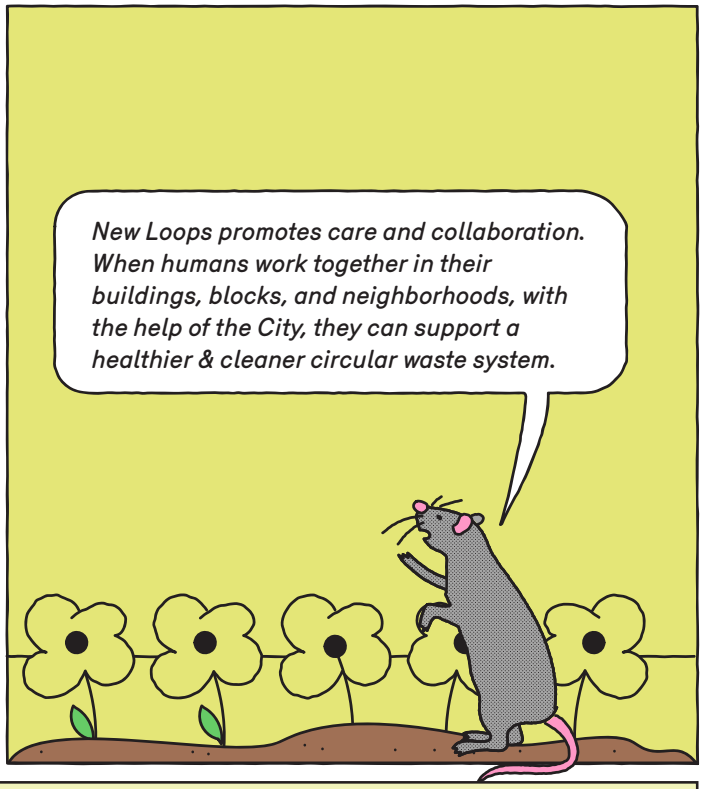
URBAN DESIGN FORUM

New Loops



How Buildings, Neighborhoods, and New Yorkers Shape Waste

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Contents

Introduction

New York City must re-envision a waste system that supports our health, climate, and communities.

Waste is a design issue. The Department of Sanitation (DSNY) collects 24 million pounds of landfill trash, recycling, and compostable material every day. Our buildings and neighborhoods are not designed to handle this volume, and our streets and sidewalks — our most abundant public spaces — become consumed by waste.

Waste is a labor issue. Building staff sort and manage enormous volumes of waste with too few staff and educational resources. DSNY uniformed staff often handle waste in unsafe street conditions with dangerous pollution exposure. Microhaulers must navigate complex policies to serve their communities. Composters rely on unpaid volunteers to process food scraps and engage their community. All New Yorkers, particularly designers, architects, and planners, must embrace their roles as waste advocates.

Waste is an equity issue. Every neighborhood deserves clean sidewalks, many opportunities for diversion, and a healthy community. Inequitable local investment in composting and recycling spaces have left many communities without the necessary infrastructure to support the City's new mandatory programs. Many environmental justice communities are near heavy manufacturing and industrial zones, which experience disproportionate pollution from diesel trucks hauling waste to private waste transfer stations.

How can we design for cleaner buildings, sidewalks, and streets? How can we center equity across all five boroughs?

New York City is on a historic route towards reaching the ambitious goal of becoming a Zero Waste City by 2030. DSNY began several new initiatives in 2023, including completing its first waste containerization pilot program and rolling out its first voluntary curbside composting program. In June 2023, New York City Council passed the Zero Waste Act, the most aggressive zero waste legislation in the US. The legislation codifies mandatory citywide curbside organics collection and enables more local composting and recycling centers.

A Zero Waste New York City must cultivate care, empower local community action, and function as a circular system.

About the Forefront Fellowship

In 2022-23, Urban Design Forum partnered with the Department of Sanitation to explore a central challenge in New York City's waste system: residential waste. The Forum convened a cohort of 26 passionate emerging professionals, including architects, landscape architects, urban designers, policymakers, community leaders, data analysts, composting advocates, and waste experts to study solid waste management in residential buildings and its impact on public space. Fellows spent three months learning from building managers, supers, and porters, interviewing city officials and advocates, and visiting community groups who manage waste at the neighborhood scale. They engaged over 45 stakeholders and completed site visits at ten buildings and neighborhoods across Brooklyn, Queens, Manhattan and the Bronx.

