, Vol. 4, Article 765577 www.frontiersin.org, p. 2.

¹³ *Ibid.*, p. 8.

¹⁴ *Ibid.*, p. 2.

¹⁵ Samuel A. Markolf, Mikhail V. Chester, Daniel A. Eisenberg, David M. Iwaniec, Cliff I. Davidson, Rae Zimmerman, Thaddeus R. Miller, Benjamin L. Ruddell, and Heejun Chang, Interdependent Infrastructure as Linked Social, Ecological, and Technological Systems (SETs) to Address Lock-in and Enhance Resilience, *Advancing Earth and Space Science*, 2018 doi number 10.1029/2018EF000926, p. 1643.

¹⁶ *Idem*

¹⁷ *Ibid.*, p. 1641.

SETSs perspective applied to horizontal and vertical public assets would help “reveal the complex causality of . . . failures due to lock-in and demonstrates how a reliance on historical information for environmental and social drivers *locks* [these assets] into fragile designs (i.e., shocks bring higher harm as their intensity increases). Subsequently, complex SETS interactions, initiated by the construction of new [public assets] or the rebuilding of old [public assets], create escalating risks (due to increasing consequences of disruption) that are difficult to avoid.”¹⁸ Together, a SETS perspective highlights how infrastructure [and building] systems become locked-in and how this increases fragility and erodes the adaptive capacity needed to address new hazards and risks.”¹⁹

One group of water system researchers for an innovative infrastructure technology project sought to develop a “Governance Framework to be a tool that encourages more expansive thinking and transdisciplinary engagement, and ultimately to achieve adoption of more resilient systems” that would help users “anticipate and address the potential governance issues triggered by the project.”²⁰ To develop this Governance Framework tool, “with sufficient breadth to guide thinking,” these researchers reviewed existing literature around transitions research and multi-level perspective analysis, responsible innovation, governance of natural resources, socio ecological systems and adaptive management, rules-in-use and traditional infrastructure governance²¹ to develop “a tool that would support the strategy for implementation, improve the design (a no-regrets design policy) and help build the business case for the transformational change the project envisions.”²² The resulting Governance Framework to guide projects “. . . is not a set of prescriptive rules but asks questions for project teams to consider and reflect upon, to be alert to the topics where opportunities or issues may arise, flag areas where additional expertise may be needed, but open about tradeoffs and prompt further inquiry.”²³

The analysis moved from “traditional top-down command-and-control to the networks of State and non-State actors” to include “justice thinking [that] can further improve upon the concept of sustainability in meeting a much broader set of social and environmental needs, not least as our understanding of systems and ecosystems continues to mature.”²⁴ While any project may produce winners and losers, application of the Framework would permit “decisions on

¹⁸ *Idem*

¹⁹ *Idem*

²⁰ *Ibid.*, p. 1-2.

²¹ *Ibid.*, pp. 4-8.

²² *Ibid.* p. 2. This is a British study with respect to water infrastructure, which in the UK has been a private enterprise since 1989.

²³ *Idem*

²⁴ *Ibid.*, p. 3.

competing interests [to] be openly and equitably addressed.”²⁵ This analysis sought “to explore the potential for justice questions at a project level for promoting adoption of better infrastructure interventions” looking at the “three dimensions of justice [which are] distribution, process and recognition . . .”.²⁶ “[A]sking questions around who benefits, who carries the burden and who is consulted (communicated with) could help identify areas of conflict, aid understanding and communication, and make trade-offs explicit.”²⁷

Governance themes for inclusion in the Governance Framework included consideration of:

- “1. The Overarching Governance Regime: What type of governance regime (e.g., market, regulatory, common, hybrid) is in operation? Who are the actors involved in governing? This sets the regime from which forms of governance and actors come into being.
2. The Forms of Governance: What tools do the actors use to govern the system? What is the law of the land relevant to the project and what regulatory framework, if any, is in place? How does the regime influence the informal and formal forms of governance that are implemented?
3. Social Networks: Who is in the project’s network? Are there gaps in the stakeholder groups represented Can the network be drawn upon as a resource . . .? How does the regime influence the informal and formal forms of governance that are implemented?
4. The Resource: How is the resource itself viewed, how are the boundaries of the system defined and how may that affect the policy, rules, social norms and behaviours to be considered?
5. Technology and Rules: Applying new technology to that system, what rules and policies are in play and how do they impact on the project and its business case? How may AREA (anticipate, reflect, engage and act) be used to inform a project’s strategy when considering the impacts of the new technology and where responsibilities may arise?
6. Justice: How (and when . . .) does the project address justice issues ... if at all?
7. Iterative Processes: How should the governance regime be adjusted (refined and enhanced, interpreted, better articulated)? . . . [S]hould the governance regime not form part of the same iterative engineering (design, operation and progressive improvement) process as the

²⁵ *Idem*

²⁶ *Ibid.*, pp. 3-4.

²⁷ *Ibid.*, p. 4.

infrastructure and its operational systems? *** [A]t its most basic level, engineering of the governance regime has the potential to enhance the outcomes from infrastructure system, i.e., deliver their full potential, rather than (potentially unnecessarily or unintentionally) constraining the systems by imperfectly designed, targeted or outdated rules.”²⁸

The results of the application of the Governance Framework design to the study project resulted in its use as a “prompt for potential landscape governance issues to be considered at an early stage by considering risks and the potential impacts on human safety, security (including data), land and the environment”²⁹ It permitted “[e]arly transdisciplinary work with governance questions in mind and highlighted practical issues over regulation and procurement contracts, which were not otherwise observable.”³⁰ The specific areas of consideration that the governance framework prompted included project context and narrative; related networks; design requirements; project strategy; and “[h]ow the current governance regime and landscape supports (or hinders) the case for change.”³¹

The case study argues for the earliest application of a governance framework to a project, ideally “when integrated into the project’s strategy planning so gaps and unanswered questions could be resolved or carried forward,” because the framework “provided an impetus for dialogue across an interdisciplinary team, sensitivity to providing governance information without stifling creativity being an important premise for the project team.”³² It “did not provide answers but flagged areas of enquiry or gaps in knowledge” to be addressed later during project management.³³ A governance framework supports multi-disciplinary efforts by providing “another lens for integrating governance into the project, with tangible proposals that could integrate with the technical and design aspects of the project rather than being distinct from them.”³⁴ This pro-active governance framework approach, which any project owner and/or its design team could deploy, may point the way toward a unified approach to actively considering all users, including the general public, in public project design and execution.

²⁸ *Ibid.*, p. 9.

²⁹ *Ibid.*, p. 10.

³⁰ *Idem*

³¹ *Ibid.*, p. 12.

³² *Idem*

³³ *Idem*

³⁴ *Ibid.*, pp. 12-13.