

## **Improving Infrastructural and Community Resiliency by Optimizing Projects in Neighborhoods**

A Critical Analysis of the Structural Knowledge Transfer Gaps During New York City's  
Capital Budget Planning Processes

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## **Disclaimer**

This report was produced for Town+Gown: NYC (Town+Gown), a city-wide research program resident at the New York City Department of Design and Construction (DDC). In particular, it is intended for Town+Gown's RP3 and Utilidor working groups, in conjunction with University of Toronto's School of Cities as a Multidisciplinary Capstone Design Project. Any views expressed herein are the authors' own and do not necessarily reflect those of the School of Cities.

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## List of Defined Terms

<b>Abbreviation</b>	<b>Definition</b>
CB	Community Board
CBPP	Capital Budget Planning Period
CD	Community District
CDNS	Community District Needs Statement
DC	Disadvantaged Community
NAS	Neighbourhood Activation Study
NYC	New York City
NYCHA	New York City Housing Authority
OMB	Office of Management and Budget

These defined terms will be used throughout the report.



## **Executive Summary**

In collaboration with Town+Gown:NYC, the student team attempted to address the knowledge transfer gaps in New York City's Capital Budget planning process that result in missed opportunities to prioritize needs of disadvantaged communities. We recognize the main problem as the disconnect between governmental agencies implementing capital resource allocations in NYC's disadvantaged communities. Findings from the Neighbourhood Activation Study identified the importance of interagency collaboration. Using state and federal metrics, we produced maps identifying concentrations of disadvantage within NYC neighbourhoods, identifying three Community Districts of relevance: Brooklyn CB4, Bronx CB5, Queens CB3. We then analysed the Community District Needs Statements from the past 5 years, and the subsequent responses from the Office of Management Budget to gain an in-depth understanding of the interagency gaps in collaboration and communication in NYC. The team gained a preliminary understanding of Community Board's respective knowledge and experience through questionnaires. Eighty percent of respondents understood and agreed that their communities were experiencing disadvantage according to the identified definitions. These CBs were interviewed, providing us with a more in-depth qualitative understanding about the capital budget process, and the frustration experienced by district managers.

As a result of our extensive research and collaboration with Community Districts, the team identified that interagency collaboration is essential to resolving the knowledge transfer gap. We produced a prototype for a collaborative online platform that would allow government agencies and Community Districts to communicate throughout the Capital Budget process. This work offers a blueprint to build, develop, distribute, and refine the platform for its eventual implementation across New York City.

## **Introduction**

The capstone project in collaboration with Town+Gown addresses a systemic gap identified in the New York City (NYC) capital budget process. Building on research conducted by the Resilient People, Places and Projects (RP3) working group, premised in part by Studio Gang's Neighbourhood Activation Study (NAS), the following fundamental premise is identified: infrastructural resiliency builds community resiliency (T. Matthews, personal communication, September 29, 2022). The project addresses barriers identified during NYC's annual Capital Budget Planning Period (CBPP).

An important precedent study for this capstone project is Studio Gang's NAS (Studio Gang, 2017). This report discusses crucial ways the city can improve policy engagements with neighbourhoods and residents as the primary stakeholders, however it presumes a high level of communication and collaboration among agencies that is missing in practice. The RP3 working group identified weaknesses in the NAS methodology relating to gaps in communication between agencies and communities:

1. The first knowledge transfer gap is the interagency knowledge transfer gap. Essentially, public agencies are not effectively collaborating with one another and with the Office of Management and Budget (OMB) on closely co-located capital projects during the CBPP.
2. The second gap is the local community knowledge transfer gap, a deficit disempowering community leaders working for change. The Community Boards (CBs) identifying infrastructural defects in their capital needs assessment are not reaching city agencies in time to be accounted for during the CBPP, a chronic problem

which gradually weakens infrastructural resiliency of a given community. (RP3 WG, 2019)<sup>1</sup>

Together, these two gaps constitute the structural planning gap, a structural problem in the CBPP. If unaddressed, the gap results in missed opportunities to optimize community needs expressed in the fiscal year's capital budget. Ultimately, infrastructure needs remain unoptimized and unfulfilled, and communities feel unheard. In order to adequately reflect engagement with community input, the city needs to solve the structural planning gap so that communities feel heard and their needs get met as their desired projects are initiated and completed.

The current CBPP begins in September when the city's CBs determine the districts' capital needs.<sup>2</sup> By October, the Capital District Needs Statements (CDNS) are submitted to OMB. During this time, construction agencies work with OMB on their capital projects in silos. This is the first phase spanning from September to January, when the preliminary budget is released. The second phase begins after the preliminary budget is released and before the executive budget is released in April. Public hearings occur after the preliminary and executive budgets are released.

<b>Simplified Capital Budget Timeline</b>	
<b>September – October</b>	Community Boards hold hearings on the capital needs of its district
<b>October</b>	Community Boards submit Capital District Needs Statements to the OMB
<b>November</b>	Each government agency submits a detailed estimate of its need for capital funds to OMB

<sup>1</sup> To learn more, go here: <https://www.nyc.gov/site/ddc/about/town-gown-working-groups.page>.

<sup>2</sup> To learn more, go here: <https://www.ibo.nyc.ny.us/iboreports/IBOCBG.pdf>

<b>January</b>	OMB issues the Preliminary Budget for the ensuing fiscal year
<b>February – March</b>	Community Boards hold hearings to determine the responsiveness of the proposed budget to their capital needs
<b>March</b>	Borough Presidents issue a set of recommendations to OMB for modifying the capital proposals
<b>April</b>	OMB issues a proposed Executive Capital Budget
<b>May</b>	Borough Presidents submit a response to the proposed Executive Capital Budget
<b>May</b>	City Council holds public hearings on the proposed Executive Capital Budget
<b>June</b>	Final Executive Capital Budget is adopted

The capstone project identifies the structural planning gap as a problem to be solved. In particular, our aim is to focus on the second gap, which is the community knowledge transfer gap. It is understood as the disconnect between governmental agencies and disadvantaged communities within NYC. The NAS methodology highlights interagency communication as an essential process for community and governmental engagement – a process that is currently missing from the budget planning process. Through extensive research, the capstone team has identified communities that are considered disadvantaged under several federal and state metrics in an effort to understand the structural inequalities at play. Based on a group analysis and decision with our clients, these Disadvantaged Communities (DCs) include Bronx CB5, Brooklyn CB4, and Queens CB3. In response to the main problem of trying to solve the community knowledge transfer gap, certain project requirements were identified in discussion with the clients. These include a clear and timely system for disseminating community information and a system to improve collaboration and

transparency, which would work together to optimize projects in neighbourhoods to increase resiliency.

### **Exploration of Design Alternatives**

#### **Alternative 1: Top-down approach by publishing a methodology based on community district needs.**

The first alternative builds off the weaknesses identified in the NAS by the RP3 working group: the missing interagency collaboration. We combine the NAS' insights with locally-sensitive data from our community partners. We demonstrate which neighbourhoods are defined as disadvantaged based on existing state metrics combined with original qualitative data. Town+Gown connected us to community leaders and academics to gain a more nuanced understanding of the operational experiences of people due to the structural planning gap. A platform would be developed to provide a space for agencies to communicate and collaborate on closely located projects. This platform intends to work as a starting point to allow community stakeholders such as residents to engage with the planning process by sufficiently highlighting their concerns to government agencies. Furthermore, agencies can collaborate on geolocated projects for efficiency. With this system in place, the interagency knowledge transfer gap will hopefully be decreased as opportunity for collaboration is increased.

#### **Alternative 2: Complement existing infrastructure to address community needs.**

The second design alternative seeks to utilize a bottom-up approach that builds upon existing community infrastructure. This approach aims to provide opportunities for residents to share their lived experiences and insights about their community's needs through the implementation of a ballot box system that can be set up in public spaces that are frequently

accessed by residents. This alternative would address the class bias existing within the current 311 call-in system for service requests, wherein higher-income communities are more likely to use the system, leading to the needs of disadvantaged communities being neglected. The implementation of a ballot box system would allow for the community's needs to be communicated more explicitly and frequently, subsequently reducing the structural planning gap caused by the disproportionate allocation of budget funds to higher-income neighbourhoods.

However, this alternative requires significant initial costs to install the ballot boxes and allocate fees for personnel to collect and sort through the data collected. The placement of ballot boxes in public spaces would require permission and resources from local authorities, which would require permission and resources from local authorities. This could delay the implementation of the option, potentially exacerbating the existing structural gap rather than reducing it. Similarly, the distribution of ballot boxes within disadvantaged communities has the potential to reinforce the systemic bias existing within the 311 data system, wherein more funds are directed towards wealthier census tracts. This could limit community insight in communities with fewer public spaces or less funding for ballot boxes.

### **Alternative 3: Bottom-up approach using ethnographic research to define disadvantaged communities.**

The team considered a second design alternative that would focus on community stakeholders and residents. This approach would provide the team with valuable insights into the lived and operational experiences and needs of those living in disadvantaged communities, acknowledging the limitations of solely relying on data from government sources. Under this alternative, the data would be sourced from the residents to better identify their needs through

ethnographic research and interviews. This would involve researchers working under a strict definition of ethical guidelines, gaining trust with community members, and then conducting qualitative research. As highly informal and loosely structured, the research would have less of a power dynamic between the residents and the government, as the researcher works between the two groups. This way, we would gain access to a treasure of quantitative and qualitative data: for example, how many times per month are the potholes affecting the residents' quality of life? How do residents subjectively feel about their experiences of community deficit and being categorized as 'disadvantaged' by the state?

**Table 1.**

***Pugh Matrix.***

Criteria	Importance	Alternative 1	Alternative 2	Alternative 3
Efficiency	5	4	5	3
Resources	4	4	3	3
Government & public legitimacy	4	3	4	5
Long-term cost-benefit	5	4	5	5
Time to implement	4	5	3	2
Community trust	4	3	4	5
Implementation cost	5	5	1	1
	Total: /31	28	25	24

## **Chosen Design**

### **Overview**

The chosen design is alternative 1, as it most closely aligned with what the community partners indicated they needed, and was feasible within our capabilities. Beginning with an analysis of existing US definitions of disadvantaged communities, the team produced a set of maps identifying concentrations of disadvantage. The research conducted by the team builds off of the NAS (Studio Gang, 2017). As mentioned earlier, this study presumed a high degree of interagency collaboration which is absent in practice (Studio Gang, 2017). Subsequently, the RP3 working group in collaboration with Town+Gown found confirmed that this collaboration was not occurring, hence the objective is to identify this phenomenon in detail in order to solve it. An analysis of CDNSs and OMB responses allowed the team to gain an understanding of the weaknesses in collaboration and communication at play in the structural knowledge transfer gap. Maps were produced to highlight the discrepancies between capital needs requests and fulfilled projects providing visual and empirical depictions of the structural planning gap. The team also applied a qualitative approach by providing surveys to community leaders, followed by interviews. This approach allowed us to gain a better understanding of the communities' experience of the structural planning gap and the impacts on community resiliency.