In this report, we define waste as the items eligible for DSNY's residential curbside collection (i.e., the trash that goes to landfill or incineration; mixed paper/cardboard and metal/rigid plastics/glass/cartons for recycling; and food scraps and yard waste that will become part of NYC's curbside collection in 2024). Hazardous household waste, e-waste, and reusable goods are mentioned frequently in the report, but they are not currently a part of DSNY's curbside collection.

About This Report

The Forefront Fellows' research illustrates the challenges and promising opportunities for reimagining our waste systems.

This report offers insight into three aspects of waste management in multifamily residential buildings, alongside forward-thinking recommendations in each area:

- Building Design: How do spatial conditions affect waste management efficiency and diversion rates within a building?
- Building Management: How do building staff and residents contribute to effective waste management?
- Neighborhood Context: How do public spaces and social infrastructure influence where waste is stored, moved, or diverted?

Fellows have also developed actionable tools for policymakers, designers, and community stakeholders to push New York City towards waste system improvements. The Waste Typology for Multi-Family Residential Buildings visualizes waste systems within typical New York City buildings. The Waste Management Guidelines outline concrete actions for building owners, managers, and staff to improve waste diversion. The Neighborhood Assets Tool offers a simple diagnostic process to understand existing waste infrastructure and needs in neighborhoods.

At the end of the report, comic-style graphics colorfully highlight the people and possibilities of transforming our waste system from No Loops to New Loops.

We hope that City officials, building owners and managers, waste and environmental justice advocates, architects, designers, and planners will use the Fellows' research and recommendations to design for waste and develop long-term investments with community input.

We believe New York City can design a healthier and cleaner circular waste system that promotes care and collaboration in every building, block, and neighborhood in our city. We hope you'll join this effort with us.

Building Design

New Loops: Multi-family buildings should have flexible indoor and outdoor spaces to best serve the needs of residents and staff.

OBSERVATIONS

New York City's waste streams have changed significantly over the past 100 years, and many building spaces need to continue to adapt.

Many residential buildings have been in use for decades. During the lifespan of the majority of residential buildings, New Yorkers' relationship to waste has transformed many times, moving from a market largely focused on reuse and comprising simple materials, to a market based on disposable, plastic materials resulting in ecological degradation.

DSNY regulations have also changed drastically since its founding in 1881. As federal, state, and City environmental justice regulations strengthened, New York City transitioned from dumping waste into the Atlantic Ocean in the nineteenth century to launching the largest curbside organics collection program in the US this year.[1] As the City moves closer to reaching its zero-waste goals, buildings will have to work quickly to comply and enable efficient, volume-reducing waste management.

Building waste management procedures are often constrained by their physical spaces.

Design impacts the physical spaces where waste behaviors, habits, and routines develop. Building-scale spatial conditions — like hallway width, elevators, outdoor spaces, and flexible storage spaces such as lobbies,

cellars, and roof spaces — contribute to waste outcomes, especially how much space waste occupies on sidewalks and streets. We observed the following patterns in our research:

- Buildings with on-site work rooms for staff had more efficient waste management systems than those lacking this dedicated space.
- Buildings with well-maintained on-site outdoor spaces for composting and gardening had greater organics diversion rates, fewer pests, and fewer foul odors from waste.
- Buildings with dedicated spaces for recycling and organics collection allowed building staff to properly sort and stage waste at the access point, which improved street cleanliness and reduced pest rates.

When possible, a simple set-up works best.

Smaller buildings commonly use a resident-led simple-circuit disposal system, which requires residents to bring their household's waste to one or two locations in the building. This system best leverages building space and staff, both of which are precious and rare resources in New York City buildings.

Larger buildings often use a staff-led right-of-way disposal system, where residents dispose of their waste at many stops along their right-of-way from their unit door to building door. In this system, building staff often repeat the work of residents: residents sort their waste when initially disposed, and building staff sort the recyclables *again* to avoid fines.[2] This system is labor-intensive and, when mandatory citywide composting is implemented in 2025, building staff cannot be tasked to sort food scraps and yard waste in the same way as recyclables or landfill trash.

While a simple set-up typically works best, there are some limitations, particularly for older adults and residents with disabilities. At one site visit to a building using a simple-circuit system, the super bridged the gap for an older resident by collecting their waste at their unit door.

Simple building design elements can make waste systems more visible to increase resident buy-in.

Because many building systems encourage "out-of-sight, out-of-mind" waste practices, many residents are disconnected from the labor it takes to maintain clean spaces, as well as their own roles in contributing to curbside waste piles. On several site visits, we found that when waste management is highly visible within buildings, it can positively influence resident behavior. Waste can be made visible in positive ways through signage as well as building design features, such as windows into trash rooms, indicator lights to show if a trash chute is functioning, or feedback displays in common areas to show resident diversion rates.

In this report, we focus on a range of waste outcomes. The amount of public space that waste occupies — or waste volume — was a primary concern of our research. We also considered recycling and organics diversion from landfills, weight, labor needed to manage waste, resident engagement, and more.

Waste Typology for Multi-Family Residential Buildings

New York City multi-family residential buildings vary greatly across design, governance, age, and accessibility. These buildings also differ in how their waste impacts public space, especially as many city sidewalks and streets are clogged with waste bags and bins.

Our research found that waste outcomes are directly shaped by building density, typically the number of units in a residential building.[3] While individual residents' behaviors and household waste practices play a role, waste occupies public space differently depending on building density; a 100-unit building's waste will take more space on the curb than a 10-unit building.

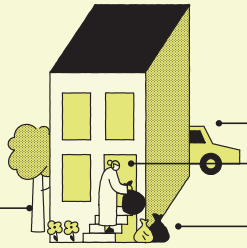
Our Waste Typology illustrates typical design elements of waste systems within buildings of six units or more. For each building size, the typology considers:

- Adaptability: How flexible is the building's physical space?
- Access Point: Where do DSNY uniformed staff collect the building's waste?
- Movement of Waste Material: How many stops are there before waste gets collected by DSNY?
- Visibility: To what extent do residents know how waste is managed in their building?

The Waste Typology will help researchers, designers, architects, contractors, and planners qualitatively assess the typical waste system within buildings and design for more circular systems in the future. This Typology can be used in tandem with DSNY's latest Waste Characterization Study to better understand residential waste in New York City.

Waste Typology

6-19 Units



Small garden

Cars parked near building

Residents bring waste outside themselves

Waste piles on sidewalk

20-49 Units

Very little greenery

Residents bring their waste downstairs to the basement or 1st floor

Elevator in building

Gated alley next to building with waste piled

Super rolls out many bins of waste to the sidewalk

50-99 Units

Rooftop greenery

Residents in apartments unaware of people in basement

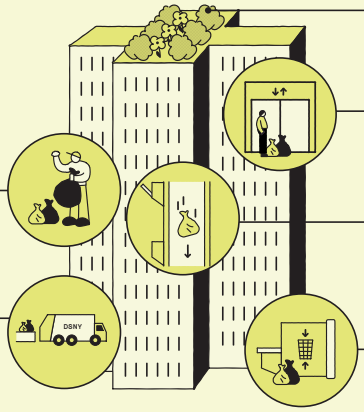
1 elevator in building

1 trash chute that connects to every floor

Building staff on a resident floor moves waste bags

1 waste compactor in basement

100+ Units



Rooftop greenery

2 elevators in building

Multiple building staff at multiple levels moving waste

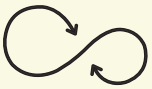
Multiple trash chutes that connect to every floor

DSNY collects waste bags from loading dock on the side

Multiple waste compactors in basement

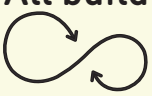
RECOMMENDATIONS[4]

For Existing Buildings:



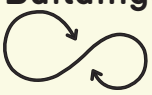
When possible, buildings should adopt a simple-circuit disposal system, where residents bring their waste to only one or two locations in the building.

Using a resident-led simple-circuit disposal system for all waste — with incentives — requires significantly less labor from building staff and it reduces contamination by residents. When DSNY fully implements waste containerization citywide, containers could also act as the point of waste storage and waste sorting for residents. This simple-circuit disposal system relies on residents to do all of their own sorting, so building staff, community partners, and other residents must take a greater role in waste education to ensure it runs efficiently with minimal contamination.



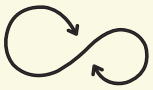
All buildings should have a dedicated on-site work room for supers and building staff,[5] and in buildings with 50 or more units, two or more work rooms should be included.

In our research, the presence of a high-quality on-site work room helped retain staff and increase feelings of pride and home. The work rooms should be directly adjacent to the main waste management areas of the building.