We proposed a prototype for an interactive online platform to be utilised by government agencies and Community District (CD) leaders. This platform would address two levels of the structural planning gap: the interagency knowledge transfer gap could be reduced by allowing agencies to communicate and visualize capital projects in close proximity so as to optimize projects; the local community knowledge transfer gap would be addressed by allowing community boards to provide geolocated observations through official



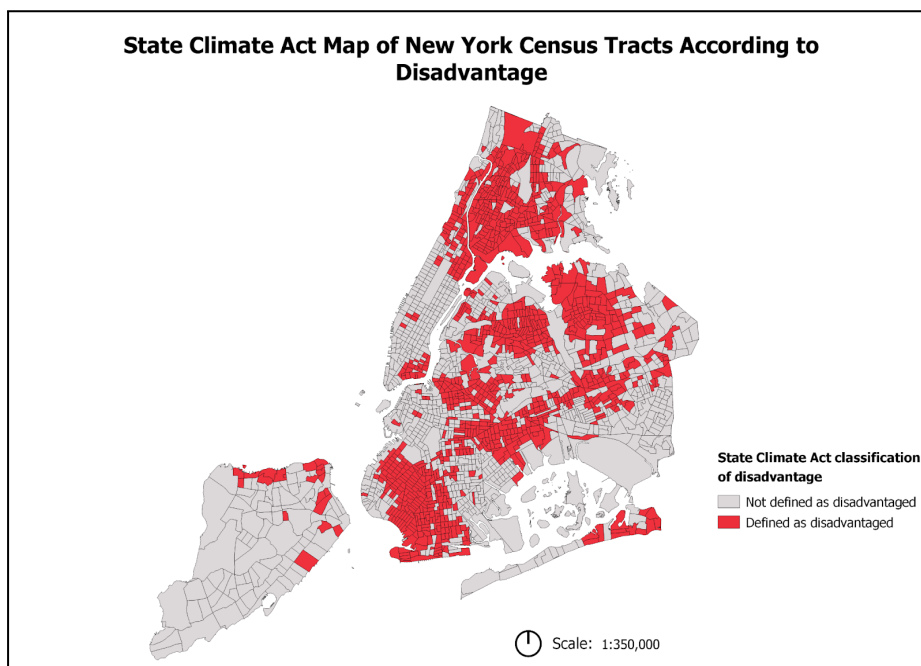
CDNSs during the planning period and share information on a real-time basis. While this platform will serve as a prototype for our team, it will provide insight into how this system can be helpful in transmitting information between agencies and communities. The main goal for this design is to provide the prototype, background research, and framework for further research and implementation to be undertaken at a later time by Town+Gown.

### Establishing Case Studies

In order to establish case study CDs, three state and federal metrics for disadvantage were mapped across NYC. As shown in the following maps, these were the State Climate Act (**figure 1**), the Federal Climate and Economic Justice Index (**figure 2**), and the CDC Social Vulnerability Index (**figure 3**).

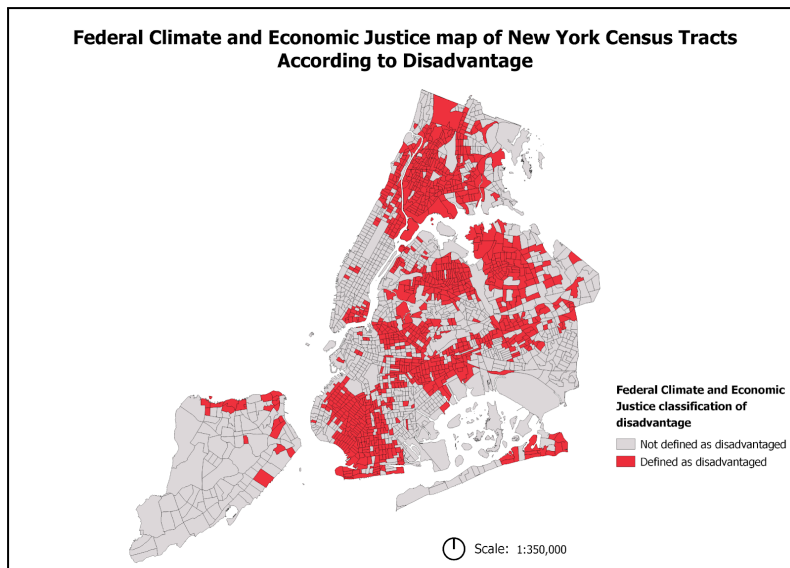
**Figure 1**

*Disadvantage based on State Climate Act metric across NYC*

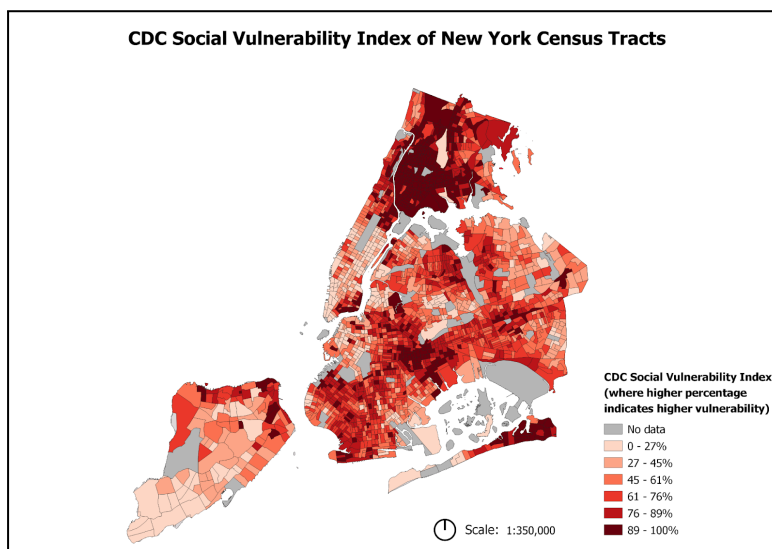


**Figure 2**

*Disadvantage based on Federal Climate and Economic Justice metric across NYC*

**Figure 3**

*Disadvantage based on CDC Social Vulnerability Index metric across NYC*

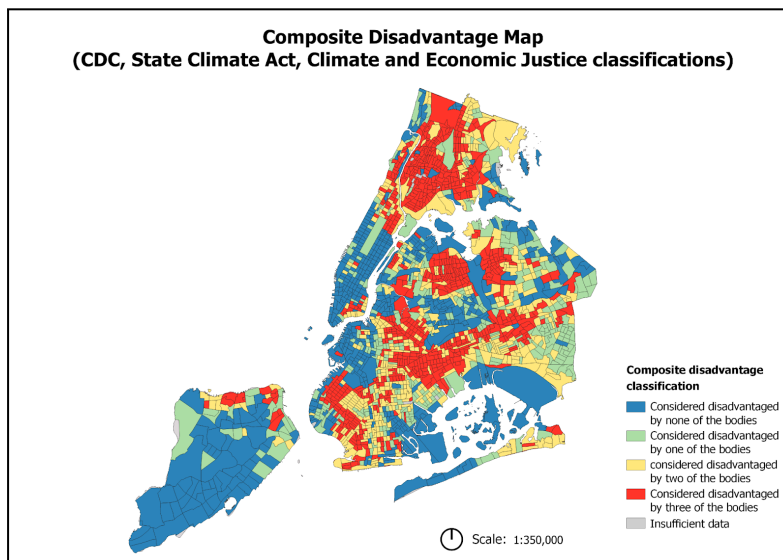


The aim was to determine the areas that are considered disadvantaged under all three categories. This was an important step, as noted in discussion with T+G, because funding often follows from these definitions. As such, the team mapped each metric separately before

combining them into a composite score to identify the areas of NYC that are considered disadvantaged under all three metrics (**figure 4**).

**Figure 4**

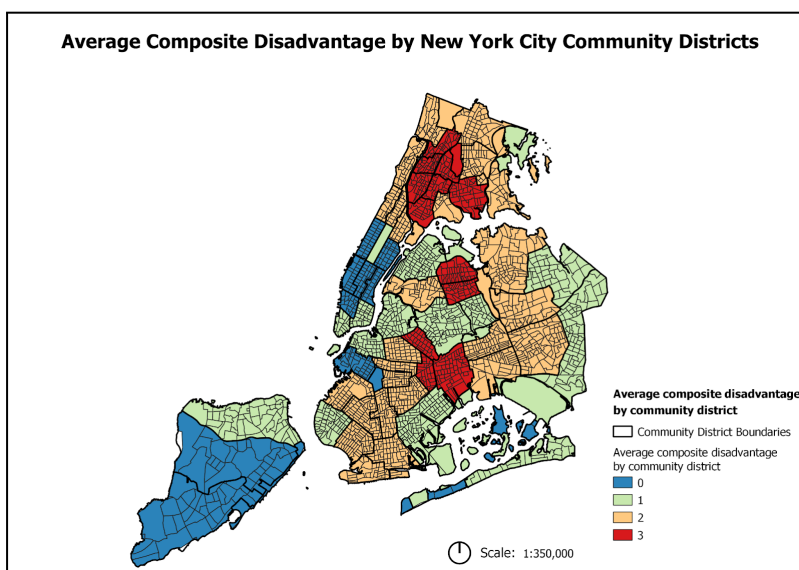
*Composite disadvantage mapped across census tracts of NYC*



As these metrics are given at the census level, an average score was created at the CD level (**figure 5**), which is the lowest disaggregation of capital budget process and analysis.

**Figure 5**

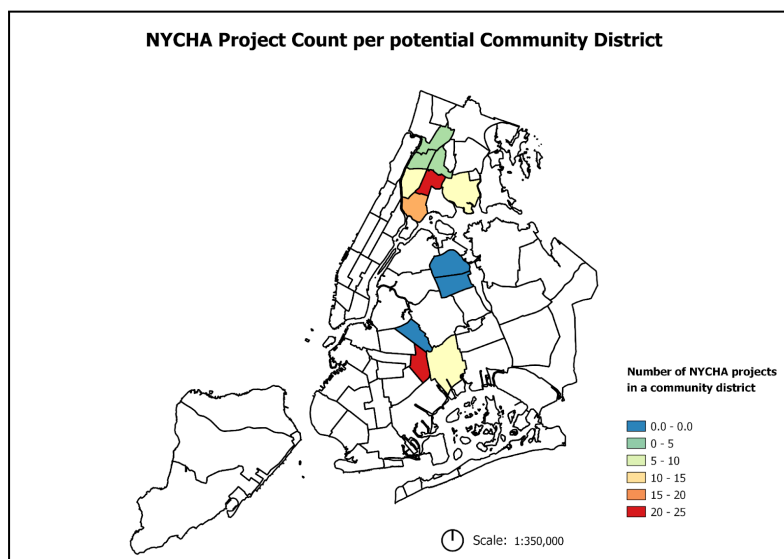
*Composite disadvantage averaged across Community Districts*



Based on this map, several CDs were found to be considered disadvantaged under the three metrics. A further consideration was the number of New York City Housing Authority (NYCHA) developments in each CD. Town+Gown advised us that areas with high concentrations of federally funded NYCHA developments might skew the CDNS analysis since NYCHA developments are not considered “city” projects and capital funding for NYCHA developments takes a different path. The team wanted to focus more so on the capital budget process in disadvantaged communities. Capital budget and NYCHA do not interact, so as such, the team identified and eliminated the CDs with high NYCHA development concentration from the pool of possible case study CDs (**figure 6**).