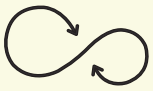
Buildings should equip waste rooms and storage areas with hose bibbs and floor drains for easy clean-up.

Supers tackle smell pollution in a number of creative ways. On our site visits, we observed that the cleanest waste rooms and storage areas included hose bibbs and floor drains that were used daily.



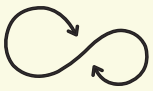
Buildings should be equipped with central compactors and cardboard balers, particularly for older buildings with limited space and adaptability opportunities.

While compactors and balers do not address the root cause of waste volume, they can significantly improve building storage space and reduce the impact on waste on public spaces.



Buildings should containerize all waste — including recycling, organics, and landfill waste — within the building footprint whenever possible.

Containers should be pest-proof, allow for fluxes in waste volume, and be equipped with a drain for waste liquids and routine cleaning. Containerization should be accompanied by volume reduction and high diversion rates.



DSNY should develop detailed building design guidelines for on-site composting and promote them to building owners and staff.

On-site composting can increase waste diversion rates, decrease pest rates, and complement the citywide mandatory curbside composting policy. However, there is little guidance on how buildings can activate available outdoor space for composting. The best solution for an on-site compost system depends on many factors, like number of units, space constraints, and involvement by building staff. DSNY could develop guidelines to advise residents and building staff on the best solutions for their needs.

Contamination refers to instances where waste is sorted incorrectly, often leading to eligible and valuable recyclables and organics going to landfills.

Additionally, these design guidelines should be coupled with DSNY incentives for buildings to adopt on-site composting and gardening programs. For example, if a building processes their organics on-site instead of needing collection by DSNY trucks, the building could be offered a financial incentive.

For New Buildings:

To accommodate future DSNY waste collection program changes, new buildings should incorporate a greater storage area than is currently required.

The launch of the curbside organics collection program demonstrates how buildings will need to evolve and adapt to meet waste needs as the city changes. On our site visits, we found that storage areas were typically not large enough to accommodate landfill waste, recycling, organics, and other waste streams.

New buildings should provide ample space to accommodate multiple waste bins in kitchen setups to increase diversion.

For a higher-tech option, traditional garbage disposals can be replaced with a "smart" garbage disposal that diverts solids into a compost collection bin.[6]

Buildings should designate simple, clear, and accessible egress routes for building staff to easily move waste to the curb on collection days.

Building staff are often tasked to move heavy loads of waste from the building to the curb using steep ramps or stairs. Clearly defined egress routes will make conditions safer and more efficient for staff.

Case Study

Small Co-op Building in Jackson Heights, Queens

Building Facts

- → Built in 1921
- → 16 units on 5 floors
- → Located in the Jackson Heights Historic District, the first planned cooperative and garden apartment community in the US[7]

Waste System

- → There are no dumbwaiters, elevators, or trash chutes in the building, which can be a challenge for older residents or residents with mobility needs.
- → This building cannot use most space-saving technologies, like compactors, due to electrical requirements and frequent flooding.
- → Their building staff is part-time, and they require volunteer labor from cooperative board members and residents.
- → This building operates a successful on-site compost program in their courtyard for their organics, leaves, and branches.
- → The super developed an accessible outdoor location to lessen the time and distance for residents to deposit their trash, recyclables, and organics.

Takeaways

- → Resident-led composting initiatives, along with citywide curbside composting, can help maintain green spaces locally while providing easier access for organics diversion.
- → A building's waste system must consider access and convenience for older adult residents.
- → A strong waste system depends on staff and residents alike contributing to managing waste collection.
- → Waste infrastructure must adapt to the challenges of climate change, as more extreme weather events become more common.

Case Study

Small Co-op Building in Jackson Heights, Queens

Building Management

New Loops: Building staff — including supers, managers, porters, custodians, and co-op board members — should be well-resourced and empowered to make decisions for their resident community.

OBSERVATIONS

Empowered building staff are crucial for a well-functioning building.

Supers and staff who take deep pride in their essential work feel more empowered to make improvements and meaningfully engage with residents. Given the diversity of the city's multifamily buildings, supers must adapt their management to meet their building's unique needs. Supers and building staff know best how waste moves throughout their building. Well-functioning buildings have staff who are trusted to update and pivot practices to maintain clean and healthy living spaces. For example, one super converted garages into waste rooms and added staff sign-in and task sheets in an effort to make their processes more efficient. Another super used whiteboards and checklists in primary waste areas for their staff, including sharing daily tasks to complete, staff schedules, and ongoing issues. Well-resourced and empowered building staff view good waste management practices as part of their building management ethos.