**Figure 6**

*NYCHA project count per high disadvantage Community District*



From the remaining case study CD candidates, the team determined three case study districts. These were chosen from different boroughs of the city so as to provide an array of data from across NYC. The final three case study districts determined were: Brooklyn CB4, Bronx CB5, and Queens CB3.

## Analysis of Community District Needs Statements

Once the case study CDs had been identified, the team analysed the CDNSs for the past five fiscal years of each case study district to gain an understanding of what types of infrastructural requests are made and what proportion of requests are infrastructural (**table 1**). The team also analyzed the OMB responses to the CDNSs that are submitted during the CBPP to understand how requests are perceived and processed (**table 2**). The results of these analyses showed that infrastructural requests over the period made up 20–30% of total requests for Queens CB3 and Bronx CB5 districts, while they made up 40–50% of total requests for Brooklyn CB4. Through the analysis of OMB responses to CDNSs, we found that a high proportion of responses fell under the following drop-down categories: *needs further study*, *project already under way*, or *bring to city council*. These responses suggested potential areas to investigate with respect to the interagency knowledge transfer gap: there are many redundancies, requests are not always made to the right agencies, and often there is missing information. If there was a system implemented earlier during the capital budget planning process, these responses could be conveyed earlier allowing the CDs to provide additional information during the period for consideration.

**Table 1: Analysis of Infrastructural requests in Community District Needs Statements from past 5 years**

Horizontal Infrastructural Observations from CDNSs				
Fiscal year		Queens 3	Brooklyn 4	Bronx 5
2019	number of total requests	43	17	39
	number of infrastructural requests	11	9	12
	percentage of infrastructural requests	25.60%	53%	30.80%
	Requests	Build new, expand, or repair wastewater treatment or water pollution control facilities (2)	Repair or upgrade subway stations or other transit infrastructure (3)	Improve accessibility of transit infrastructure, by providing elevators, escalators, etc.
		Reconstruct streets	Reconstruct streets (4)	Repair or build new step streets (5)
		Repair or build new step streets	Repair or provide new street lights	Repair or provide new street lights (2)
		Repair or construct new curbs or pedestrian ramps	Improve streetscapes in business districts to attract / encourage commercial activity, e.g., lighting, sidewalk improvements	Rehabilitate bridges
		Repair or construct new medians or bus pads		Install streetscape improvements
		Other transportation infrastructure requests (2)		Provide surveillance cameras
		Repair or provide new street lights		Improve streetscapes in business districts eg. lighting, sidewalk improvements
2020	number of total requests	37	17	41
	number of infrastructural requests	8	8	12
	percentage of infrastructural requests	21.60%	47%	29.30%
	Requests	Investigate odor complaints about a wastewater facility and address/repair or make equipment improvements as needed (2)	Repair or upgrade subway stations or other transit infrastructure (2)	Improve accessibility of transit infrastructure, by providing elevators, escalators, etc.
		Reconstruct streets	Reconstruct streets (4)	Repair or build new step streets (5)
		Repair or build new step streets	Repair or provide new street lights	Repair or provide new street lights (4)
		Repair or construct new curbs or pedestrian ramps	Make infrastructure investments that will support growth in local business districts	Rehabilitate bridges
		Repair or construct new medians or bus pads		Install streetscape improvements
		Inspect sanitary sewer on specific street segment and repair or replace as needed		
		Inspect storm sewer on specific street segment and service, repair or replace as needed		
2021	number of total requests	37	18	41
	number of infrastructural requests	8	8	12
	percentage of infrastructural requests	21.60%	44.40%	29.30%
	Requests	Investigate odor complaints about a wastewater facility and address/repair or make equipment improvements as needed (2)	Reconstruct streets (4)	Improve accessibility of transit infrastructure, by providing elevators, escalators, etc.
		Repair or build new step streets	Repair or provide new street lights	Repair or build new step streets (5)
		Repair or construct new curbs or pedestrian ramps	Repair or upgrade subway stations or other transit infrastructure (2)	Repair or provide new street lights (4)
		Repair or construct new medians or bus pads	Make infrastructure investments that will support growth in local business districts	Rehabilitate bridges
		Repair or provide new street lights		Install streetscape improvements
		Inspect sanitary sewer on specific street segment and repair or replace as needed		
		Reconstruct streets		
2022	number of total requests	37	18	41
	number of infrastructural requests	9	8	12
	percentage of infrastructural requests	24.30%	44.40%	29.30%
	Requests	Other transportation infrastructure requests (5)	Reconstruct streets (4)	Improve accessibility of transit infrastructure, by providing elevators, escalators, etc.
		Repair or build new step streets	Repair or provide new street lights	Repair or build new step streets (5)
		Repair or construct new curbs or pedestrian ramps	Make infrastructure investments that will support growth in local business districts	Repair or provide new street lights (4)
		Repair or provide new street lights	Repair or upgrade subway stations or other transit infrastructure (2)	Rehabilitate bridges
		Reconstruct streets		Install streetscape improvements
2023	number of total requests	44	18	41
	number of infrastructural requests	9	8	12
	percentage of infrastructural requests	20.50%	44.40%	29.30%
	Requests	Other transportation infrastructure requests (5)	Reconstruct streets (4)	Improve accessibility of transit infrastructure, by providing elevators, escalators, etc.
		Repair or build new step streets	Repair or provide new street lights	Repair or build new step streets (5)
		Repair or provide new street lights	Invest in infrastructure that will support growth in commercial business districts	Repair or provide new street lights (4)
		Repair or construct new curbs or pedestrian ramps	Repair or upgrade subway stations or other transit infrastructure (2)	Rehabilitate bridges
		Reconstruct streets		Install streetscape improvements

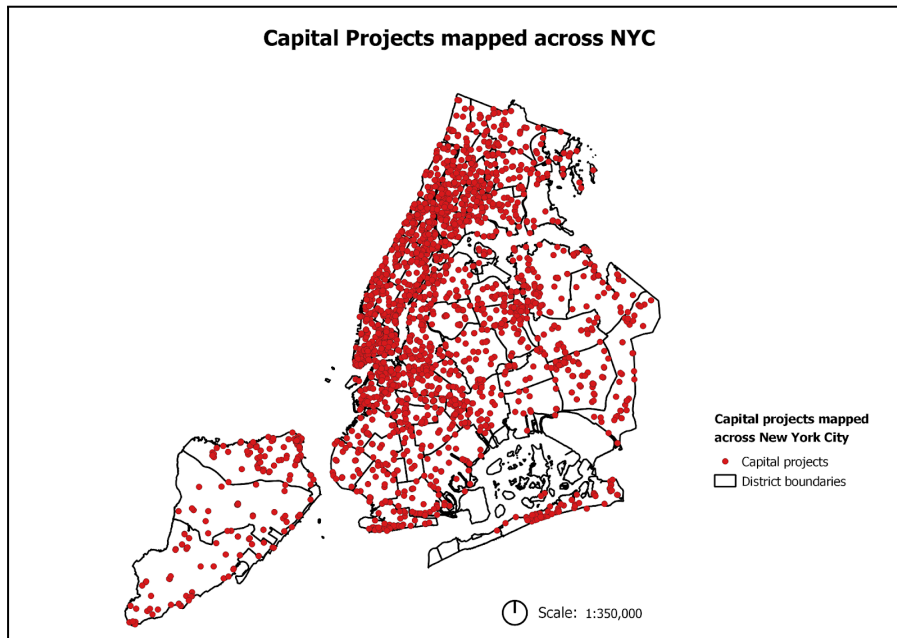
**Table 2: Analysis of OMB responses to Community District Needs statements from past 5 years**

OMB Responses Register for all requests						
Fiscal Year	Queens 3	Percent of total	Brooklyn 4	Percent of total	Bronx 5	Percent of total
2019	Project in process/planned or already completed (A)	23.30%	Project in process/planned or already completed (A)	5.90%	Project in process/planned or already completed (A)	10.30%
	further information required/contact responsible agency (B)	32.60%	further information required/contact responsible agency (B)	47%	further information required/contact responsible agency (B)	33.30%
	agency will try to accommodate within resources (C)	20.90%	agency will try to accommodate within resources (C)	29.40%	agency will try to accommodate within resources (C)	5.10%
	no proposal submitted (D)	4.60%	no proposal submitted (D)	0%	no proposal submitted (D)	5.10%
	bring to city council (E)	4.60%	bring to city council (E)	5.90%	bring to city council (E)	12.80%
	not recommended for further funding/uncertainty due to fiscal restraints (F)	7.00%	not recommended for further funding/uncertainty due to fiscal restraints(F)	11.80%	not recommended for further funding/uncertainty due to fiscal restraints(F)	30.80%
	not NYC responsibility (G)	7.00%	not NYC responsibility (G)	0%	not NYC responsibility (G)	0%
	Not a budget request (H)	0%	Not a budget request (H)	0%	Not a budget request (H)	2.60%
2020	Project in process/planned or already completed (A)	18.90%	Project in process/planned or already completed (A)	23.50%	Project in process/planned or already completed (A)	17.10%
	further information required/contact responsible agency (B)	16.20%	further information required/contact responsible agency (B)	41.20%	further information required/contact responsible agency (B)	22%
	agency will try to accommodate within resources (C)	21.60%	agency will try to accommodate within resources (C)	17.60%	agency will try to accommodate within resources (C)	4.90%
	no proposal submitted (D)	0%	no proposal submitted (D)	0%	no proposal submitted (D)	0%
	bring to city council (E)	32.50%	bring to city council (E)	11.80%	bring to city council (E)	41.50%
	not recommended for further funding/uncertainty due to fiscal restraints (F)	0%	not recommended for further funding/uncertainty due to fiscal restraints(F)	5.90%	not recommended for further funding/uncertainty due to fiscal restraints(F)	12.20%
	not NYC responsibility (G)	5.40%	not NYC responsibility (G)	0%	not NYC responsibility (G)	0%
	Not a budget request (H)	5.40%	Not a budget request (H)	0%	Not a budget request (H)	2.40%
2021	Project in process/planned or already completed (A)	21.60%	Project in process/planned or already completed (A)	22.20%	Project in process/planned or already completed (A)	24.40%
	further information required/contact responsible agency (B)	32.40%	further information required/contact responsible agency (B)	38.90%	further information required/contact responsible agency (B)	14.60%
	agency will try to accommodate within resources (C)	27%	agency will try to accommodate within resources (C)	16.70%	agency will try to accommodate within resources (C)	14.60%
	no proposal submitted (D)	0%	no proposal submitted (D)	0%	no proposal submitted (D)	0%
	bring to city council (E)	16.20%	bring to city council (E)	16.70%	bring to city council (E)	26.80%
	not recommended for further funding/uncertainty due to fiscal restraints (F)	2.70%	not recommended for further funding/uncertainty due to fiscal restraints(F)	5.50%	not recommended for further funding/uncertainty due to fiscal restraints(F)	17.10%
	not NYC responsibility (G)	0%	not NYC responsibility (G)	0%	not NYC responsibility (G)	0%
	Not a budget request (H)	0%	Not a budget request (H)	0%	Not a budget request (H)	2.40%
2022	Project in process/planned or already completed (A)	16.20%	Project in process/planned or already completed (A)	22.20%	Project in process/planned or already completed (A)	19.50%
	further information required/contact responsible agency (B)	24.30%	further information required/contact responsible agency (B)	27.80%	further information required/contact responsible agency (B)	22%
	agency will try to accommodate within resources (C)	16.20%	agency will try to accommodate within resources (C)	22.20%	agency will try to accommodate within resources (C)	7.30%
	no proposal submitted (D)	0%	no proposal submitted (D)	0%	no proposal submitted (D)	0%
	bring to city council (E)	40.50%	bring to city council (E)	16.70%	bring to city council (E)	39%
	not recommended for further funding/uncertainty due to fiscal restraints (F)	0%	not recommended for further funding/uncertainty due to fiscal restraints(F)	11.10%	not recommended for further funding/uncertainty due to fiscal restraints(F)	12.20%
	not NYC responsibility (G)	2.70%	not NYC responsibility (G)	0%	not NYC responsibility (G)	0%
	Not a budget request (H)	0%	Not a budget request (H)	0%	Not a budget request (H)	0%
2023	Project in process/planned or already completed (A)	9.10%	Project in process/planned or already completed (A)	16.70%	Project in process/planned or already completed (A)	14.60%
	further information required/contact responsible agency (B)	27.30%	further information required/contact responsible agency (B)	38.90%	further information required/contact responsible agency (B)	39%
	agency will try to accommodate within resources (C)	11.40%	agency will try to accommodate within resources (C)	11.10%	agency will try to accommodate within resources (C)	0%
	no proposal submitted (D)	0%	no proposal submitted (D)	0%	no proposal submitted (D)	0%
	bring to city council (E)	47.70%	bring to city council (E)	16.70%	bring to city council (E)	31.70%
	not recommended for further funding/uncertainty due to fiscal restraints (F)	0%	not recommended for further funding/uncertainty due to fiscal restraints(F)	16.70%	not recommended for further funding/uncertainty due to fiscal restraints(F)	14.60%
	not NYC responsibility (G)	4.50%	not NYC responsibility (G)	0%	not NYC responsibility (G)	0%
	Not a budget request (H)	0%	Not a budget request (H)	0%	Not a budget request (H)	0%