Building staff include staff from property management companies as well as cooperative residents and board members who are responsible for building waste management. Building staff may include building managers, superintendents, porters, door attendants, handypersons, and other staff. We recognize them as essential workers!

Building staff need sufficient levels of staffing, training, and funding for their waste management systems to excel.

Building staff are frequently tasked with developing strategies for improving waste outcomes with too few staff, training, and funding. Building staff typically lead direct communication with residents on waste management, and they often need to tailor educational materials for their community to enhance their effectiveness. In many instances, supers developed directional signage and visual aids for every floor in all languages spoken by residents.

DSNY should continue supporting building owners and staff with education, more training, and funding.

Residents who had a sense of ownership over their community's waste had better waste management systems.

In an engaged building community, residents feel ownership and responsibility, ensuring that their waste is properly sorted and public building spaces stay clean.[8] Residents should clearly understand their role and the role of building staff in good waste management.

Certain ownership structures naturally offer more opportunities for residents to be engaged, like co-ops and condos where residents can serve on a board overseeing the stewardship of community spaces.

However, even in other ownership structures — like rentals and public housing — a sense of ownership can be encouraged through building management. At a rental building in the Bronx, the super hosted regular office hours and events for residents to directly discuss good waste management practices, which also helped residents get to know one another and encouraged them to be accountable for their living spaces. The super also promoted friendly competition between floors, including offering incentives to the floor with the cleanest waste room, to foster a sense of community and purpose around waste management.

Building managers can support residents to stay accountable to their waste responsibilities with incentives and oversight.

Positive reinforcement — like incentives — can powerfully shift waste behaviors, while a penalty-based waste culture can alienate residents and staff. At one site visit, a super spoke directly to residents who did not properly sort their recyclables. Other sites adopted a "floor captain" model, where a resident volunteers to oversee their floor's waste system and provide information to their neighbors to support their shared value of cleanliness.

Community partnerships help everyone.

Formal partnerships between building staff and community resources — like community-based organizations (CBOs), local composters, and local microhaulers and haulers — can boost local opportunities for reducing waste and improving diversion rates. In one site visit in Forest Hills, the super enrolled his building in the ecycleNYC and refashionNYC programs — partnerships with ERI and HousingWorks, facilitated by DSNY — to divert electronic and clothing waste. He described how easy it was to arrange a free pick-up while also providing a meaningful waste-diversion service for residents. These partnerships can reduce the burden on DSNY to handle every type of waste while strengthening community ties.

RECOMMENDATIONS

DSNY should co-develop and pilot "Good Waste Management Guidelines" to establish citywide protocols for residential buildings.

DSNY should engage building owners and staff at 100+ unit buildings to co-develop new guidelines that build on the Zero Waste Design Guidelines Best Practices,[9] focused on concrete changes for existing buildings. DSNY could also develop incentives for building owners who adopt these guidelines.

DSNY should pilot a new program to support innovative waste technologies.

DSNY should pilot a new program modeled on NYCEDC's Proptech Piloting Program.[10] This program would facilitate partnerships between building owners and private start-ups developing innovative waste-related technologies. DSNY can assess pilot performance and determine a technology's potential for scalability, where previously this information was unavailable. Types of technologies could include smart waste bins for buildings, waste level sensors and weighing tools, and apps designed to disseminate information about proper recycling and composting.[11] Launching an open call for innovation can create opportunities to source innovative waste technologies and create jobs.

DSNY should pilot additional curbside collection days for recycling and composting.

Most of the supers we interviewed shared that they have handled more cardboard and paper waste than ever before. This cardboard waste is more physically demanding to sort and organize, and it takes up more space on streets. Several supers said that they would appreciate more recycling collection days and fewer landfill waste collection days. Using data from the recently published DSNY Containerization Study, DSNY could identify many streets that are great candidates for additional curbside collection days for recycling and composting.

To support the equitable implementation of curbside composting collection, DSNY should provide targeted incentives and education for underserved neighborhoods.

When citywide curbside composting becomes mandatory, much-needed services will become accessible in every New York City neighborhood. However, to ensure that communities effectively engage in the program, DSNY should develop a targeted incentive program — for building owners, staff, and residents — that encourages positive reinforcement and education in historically underserved neighborhoods.