Furthermore, the capital projects from the past 10 years were mapped across NYC (**figure 7**).

**Figure 7**

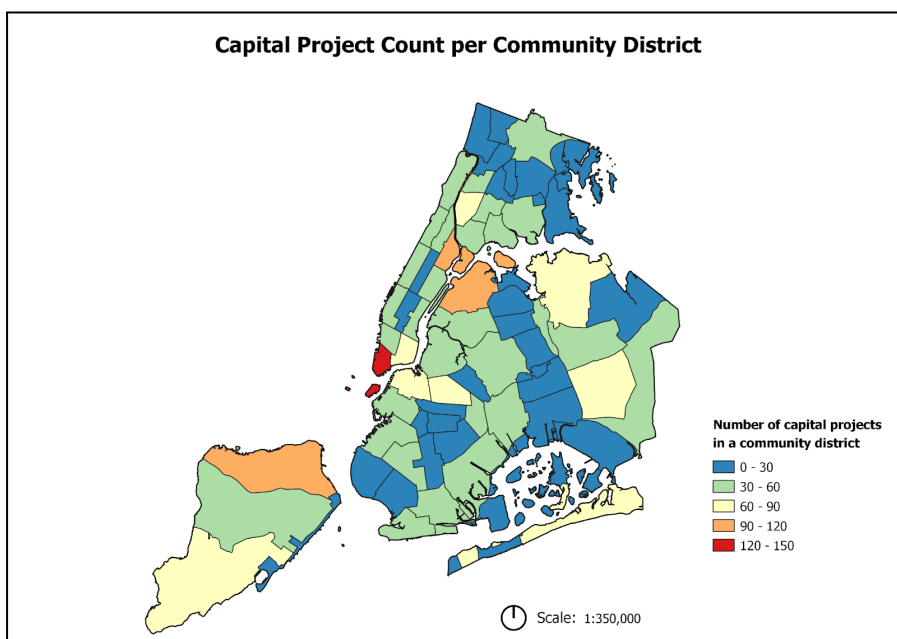
*Map of Capital projects from the past 10 years across NYC.*



From this data, a further map of the number of capital projects per CD was created (**figure 8**).

**Figure 8**

*Map of Capital project count per Community District.*





A comparison of the capital projects per CD with the level of disadvantage of each CD (**figure 4**) shows a discrepancy in the number of capital projects undertaken in each CD. Fewer capital projects are undertaken in the most disadvantaged CDs. This highlights the structural planning gap demonstrating the lack of capital input into more disadvantaged areas. Relating to the premise that infrastructural resiliency builds community resiliency, the most disadvantaged communities are being routinely underserved and neglected, creating more fragile communities.

## **Survey and Interview Analysis**

### ***Surveys***

Based on the CDNS analyses above, the team created a questionnaire assessing different aspects of the structural planning gap, with the aim of acquiring a preliminary understanding of CB knowledge and operational experience. The analysis of the CDNSs suggested areas to focus the survey on. The categories in the survey included Disadvantaged Community, Infrastructural Resiliency and Community Resiliency, Aging Subsurface Infrastructure, Neighborhood Activation Study (NAS), and Capital Process in the Capital Budget. We received responses from five Community Districts. Unfortunately, one of the case study neighbourhoods (CB3 Queens) was unable to participate. As an alternative route, one of our team members attended the March 16, 2024 CB3 meeting and found that although they had difficulties with staff shortage, they exhibited concern about the needs and demands of their community members.

Based on the survey responses we received (**Appendix A**), we conducted an analysis and found many similar responses and experiences from each CB. We found that most respondents that participated in the survey clearly understood and recognized that their

community was experiencing disadvantage (80% of respondents), and they believed that these problems were related to social, economic, and climate issues that deeply affected their community. Most responses suggested that it is mainly funding issues and delays in planning that are deeply affecting the advancement of capital projects.

Secondly, we observed that some CBs were not clear with certain terminologies, public capital projects, and policies. This points to an issue relating to the knowledge transfer gaps, where the team believes that more effective communication and information exchange between agencies and communities may require additional training at the CB level on capital budget and infrastructural issues to ensure that community members can clearly translate their infrastructure deficiency observations so they appear less like complaints and more like technical observations. This will also allow the construction agencies to know more about real infrastructural deficiency needs of each CD.

Finally, the CD respondents are also looking forward to possible planning, transformation, and assistance from agencies for the community in the future. These expectations included improved infrastructure, greater access to government services, and increased community engagement in decision-making processes. From the above collection and analysis, we can see that the five respondents are consistent in their answers to most questions. As a crucial limitation, our sample size is very small and cannot accurately predict the situation of other CBs. However, we believed that the information obtained from these responses was significant for our follow-up interviews and the whole project, as the prototype would be implemented with a small group of participating districts for testing.

All of the above analysis represents our observations and summary based on several questions in the survey. Our research and analysis revealed that CB responses to 80%-90% of the questions were highly similar, or the same. From this, we can infer that these highly

similar answers reflect the CBs' similar experiences with the agencies, budget processes, and perceptions of their own community. They experience problems existing in the community and are strongly aware of the gap in communication and cooperation with agencies.

### ***Interviews***

Our team also found it important to acquire further data and information about the operational experiences of community participants in the capital budget process from those who are directly involved in it, or who have more professional or academic experience related to it. As such, after the surveys, we set up follow-up interviews with two CD managers. Due to time and schedule constraints, we were unable to interview all case study CDs, but the interviewees were highly knowledgeable about the CBPP and systemic disadvantage in communities. The interviews were conducted with a district manager from CB14 Brooklyn (**Appendix B**) and a district manager from CB4 Brooklyn (**Appendix C**). The interview responses provided us with a more in-depth qualitative understanding about the capital budget planning process, including weaknesses, and the frustrations experienced by district managers. Some themes were identified. Broadly, the interviews provided us with insights into the existing processes, as well as areas of challenge that our proposed solution could address, and obstacles that are long-standing issues that can not be addressed through our proposed solution alone.

### ***Insights***

The interviews provided the team with several helpful insights into the operational experience of the CBPP, as well as the way disadvantage is identified. These insights informed the team's final proposed design. Firstly, the team gathered an understanding of disadvantage at the hyper local level. It was understood that most people living in disadvantaged conditions or in disadvantaged communities are often not allotted the luxury to even consider this fact,

and to get involved in public policy. Many of the people experiencing extreme disadvantages are working several jobs simply to survive. Therefore, much of the process is lacking input from the key demographic who are experiencing the most disadvantage. The interviews also helped elucidate the scale of CDs. These areas cover large areas representing fifty to two hundred thousand people on average. This is a challenging scale particularly in identifying underserved communities as the areas are so large. Populations at this scale are non-homogenous with different areas experiencing different levels of disadvantage. Another insight was understanding the current speed of government procedures. One interviewee spoke about the repairs from Superstorm Sandy that occurred 10 years ago. Not a single infrastructure project has been completed in Edgemere, Queens since then, even though market rate housing is frequently built in the same area. This elucidated the team on the realities of the knowledge transfer gap, and the lack of attunement between community needs and government provisions. Another interviewee also enlightened the team on an effort on the part of DCP and OMB from around 6 years ago to create a new, streamlined and more efficient DNS-Budget Priorities platform. The idea was to create a standardised form making it easier to communicate needs to the correct agencies. However, the interviewee expressed frustration with the agency responses, and the use of drop-down menus in this new system. In fact, in her opinion, the drop-down responses made agency responses even less helpful, and decreased OMB responsiveness. Furthermore, certain CBs have seen their CDNS items gradually reflected in the capital budget whereas others have not. This points to a lack of prioritisation on the part of OMB, as well as a systematic arbitrariness that continues to lead to inequalities in addressing disadvantage.

These insights helped us shape our proposed platform. Importantly, we wanted to incorporate a data visualization aspect through the overlaying of maps and proposed project locations in

order to make it easier for agencies to survey these large CDs, and optimize co-located projects. Additionally, we understood the frustrations with drop-down menus and would remove these from our proposed platform.

### **Challenges**

The interviews also helped the team identify certain challenges that are faced within the current planning process. These are identified as problems that could be addressed through our proposed platform. Firstly, both interviewees referred to the fact that any projects involving two or more agencies are extremely difficult to implement, with a lack of coordination and high costs. Our proposed platform would create a more efficient system for agencies to coordinate among themselves and optimize projects in the same areas. One interviewee also pointed out that government agencies often avoid collaborating because it typically slows down work efforts. They also alluded to the fact that ageing infrastructure in the city is addressed “piecemeal” and “in silos” with insufficient agency coordination. For instance, their CB in particular experiences significant and chronic flooding. In the last few years, a sidewalk improvement project was undertaken on a major street where flooding has been occurring. However, the Department of Environmental Protection (DEP) did not use this opportunity to simultaneously address flooding issues. Through our proposed platform, these two projects could have been optimized by providing a platform for the agencies to visualize the proximity of the projects.

This interviewee also described the government as reactive rather than proactive, referencing a significant issue in the time taken by agencies to respond to community needs. Another issue that was raised was the insincerity on the part of government agencies. They stated that often government agencies come to communities with projects, rather than responding to community needs. The agency responses in the new DNS-Budget Priorities

platform are also thought to be more insincere due to the overuse of drop-down menus. Responses are no longer crafted with human input and advice, but rather standardised answers are provided which offer little to no insight on how to advance projects further. Our platform would try to address these challenges particularly by creating a space that makes it easier for agencies to collaborate with one another as well as with the CDs. The platform would make it easy to visualise colocated projects, and optimize them in this way.

### **Obstacles**

Finally, the interviews helped the team identify obstacles in the current planning process. These are systemic obstacles, and the designed platform may not be able to solve all obstacles. In particular, as was brought up by an interviewee, their community demonstrates chronic social and economic disinvestment which has been worsened by environmental challenges over the years. As the community has experienced the regular cycle of new mayors and government representatives, priorities have changed, and through the governmental process timeline, little to no real changes have been made. Another example from another CB is a police precinct that has been on the CDNS for over 30 years. Capital projects require political willpower to be advanced, and often it is hard to achieve these projects within the short time period that government officials remain in office. As such, major projects that span longer than the short government cycle are hard to implement. This is a chronic and systemic issue that is very difficult to tackle. Little can be done about this through our platform alone.

### **Platform and Methodology**

As interagency collaboration was identified as something that is significantly lacking in current practice, the team produced a prototype for a geospatial, interactive, and collaborative online platform that would allow government agencies and CDs to share knowledge of closely co-located projects under construction during the CBPP. This would allow for the optimization of projects in close proximity. Due to the constraint of our skills in software management, the team was only able to produce a prototype and a description of what an end product software could look like.

The platform would allow CBs to upload and geolocalise the infrastructural observations from their CDNSs on a platform available to the CDs, construction agencies, as well as OMB. The interactive platform would have several advantages over the current system:

1. The geo-localisation of the projects on a shared platform would allow for agencies and community boards to visually identify projects in close proximity that could be optimised together. The tool would include two layers, one specifically for government agency project visualization, and one for community districts. These two layers could be visualised individually, or collapsed together in order to identify overlapping areas. This, for example, could solve the problem currently encountered where roads are opened up several times in close time proximity for different projects.
2. The platform would provide all of the information already included in the CDNSs in one place with filters so that only the project requests directed to specific agencies could be displayed. With this functionality, agencies collaborating with each other and OMB can find optimization opportunities

and then view them with CDNS identified observations to decipher the optimization.

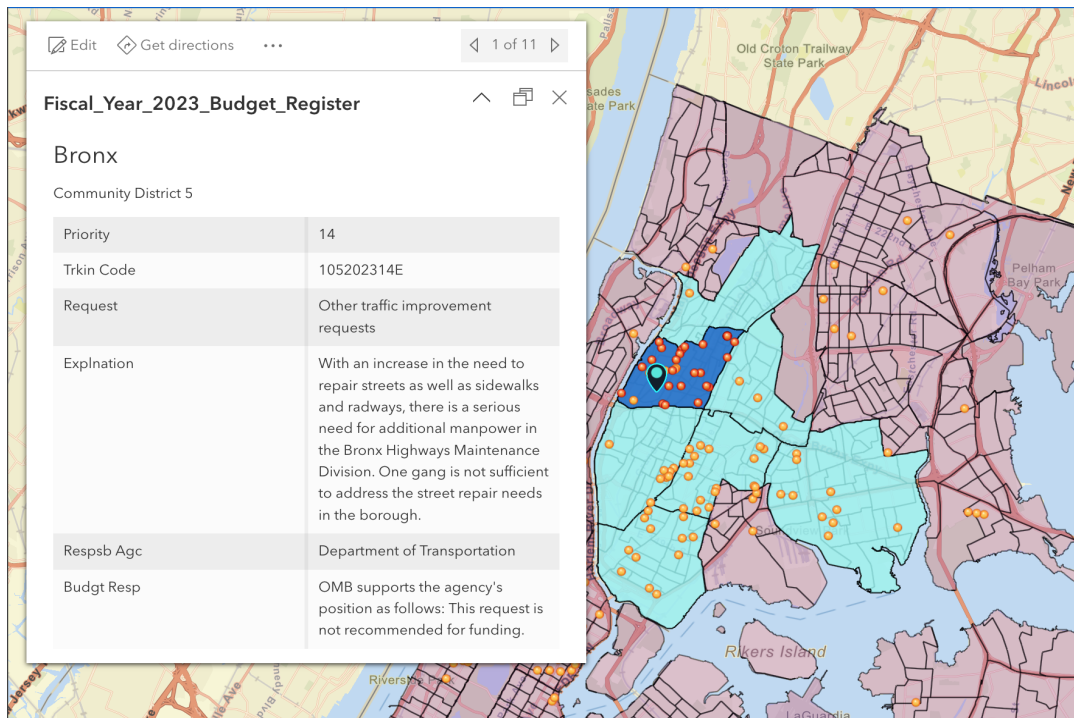
3. The platform would allow agencies to evaluate CDNSs earlier and obtain additional information from CDs, if necessary. Since drop-down menus were identified to be detrimental to the agency responses, these should be removed, and the area for response would permit agencies to provide a written response with guidance for moving forward during the CBPP.
4. The area for response under each project request would allow for community boards and agencies to communicate with each other for clarification throughout the year rather than ending during the period. This could accelerate the CDNS process for projects becoming part of the capital budget aligned with agency needs

The team produced the following images of our prototype to show how this interactive, collaborative online platform would allow government agencies and CDs to collaborate with each other during the CBPP allowing for the optimization of co-located projects.

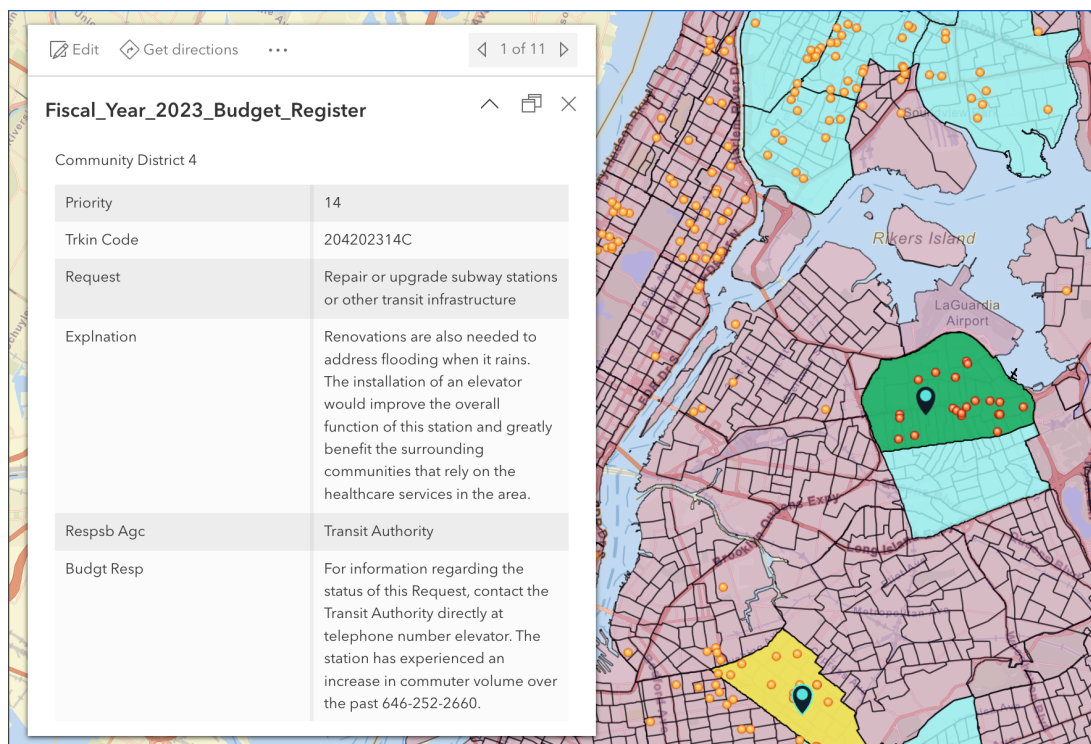


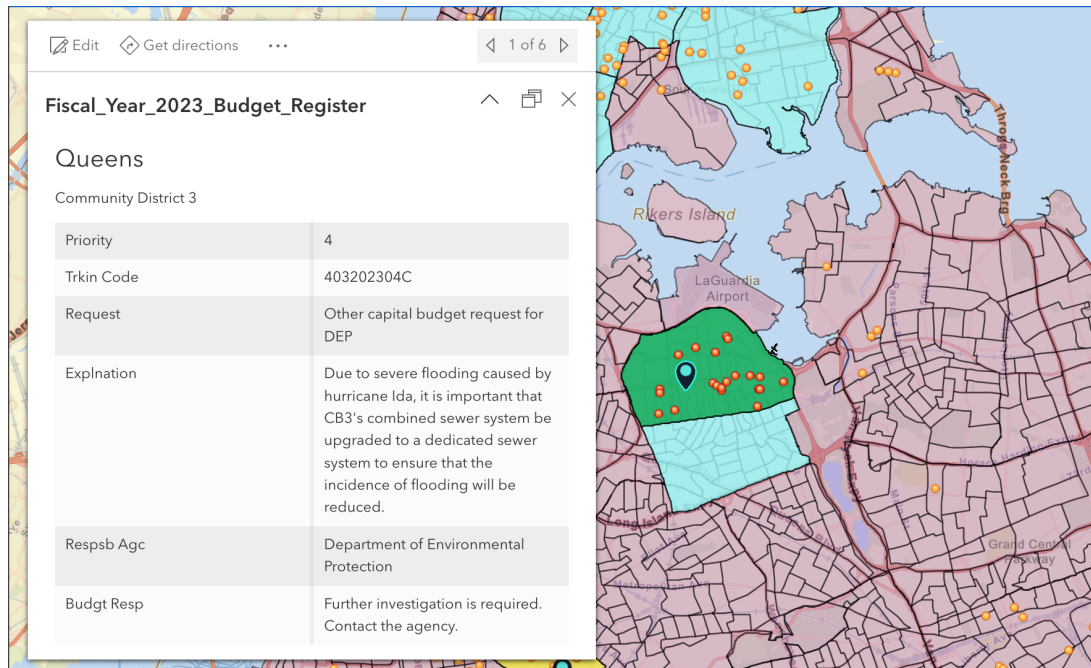


**Figure 11** *Request Information Table for Bronx 5*



**Figure 12** *Request Information Table for Brooklyn 4*



**Figure 12** Request Information Table for Queens 3

Our team recommended using the ArcGIS platform as the best software to connect community districts and agencies on actual projects during the CBPP. This platform is simple, yet enhances communication among various groups in the city, especially between the CDs and the agencies, to facilitate communication and optimization during the CBPP, with potential for project efficiency post adoption. To build our platform, we first created a layer using QGIS, within which we developed a location coordinate that contains an information frame. This information frame consists of different data according to CDNSs including all relevant project information and requests. After building the layers and frames in QGIS, we imported the entire map into ArcGIS Online, where we could enter specific data and information into each text box. Finally, this information would become pop-up boxes that would appear connected to each capital project. Users could easily click on each box to access request information for the CD. As shown in the examples we provided, we initially focused on building these pop-ups for our case study neighbourhoods, which were CB5 in the

Bronx, CB4 in Brooklyn, and CB3 in Queens. Once implemented and used, there is potential to expand the platform's functionality.