New York City can learn from other municipalities' dynamic education efforts to help residents learn how to sort their organics properly. For example, the City of Seattle implemented the Friends of Recycling and Composting monitoring program. In exchange for a $100 utility bill credit, volunteers at multifamily buildings routinely inspected collection bins and provided educational information to residents. Other incentives could include offering after-hours use of gathering spaces for volunteers who help their building reach specific waste management goals.

DSNY should also prioritize additional resources for neighborhoods with limited access to composting education, like neighborhoods with no or few Smart Bins or composting drop-off sites.

DSNY should create and promote additional formal partnerships between building managers and local organizations that divert materials from landfills.

Given the value of community partnerships in supporting building managers to divert waste, DSNY should expand its capacity to facilitate new partnerships and expand existing ones. For example, when buildings request additional pick-up days for organics, partnerships with local microhaulers could support local jobs while filling

a gap in DSNY service. DSNY could expand existing relationships with organizations like Big Reuse to create additional opportunities to donate home goods, appliances, and other goods.[12]

Building staff should establish formal relationships with canners and umbrella organizations like Sure We Can to dispose of can and bottle waste from the building.

Since New York State enacted the Returnable Container Act, also known as the Bottle Bill, in 1982, more than 90 billion plastic, glass, and aluminum beverage containers have been returned and recycled.[13] The program has also created opportunities for New Yorkers to earn an income for redeeming recyclables, which introduced canners as an important actor in recycling. In 2019, Sure We Can, a redemption facility and advocacy group for and by canners, reported more than 12 million cans and bottles were recycled by over 1,000 canners.[14] At one site visit, a building manager shared that they have formed partnerships with canners, granting them regular access to their building's recyclables. Formal partnerships between building staff, canners, and umbrella groups like Sure We Can could provide more formalized work for canners, produce more reliable income for canners, reduce the curbside footprint of these recyclables on public spaces, and reduce hauling costs for DSNY.

DSNY should provide specific support to building managers who work in residential buildings with a significant population of older adults and/or residents with disabilities.

One co-op member noted the barriers faced by older adults in complying with building rules that are inaccessible to them. DSNY could create consultative groups where building managers could find solutions to support older adults and residents with disabilities.

Waste Management Guidelines

These simple guidelines put our recommendations into practice for building owners, managers, and staff. They are designed to complement existing guidelines and trainings, like the Zero Waste Design Guidelines' Waste Management Plan[15] and DSNY's Clean Buildings Certificate program for Residential Maintenance Staff.[16]

Co-locate diversion opportunities in commonly used resident spaces.

For example, add paper recycling bins to mailrooms and package rooms to encourage diversion. Add recycling bins to laundry rooms for detergent containers, as well as additional bins for fabric and clothing donations.

Increase the visibility of the waste streams and storage throughout the building.

For example, add translucent partitions for storage. Document trash production and publicize the data to residents.

Designate a common area in your building for residents to exchange or donate unwanted bulk items, books, clothing, or furniture.

For example, create a free library and lounge area for residents with books and furniture that may have otherwise gone to waste. Choose an area near the entrance of the building where residents could passively exchange unwanted, quality items with their neighbors.

Place building waste storage in an accessible route to the DSNY access point to make it easier for your staff to move waste.

For example, choose a central location for waste storing and staging that contains rolling bins and elevator access.

Case Study

Large Rental Building in Mott Haven, The Bronx

Building Facts

- Affordable housing rental complex
- 167 units on 13 floors
- Located in Mott Haven, a neighborhood is at high risk of displacement compared to the rest of New York City[17]

Waste System

- Compactors and trash chutes regularly overflow and there is little access to green space.
- The building has three trash collection days and one recycling day. The building staff have advocated for more recycling collection days than trash collection days due to their limited storage space.
- The building super uses many avenues to communicate with residents, including monthly meetings and signage in multiple languages.
- To promote better waste management practices and foster community, the super created the "floor captain" incentive program for residents who volunteer to educate their neighbors.
- There is little waste infrastructure in the neighborhood: the nearest food scrap drop off local is a mile away, there are no smart bins and few landfill litter bins[18] in the area, and nearby construction debris and e-waste regularly ends up on streets.

Takeaways

- Building staff can be effective and creative in finding waste solutions for their building.
- Communication about waste systems should be shared in many languages and consistently.
- Waste management incentives can support building staff to monitor, encourage, and enforce building policies.
- Buildings must also think beyond building operations to holistically and effectively reduce building waste volume.