### **Ways Forward**

As an outcome of the capstone project, the team has created a prototype and description of a collaborative platform that could be implemented to optimise the capital projects during the CBPP by solving the interagency and community knowledge transfer gaps. As our team had software restrictions as well as time constraints, the outcome of this project ends with our research and prototype. Moving forward, a fully fleshed out platform should be constructed, implemented and tested with the capital agencies and a small test group of CDs as part of user research for testing the initial design. From here, feedback should be gathered from the CBs as well as from the agencies and OMB. The platform can be revised according to testing results until it is functioning as anticipated and can be fully deployed to include all CDs. Additionally, the platform should be periodically assessed for the purpose of adjusting it to current requirements.

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Neighborhood activation study.

Studio Gang (2017). *Neighborhood activation study: Crime prevention through community design and problem-solving*. NYC Mayor's Office of Criminal Justice.

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

## Appendix A

### Survey Results

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
<b>Based on the above definition, do you see experiences of disadvantage at the local level?</b>	This question is too broad. Please be more specific.	Yes	Yes	Yes	Yes
<b>In your experience, what do Community Board members think about disadvantage at the hyper-local level?</b>	I'm only able to speak to the work of my CB. As a disenfranchised community that experienced disinvestment since the 70s, the board has advocated for the most vulnerable and disadvantaged.	community boards cover large areas which include multiple neighborhoods which are not homogenous... It is a challenge to distinguish the underserved areas and make a separate needs assessment	I can't speak for all members. Generally disadvantage is viewed at the hyper-local level through several housing issues, environment, access to open space, schools, health and city agency specific issues and budget priorities.	They advocate for increased programs for these areas.	Siting of unattractive facilities.

<b>What about Community District residents you come into contact with – what has been your impression of how they think of disadvantage at the hyper-local level?</b>	Folks are generally too busy dealing with the impact of disadvantage to have much time to think about it theoretically.	I take every opportunity to work with non-profit community organizations which really have the pulse of their constituents... CDs represent about 50,000-200,000 people in average. I do not think that there can be a hyper-local-level thinking.	Because Community Boards are the most local level of government, and the liaison between our community and all city agencies, residents and other community members think of disadvantage varyingly depending on the issue at hand.	Yes, they advocate for disadvantaged areas, too.	Siting of unattractive facilities.
<b>Do you think there is a connection between infrastructural resiliency and community resiliency?</b>	It's difficult to have or sustain community without infrastructural resiliency.	Yes	Yes	Yes	Yes
<b>How has the inability to expedite infrastructural projects rapidly affected the resilience of the community?</b>	Bushwick has been through so much in the past 50 year. It's an incredibly resilient community however, much of those hardships are specifically linked to social and economic disinvestment. Environmental challenges will only further exacerbate those issues.	Superstorm Sandy was 10 years ago. there is yet to be one infrastructure project completed in Edgemere, Queens but there are numerous market rate housing projects underway. The City is working in siloes.	There is a relationship between infrastructure projects and resilience but I'm not sure that the resilience of the community has been rapidly affected. I'd use the words persistently, or ongoingly, or insidiously...	Projects and programs in all sectors are delayed.	Sense of neglect among residents.



<b>To what extent do you think Community Board members see the connection between infrastructural and community resiliency?</b>	It depends on the board member. We have a diverse board with different backgrounds and experience.	the City Charter gives Community Boards lots of responsibility and environmental stewardship... Given the limited time of the volunteering CB members and lack of knowhow on the subject, there is no holistic understanding/approach to social and technical resilience combined	It varies along a 50 member board but those who do, do so thoughtfully.	Hard to tell	It is opaque to the community. A sense of overall neglect.
<b>What types of horizontal infrastructural resiliency projects are the most difficult to implement? What are some barriers to that type of infrastructural development?</b>	This is a question for the agencies (DDC, DEP, DOT) responsible for project development and coordination.	what is a horizontal resiliency project?	I am unfamiliar with horizontal infrastructural resiliency projects and ill-equipped to answer this one.	Any project that involves two or more agencies are very difficult to build. There is no coordination. And they usually cost more money.	Capital intensive projects. Sense that elected officials are not quick to respond to the community.



<p><b>How do you feel aging infrastructure, especially subsurface utility infrastructure, affects your community?</b></p>	<p>The reality of aging infrastructure is that it no longer serves its intended purpose. Bushwick, a landlocked neighborhood, now experiences flooding in areas of lower elevation during storms regardless of their severity. The change in climate has led to higher levels of rainfall that the city's infrastructure was not designed to accommodate at the time.</p>	<p>Most infrastructure in NYC is upward of 100 years old and is inadequate. the government is only (at best) responsive and not proactive</p>	<p>I feel that they don't get enough attention or funding and that they are addressed piecemeal and in silos. There is not enough interagency coordination and very few efforts to shift the paradigm.</p>	<p>The city needs to adopt a budget that manages the needs of the people that live in the communities, instead of building new housing for new people with new infrastructure. Everyone thinks it's important to have affordable housing, but that's not really what's needed. While we need to take care of underground, we need to take care of the existing housing as well.</p>	<p>Ruptures in services, flooding and impediments to transportation.</p>
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<p><b>NYC's Capital Budget includes repairs to subsurface utility infrastructure consisting of the public water mains (DEP), sometimes including surface roadway improvements (DOT). Have there been such projects in your Community District and what are your thoughts on these projects as they relate to your community?</b></p>	<p>The reconstruction of Wyckoff Avenue and water main repair along the same corridor has been delayed since prior to the pandemic due to the proximity in a one block segment to the Wolff Alport Superfund Site.</p>	<p>I work in Brooklyn's Clinton Hill/Bed-Stuy neighborhood and the streets are always being opened up and closed for repairs... it is not efficient and wasting public funds</p>	<p>For years CD14 has brought chronic flooding conditions and roadway capital needs, such as trench repair to the attention of the appropriate agencies and as part of our District Needs Statements and budget priorities. Most recently Church Avenue roadway and sidewalks were improved and included in the improvement was the installation of additional catch basins but during the project DEP would not use the opportunity to address chronic sewer flooding in the area. DEP only adds catch basins when there is a related capital project but they missed the opportunity to add catch basins on Parkside Avenue when DOT installed a projected bike lane. This is unfortunate since Parkside has zero catch basins (because it was originally a park road).</p>	<p>Once again, it's very difficult if there are two or more agencies involved in a project. We have had many of them in many of our neighborhoods. There really needs to be more coordination.</p>	<p>There are complaint-driven repairs, pedestrian safety improvements and the installation of bike lanes at the expense of vehicular traffic lanes.</p>
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<p><b>There are also private utility projects in the roadway (i.e., ConEd, National Grid, Verizon, Spectrum). Have there been any large private utility projects in your Community District? What are your thoughts on those projects as they relate to your community?</b></p>	<p>National Grid completed a portion of the Metropolitan Natural Gas Reliability Project prior to the pandemic. At the time, there wasn't much feedback or any organized opposition from the community.</p>	<p>I am not aware</p>	<p>Yes, these projects are too often not coordinated with one another and there is not enough community notification.</p>	<p>Private utilities, need to be more involved with the communities prior to the actual construction. Many times they are very disruptive, and people don't really know why.</p>	<p>no.</p>
<p><b>Are you aware of the NAS?</b></p>	<p>I am vaguely familiar with it based on previous correspondence with Terri Matthews from the DDC Town + Gown program,</p>	<p>yes</p>	<p>No</p>	<p>No</p>	<p>No</p>

<b>What are your thoughts on the need for interagency collaboration during the capital budget planning process prior to adoption?</b>	Agencies should always communicate in order to streamline projects and maximize efficiency however the need and reality varies.	absolutely necessary	Highly necessary but harder than it seems. Attempts to coordinate are sometimes stymied by conditions found in the preliminary phase of a project that then has a domino effect. Projects cannot always move seamlessly through a calendar year because of various holiday embargos and street events. I think there should be a greater effort but also more transparency and local input at the inception of a project instead of in reaction to fully realized proposal.	Very important	Need to decouple funding from design.
<b>What are your thoughts on city efforts at community engagement as they relate to your community?</b>	Some agencies do a better job than others, although we're grateful for the support of all agency partners.	absolutely necessary but this (community engagement) requires a different skill set and neutrality/objectivity on the part of the City to make just decisions	They are feeble and insincere. Again, agencies like to come to a community with a proposal rather than listening to the community at the inception phase of planning. Agencies such as DOT have even gone so far as to try to skirt community input by forming their own "community advisory committee" of locals who they cherry pick.	The City works for the people. The City does not have to engage the community, they need to listen to the constituency.	Projects are announced and public input solicited too far 'downstream' in a project's development.

<p><b>What barriers do you think community leaders face in informing the citywide capital processes and policy making?</b></p>	<p>First and foremost, knowledge of the process, access to information, time/capacity, and an evolving social infrastructure that's less sustainable than before.</p>	<p>engagement and collaboration is time consuming and most people who live in these underserved communities have multiple jobs to survive... they don't even have the time to come to the table to participate in decision making... academia might be engaged to bridge the gap</p>	<p>A lack of sincere interest by the agencies, timing (democracy is slow), inclusion especially when including various language groups, adapting to the practices of historically disenfranchised groups, and balancing shifting demographics.</p>	<p>Need decision makers to listen to the people.</p>	<p>Access to media and public engagement.</p>
<p><b>With respect to the infrastructural resiliency issues flagged, how did they emerge in your process?</b></p>	<p>All budget requests were made based on the districts greatest needs. Those needs are identified during board meeting discussions, correspondence with the boards office, and general community feedback.</p>	<p>I did not review CDNS for the last 5 years... I cannot make and assessment</p>	<p>Service delivery requests and community input at various committee meetings and public hearings.</p>	<p>The City's does not respond well to CB priorities in the Budget process.</p>	<p>In 2 ways. 1. Through the budgeting process. Infrastructure (and all other needs) are prioritized as a budget item that the Community Board makes a recommendation for.</p>

<b>Generally, what do you think are the biggest difficulties communities face in assessing infrastructural needs?</b>	Not sure why this is framed as the community's responsibility. The city/government is responsible for assessing infrastructural needs, reporting their findings to the community, and the community provides feedback to further inform the study, project, proposal, etc.	lack of Information	Agency transparency, funding and community leaders who serve long enough to see a capital project through, to name some.	Not treated as stakeholders	funding and the relative opaqueness of the process.
<b>Have you seen, over time, any of your CDNS items eventually reflected in the city capital budget?</b>	No	explain CDNS	Yes. Some.	Some	No
<b>What is the average time lag between a CD's initial expression and capital budget authorization?</b>	Unable to say specifically - most capital projects take more than several years from start to finish and the political willpower to move forward.	enough to make it impossible for CD statements do not get included in the City's capital projects planning	I think the average might be skewed by the fact that CB14's acknowledged need for a new precinct house has been pending for 30 years. Umma Park only took about a decade.	Depends on the agency.	10+ years.

<b>What steps were involved?</b>	See answers above		The answer to the Precinct House request is long - it was funded in the 90s but not realized and sent to the back burner ever since. What happened with the Park is that a Councilmember got elected who lived near the park, understood the importance and funded it as soon as she was elected. Note that capital projects in local parks are dependent on city councilmembers and rarely if ever funded directly through DPR's own capital!	No steps	Making a formal recommendation in our District needs statement and the Community Board recommendations.
<b>How might the capital budget planning process be improved with respect to the CDNS mechanism?</b>	It would be great if the agencies participated and provided responses more sincerely. Otherwise, it's an exercise in futility.	coordinate timelines and make the local level statements be reviewed before the City level projects	Meaningful engagement at the agency level might help.	Clarify the process.	Folding our process into the City Council process so there is greater alignment.

<p><b>What resources or mechanisms do you think would help CDs better express capital needs so that OMB and the capital agencies can treat them more effectively?</b></p>	<p>A central staff for Community Boards would be a great start. That team ideally would have at least one person dedicated to providing support around the district needs process, providing easy access to models from boards citywide. There's a real opportunity to buildout support for the process and City Planning has attempted to support the boards, although the best intentions don't always translate into meaningful help. In my experience with City Planning, they are great at listening and providing feedback on our ideas and previously helped format surveys. Recent internal changes at the agency have made the support inconsistent and gives the impression that it's DCP-driven as opposed to something we requested. With limited resources and capacity, we don't have much time to reflect consciously on the theoretical. Some help is better than no help.</p>	<p>?</p>	<p>That's the question! DCP and OMB have been promising this improvement for about the past 6 years when they introduced a new DNS-Budget Priorities platform. Not only did not not improve agency responses, it has become worse and OMB itself was unresponsive to a budget request. Please refer to CB14's Letters of Comment on the Preliminary Budget responses.</p>	<p>Provide better instructions..Hold a zoom to talk to those interested</p>	<p>Coordination with the City Councils' recommendations.</p>
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## Appendix B

### Interview #1

Caitlin Ebsary (CE): In the survey, you responded that subsurface infrastructure is addressed piecemeal and in silos. Can you explain a little bit more about why you think this might be happening and whether there might be a way to address it?

Interviewee 1: “I think the way we experience that is when there’s a street opening permit at the same location time and time again because one utility went down and didn’t coordinate with others to get things done while they were doing their job (whoever the primary “they” is in the scenario). We find that agencies kinda get around that by calling things “emergency work” in order to be able to open it without having to coordinate with other agencies. The other thing that happens a lot of times - I’m thinking specifically about roadbridges here, not because it happens more often with them but because that’s my experience with this scenario - is that sometimes the initial work is exploratory and so it’s just like a maintenance check-up and in that maintenance check-up, other things are discovered and uncovered and so to coordinate all of that sometimes puts the work so far on the back bumper that - to say it never gets done is not quite accurate, but certainly what it feels like. The need for agencies to get their stuff done so they don’t want to coordinate because it slows their process down, and also the lack of insight they have from the get-go.”

CE: In your survey, a lot of your answers alluded to an insincerity on the part of the agencies, do you think there is a way to address this insincerity?

Interviewee 1: “I’m not sure the context in which I alluded to that, but so I’ll speak generally. I think there is - maybe I was thinking of DOT, which DOT might play the villain in a lot of these stories - public input is difficult. You get a lot of static, sometimes it’s nimbyism, sometimes it’s that we’re asking hyper local areas to take an impact for a benefit that’s diffuse, and so the immediate group doesn’t want to bear the brunt. So democracy is hard and it’s slow and it lacks efficiency. I think agencies have this drive to be efficient, which then makes them sometimes sacrifice the equitable. And I try to make the argument all the time that it probably slows down the start of a project to include community input but you make up that time in the end because you’ve already laid the groundwork for the buy-in and when people feel heard, they have a tendency toward supporting the project even when what they said doesn’t become a part of the project. Just knowing it was considered and explained why it wasn’t in there or being a part of a process, I feel like a lot of these projects would end up saving time. I think we’ve had pushback on a number of projects fairly recently just because DOT - in the cases that are in my head right now - didn’t go about getting community input at the inception of the plan”

CE: What is the main driver for agencies to implement projects right now?

Interviewee 1: “Well, I mean there is a part of the process that does work and we sometimes forget it because that part is so slow. Something that was in the 10 year capital plan 10 years ago might now be coming to fruition, but all of the elected officials that were behind it in the beginning are term-limited out and they’re not there anymore. So pulling the thread through gets a little bit lost. I do want to say there are some things that do work, things do get built, things do get repaired, things do get improved.

But I'll say where I find it falling off more often than it used to, I would bring Parks up as the best example: when we make a request to rehabilitate a park or playground in this district, unfailingly, the response in that budget request will be "talk to your elected officials". So we're supposed to get our elected officials to fund capital projects and parks, that again won't be complete while they're still in office to cut the ribbon, and it's just not sustainable. It's in my budget comment that I just sent to the city yesterday, that is not a sustainable way to fund capital projects, but it's getting worse, because we've been asking for trench restoration projects in this district and city wide for at least 7 years, and that's just where the street is sinking because projects that were done in the 80s - there were a lot of roadbed projects done - but they were all backfilled with a substandard material so now they're just sinking. And there's not a capital budget in place to report trenches, so it gets reported as a DOT road condition, and then DOT puts asphalt on it and that's dumb because when something is sinking and you put something heavy on it, it just sinks more. So we've been asking for trench restoration funding, finally about 5 years ago DOT said "ok we have 60 million dollars we're gonna start going after these things" but 60 million dollars isn't a lot of money given how many projects needed to be done, more of them are in Queens than in Brooklyn, so we didn't see any of that 60 million dollars. Last year when I was like "hey, what about trench restoration projects", DOT said ask your elected officials, and the response to that was "are you crazy?" That is not how we are going to get these funded, I wouldn't even dare ask an elected official, it's not an appropriate way to get it funded. So that's scary, that's the trend, that's worrisome."

CE: In your survey, you mentioned a Church Avenue project, and a missed opportunity for stacking projects, could you tell me a little bit more about that?

Interviewee 1: "So Church avenue, especially toward Coney island avenue, so that would be the Western part of Church avenue - I'm going to name 2 streets. At Church avenue at Stratford and Church avenue and East 10 Street, that's a chronic flooding location. And that's partly a capacity issue, and it's also a catch basin issue - there aren't as many because north of it used to be a park road so there aren't any on park avenue, so these households and businesses get flooded every time it rains more than an inch and a half in an hour, there will be basement flooding, the sewer system is overwhelmed. You probably know we have combined sewer systems here, so the sewer system is overwhelmed, and sometimes it's crazy because the homes are getting flooded from above, water that's on the road surface coming into the basement, and from below as the sewer bubbles up. So you get these kind of almost geysers that are being held down by their own pressure, so it's this bubbling up thing. So when the Church avenue sidewalk restoration project was built, they put some additional catch basins in, but they didn't place them where we had the flooding concerns and so that's the lost opportunity. I think the flooding issues came to my attention after that, but it shouldn't have been up to a lowly district manager to identify this dovetailing that should have taken place."

CE: In your survey response you also talked about how this park project was implemented very quickly whereas the police precinct has been in limbo for 30 years and how the implementation relied on a specific council member's pushing for it. How do project requests balance between major residential requests and council members' personal desires?

Interviewee 1: "That kind of goes back to what I was saying before about me thinking that funding Parks capital projects through council member offices shouldn't be. But to the extent that it is, the Umma park project - i want to correct that it happened fast. It didn't happen fast, the previous council

member in that seat did not fund it - I think he was in his seat for 12 years. So anyways, it was 12 years of asking the previous council member, and he had other park priorities that weren't in this community district so it never got funded by him. The minute Rita Joseph got into the office, it was the first thing she did. Now, I'm not saying that she wouldn't have done it otherwise, I think she's a broad thinker, but it does so happen that she lives on the block, so I think she had a direct channel to how urgent this need was, and probably people in her own building and stuff like that. That doesn't make it any less the right thing to do, but I guess I'm saying that there's some sort of fortuitousness about it, it shouldn't be subject to what a council member feels should be done, it should be subject to Parks condition report card for instance, and then Parks has its own capital to, in an objective order, rehabilitate parks. And they can put other things into the rubric right, you can put the level of poverty in that district, you could put in - like our district is 59th out of 59 community boards in terms of green space, we should get a boost from that in terms of our parks being rehabilitated. So, sorry, that was a long tangent just to make sure you were clear that that was not fast.

I don't know, that could have languished for another thirty years if this council member did not find it important to do, it's sort of a vaguery. But the police precinct, it's a really long story. It was actually in the capital budget in the late 90s, and then after 9/11 with the budget austerity that followed that, all capital projects were sort of removed temporarily, and then it took a long time to build back up. By that time, demographic changes and land use changes in this district made building a police precinct even more difficult because we just don't have that much developable space and police precincts are really hard to host - they're just awful, it's like cop cars all over the sidewalks and sirens - this is a fairly cop supportive district, but not a police precinct supportive district. So it's just hard. But the fact is that the precinct that they're in is the old stables, you know horse stables, and it's over 100 years old, and it doesn't fit the members of service that are in there, and it's just a little bit stunning that there's just no political will to devote the capital to the precinct. It's also not that politic to be super supportive of major expansions on police either, I think that political zeitgeist might have something to do with it too."

CE: You also mentioned a new DNS-Budget Priorities platform that was implemented, I was just wondering if you could tell me a bit more about that, what the previous system was and how it changed, and when? I wasn't able to find much about that in my research.

Interviewee 1: "Let's call it 6 years ago, the Department of city planning and Office of Management and Budget came to meet with all district managers and said "hey, instead of each of you having your own word document that some of you write as a whole bullet point list, and others of you do exhaustive narrative, and some of you do maps and pictures, and others of you do graphs, and some of you don't do at all, we are going to introduce this platform where there will be more drop down menus, and the idea was - it's actually a good idea - your district needs statement is going to comport with your budget priorities", because we used to do these very separately. We would write a narrative about our district needs and then we would make a list of our budget priorities, I think this board was usually pretty good at tying them together - I mean that's kind of the point - but I guess others weren't. So they wanted to sort of streamline both the bridge between the needs and the budget priorities and also make a more standardised report, so that agencies could better identify what their role was, what was being asked of them. So they kind of divided everything into - like theres a human services part, and an infrastructure part and a community safety part - so all of this makes good sense, I see that the vision isn't whacky, but it is a lot of drop down menus, and so at its inception, the development of the platform wasn't informed by the people who were going to use it. So it doesn't

exactly mesh with how we articulate needs. SO it can be very frustrating, when you're saying you need a trench restoration, and there isn't an item that matches that. So I did the first year, in a little bit of a temper, clicking "other". And then that didn't feed data that actually was useful data, so then I tried to calm down and tried to play more nicely, but where it's become exceedingly frustrating, it's a lot more work than it used to be. You used to just update your other thing, and now you have to start all over, and in a lot of ways the platform itself is just tedious and the windows are small and it closes out on you. So we've all learnt to write it in a Word document and cut and paste, but it's a lot. And if the reward for doing that work were that the agencies then for the first time ever started responding to those budget priority requests with meaningful answers, and even when it's no, guiding answers, then I wouldn't mind it at all, I sort of enjoy the whole exercise of it all, and even writing back to their meaningless answers. But it hasn't improved, and in fact it's gotten worse. It's clear that the agencies have a drop down, and they're picking mostly "ask your elected officials", "needs further study", or "will address within existing resources" which is a real slap in the face when we're saying we need more and they're like we'll give you more within existing resources, that sort of defies the definition of "more".

CE: Looking in as an outsider, the system seems quite slow and repetitive throughout the year, with having to submit a request several times, and receiving the same answers over and over. For our case studies, we looked in depth at the District need Statements for the past 5 fiscal years. A lot of the requests seem to be repeated year after year. Additionally, many of the responses from OMB include "need further study", or "redirect to council, or a different agency". Is it a frustrating process for you?

Interviewee 1: "It is. And I think the first step to resolving it is to remove the drop down menu. I mean, if they had to actually use their own words, then they would have to use their own brains, and I think that we would get something more meaningful like that. So, it's frustrating cus its not helpful, and it's frustrating cus it seems easy to improve upon."

CE: As a follow up, what do you think would make the process easier for you as a district manager as well as the community boards?

Interviewee 1: "I don't even care about it being easier as long as it's more meaningful. And it's just making sure that the people in the agencies who have to respond to these are people with knowledge or people who know how to obtain the knowledge to respond. The other thing is - I don't know if this is directly an answer, but one of the things that I've been talking to colleagues a bit and we've started doing a little bit this year is showing up at the city council budget hearings, because we're sort of this process that goes into the Mayor's preliminary budget, but then the council is putting together theirs and then it sort of all comes together. So if we're not being heard in the lane that we're supposed to be in, then we can always turn on our turn signals and move into the other lane. So we're trying to do that. And part of the testimony has been - I've been trying to frame what I submit with this idea that our part of the process - and this kind of goes to the community input that you mentioned at the top - we're the only part of the budget process that is really prescriptive about gathering community input. We have 4 public hearings a year on the budget. City council has budget hearings, but it's at city hall, their expert panels are the agencies themselves, and I wonder if any members of the public show up to them. Technically they can, but it's not super public forward. Ours are. The mayor doesn't hold a public hearing on the budget, the agencies don't hold public hearings on the budget, City council only kind of sort of does and doesn't really advertise it as such, it's more of an information gathering than a

hearing - so were the only point at which the public is forward in the process, so to the extent that the mayor isn't directing the agencies to respond, and to the extent that City council isn't clamouring for better response, it's not serving their constituents."

## Appendix C

### Interview #2

Abyaaz Khan

So what are some of the most common lived experiences of disadvantage in your community?

Interviewee 2

That's a very broad question. I mean, Bushwic historically, has evolved over many decades. But if we're talking about the 70s, you know, there were high poverty rates, lower education levels, there's crime, you know, higher crime levels, very difficult times. So anything you could imagine in the community that's been disinvested in and essentially forgotten, as there was significant white flight from the neighborhood in the 60s 70s. There's also, you know, historically speaking, the blackout of 77, which was when the city was at its height of economic turmoil, even the federal government wasn't prepared to help the city recover. A lot of families decided that this was no longer a community they wanted to be a part of, and then primarily families of color stayed and demonstrated the utmost resiliency to get us to where we are today, on the other side of history.

Abyaaz Khan

Thank you. Yeah. As a follow up question to your response, actually, you mentioned the chronic disinvestment experienced by your CB over the past few decades, especially from the 70s onwards, could you tell me a bit more about that?

Interviewee 2

Pretty straightforward. There was a period of time where the city had no money to invest, and the 70s and 80s, when things were challenging, that does not mean there were no investments. Granted, I was not here during that time to speak on those, you know, affairs, those budget requests, but the community board itself came into existence in 77, as well. So right in the crux of this turmoil, if you will, and was able to find ways to work with leadership, specifically with, you know, different mayoral administrations, which we, you know, those of us that work at community boards, over different administrations know that each mayor has their own approach to government, some see the boards as partners, the the, you know, the people as, as you know, guides, you know, stewards of their communities, some prefer a top down approach. So, you know, it really varies when it comes to leadership and investment. If you have a leader that wants to work with the people, and to prioritize, you know, the requests that are coming directly from them, they're going to work closely with the community board, they're going to try to align priorities. But if you don't have that, then unfortunately, you may not see the same results.

Abyaaz Khan

What do you think this is my third question, what do you think about the city's engagement with communities and assessing infrastructural needs? Does the city do enough and what can do better?

Interviewee 2

My knowledge, the city does nothing. You know, engaging infrastructural needs, maybe the Department of Environmental Protection will host some like public forums that talk a little bit about, you know, stormwater management, you know, cloudburst formations. And perhaps, you know, there are community members that are like, I want nothing more than to spend my Tuesday night listening to this. You know, I'm one of the people that love listening to those things. But this is also what I do for a living. So it's relevant to my work. If we're talking about how every day community members that may not be in a public service related field are being informed or how they're being involved in these conversations, I would say whenever their catch basin is backed up, or whenever there's flooding in their homes, whenever there's a crisis or a problem, then they're forced to call 311. Or they're forced to contact us or their council members, their elected officials, and then that's when they generally will get some type of information or education, in reference to what's happening with infrastructure. Otherwise, I don't really see agencies on the forefront of those discussions.

Abyaaz Khan

Interesting. Okay. So from what I'm hearing here, there is this gap in collaboration and communication between cities and communities. How do you think this gap might be lessened or improved?

Interviewee 2

Again, a very broad question. You know, everyone has limited funding and resources and capacity. So obviously, if you want to improve something, you need to invest in it, whether it is time, money, or just your will, you know, so it needs to be a priority in order for us to focus on it and improve it.

Abyaaz Khan

What do you think of the relationship between infrastructural and community resiliency? How has it manifested for your community board?

Interviewee 2

So, infrastructure and community resiliency, Bushwick is somewhat unique in the sense that it is landlocked. So when we think about resiliency folks often think about coastal areas first, you know, so I think until what was it hurricane Ida, no one really said, Oh, Bushwick, we need to be environmentally, you know, resilient, or we need to think about our infrastructure, hurricane to change that. Because now any, you know, rain event, which we don't just call it rain anymore, we call it a rain event, because we know that rain is now more intense. The infrastructure was designed to only support I believe, it's like an inch in change of rain. But

now we're seeing significant rainfall that's affecting folks that are in lower parts of the neighborhood. All of this was foreseen, I forget which report it was, it might have been a stormwater mapping report stormwater resiliency report that came out in 20, I think, May 2021. From the Department of Environmental Protection, it could have been a few other agencies that were collaborating on that. But it basically shows right, like the low lying portions of our district are more susceptible. So over the next, you know, 1020 years, whatever their tools, their metrics were for measuring it, they're going to be impacted. And that's absolutely what we saw later that year, in September, when Hurricane Ida came. And all of those areas, it wasn't just like a little flooding. It was substantial. It was like cars up to their rearview mirror, you know, folks standing on top wondering if this is the end of days. But no, it's just rain. Right. So it's a new conversation for some in terms of environmental resiliency, but in terms of you know, how to confront adversity, and how to plan strategically around requests needs, whatever the case may be. That is a conversation that this community is very familiar with.

Abyaaz Khan

Perfect. As a follow up question, how might aging infrastructure be further impacted due to a changing climate?

Interviewee 2

I think that's pretty straightforward. It's going to fail. Yeah,

Abyaaz Khan

Looking in as an outsider, the system seems very bureaucratic, slow and repetitive, repetitive, or former case studies. We looked at the district needs statements for the past five years, a lot of the requests were repeated year after year. Moreover, many of the requests from OMB need further study or redirect to counsel or different agencies. Is it a frustrating process for you?

Interviewee 2

absolutely. You know, I don't think anyone enjoys, you know, putting time and effort into anything that they do to have it met with the bare minimum, or just basically what feels like a waste of time, there's been a lot of discussion about how the discussion amongst colleagues citywide primarily district managers about how the budget responses or budget request responses have worsened over the past two years. You know, it's either the folks that and we're trying to figure out what's happening behind the scenes to get a better sense of what we can do about it. But it could be that folks, you know, with the change in administration no longer have, you know, people are retiring, they may not have the knowledge of some of these projects and things to scope understanding. So they're just selecting, you know, preset responses from a drop down menu that aren't very helpful. It could just be that these are folks that now are doing like, I don't know, three different jobs when they just had one job before. So I'm trying to be fair. But without knowing what's happening behind the scenes, it looks as



though the agencies don't take the process seriously, it looks like they don't care about the community's perspective. And honestly, it doesn't look like we are engaging in any kind of meaningful dialogue to really determine how to address these needs. It looks like we are doing all this work for nothing, and then we're doing it every year. So

Abyaaz Khan

As a follow up, what do you think would make the process easier for you as a district manager as well as for the community boards?

Interviewee 2

So I think that it's if we could do anything, which anything is not, I'll say what's more realistic, but if we can do anything, I think it'd be amazing to see, you know, boards from across the city that may have more interests or enthusiasm around this process come together and have a conversation about, you know, that very question, right, you know, or maybe share a little bit about the work that they do, how they format their process. You know, we've tried to evolve this over the years to engage more of the public because it was just me sitting in the office thing. I don't know how to quantify or qualify all of the needs of the district. You know, when I asked the board, they were like, Oh, well, that's, you know, figure it out, you know, like, you got it, you're doing great. I'm just like, wondering, wonderful. So you know, of course, I use tools like, you know, open NYC open data, you know, I look at our 311 requests, I look at, you know, notes for meetings, and I tried to synthesize all of that, but that's still imperfect, right, and there's a lot more nuance, and that still doesn't get me closer to people, and having them understand that they're a part of this process as well. So beyond working with our board, and having our annual budget meeting, we've also expanded this to include a survey. We've expanded this last year to do our first town hall on district needs, where we instead of it just being me saying, This is why your trees aren't pruned. Or this is why this playground isn't updated, we invited all of the officials from the agencies to interface directly with the public. We had interactive posters, where they could put stickers on, you know, different budget requests. So a lot of fun, really great. I will also say I'm one of two staff in my office. So at what point? Am I supposed to coordinate these events to facilitate a 50 person board? Answer all these phone calls and complaints, and then also, like, do the work of 10 other people, I don't know. But we try to figure it out, we do the best that we can. And I'm grateful to have an understanding board. But I think that support. And not just I want to say I'm very grateful to have the folks at city planning as well who have listened to me, you know, kind of brainstorm about these ideas, because it's much easier to brainstorm with other people than just your wall in your office. You know, but there's a limit to what they can do as well. So whereas I need capacity, I need people, I need bodies, I cannot always rely on my board. They are unpaid volunteers, and they do show up, you know, when I ask for help, but I have to be, you know, this isn't, this isn't something they get paid for. So having dedicated help for this would be phenomenal, adding boats that can synthesize and review this data, you know, having, like a fellow specifically assigned to do this work would be amazing. You know, and someone that's obviously, you know, on a level, most likely a grad student, right,

that wouldn't need much management, you know, can work fairly independently. But yeah, so I think I ended with the more realistic version of what could happen, right? Because I can, you know, find a fellow. But I think there needs to be some type of conversation about, you know, what models can we share with one another? How can we kind of make this easier for ourselves just with our shared knowledge throughout the city?