Case Study

Large Rental Building in Mott Haven, The Bronx

Neighborhood Context

New Loops: Neighborhood assets should be leveraged and strengthened to create a healthier public life.

OBSERVATIONS

Land uses and density impact the volume, curbside footprint, and types of waste produced in a neighborhood, as well as waste hauling strategies.

Low-, moderate-, and high-density residential neighborhoods all experience different waste challenges, particularly with access to sufficient curb space. Building staff that we interviewed in moderate- to high-density residential districts noted their pest problem was likely due to surrounding restaurants and businesses. Building staff working near popular destinations, Central Park and Domino Park, noticed increased litter around their buildings that they felt responsible for collecting. Waste management strategies differ between neighborhoods with high pedestrian traffic and those with high vehicular traffic. Land uses and density also contribute greatly to the strategies that DSNY trucks, private haulers, and microhaulers employ for their collection routes.

Neighborhoods with consistently available and diverse public waste infrastructure — like Smart Bins and e-waste/textile drop off sites — had cleaner streets and better waste diversion capacity compared to those that only had access to DSNY curbside collection.

Neighborhoods with a wide variety of public waste infrastructure often experienced less contamination of their building's waste. To fill in some of this gap, many communities host public receptacles, like Smart Composting Bins. However, across our site visits, we observed significant gaps in public waste infrastructure.

In general, there is more litter near specific public infrastructure — including train stations, bus stops, and school yards — and not enough waste collection sites.

Few buildings had the space or resources to host permanent drop-off sites for special waste collection, such as e-waste, textiles, and furniture. Many building staff members were not aware of whether there were any drop-off sites within walking distance. When there are drop-off sites nearby, many have irregular or temporary schedules, making it difficult for residents to dispose of their special waste properly. The need for expanded special waste collection drop-off sites is particularly urgent for lithium-ion batteries, as they continue to end up in the trash or general recycling, where they can cause fires.

The current design of streets is difficult for DSNY staff to navigate.

Currently, DSNY uniformed staff are tasked with navigating sidewalk and street conditions that vary significantly from neighborhood to neighborhood, in addition to managing diverse waste containers that may strain them, slow their process, and leave waste on the street that falls out of these containers. On collection days, they navigate difficult sidewalk and street spaces, street trees, signage poles, street furniture, vehicle parking, bike lanes, bus lanes, and more, often in low-visibility conditions.

Robust community-based solutions exist in many parts of the city and would benefit from further investment.

Many communities across New York City have creatively funded and operated their own compost programs, clothing swaps, bike repairs, and more for decades, collectively realizing their own visions for clean and healthy neighborhoods. Stakeholders at several community organizations and BIDs expressed their excitement to support waste management efforts at building- and neighborhood-scales. However, they are often spread thin. Greater investment in neighborhood community organizations and BIDs would contribute to cleaner and more beautiful public spaces in the neighborhood.

Neighborhood Assets Tool

Every neighborhood has important assets that can contribute to cleaner streets and sidewalks, greater waste diversion, and a healthier community.

The Neighborhood Assets Tool is designed to help planners, city officials, and local leaders qualitatively characterize a neighborhood and develop neighborhood-level waste plans to address their needs.

The Assets Tool highlights four essential qualities that influence neighborhood waste outcomes: public infrastructure, community programming, land use and density, and streets. This simple tool can encourage an asset-based approach to improving neighborhood waste services.

Neighborhood Assets Tool

PUBLIC INFRASTRUCTURE

how many opportunities does the neighborhood have for additional waste diversion?

Few

My neighborhood doesn't have any Smart Bins.

Mid

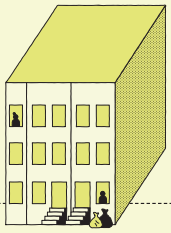
Most

My local park hosts bike repair clinic every month.

COMMUNITY PROGRAMMING

how much influence do neighborhood CBOs and BIDs have?

Little



My neighborhood doesn't have a neighborhood association or BID.

Medium

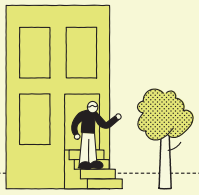
A Lot

My neighborhood hosts a street tree beautification day every month.

LAND DENSITY

how is the neighborhood classified, based on DCP's residence district zoning rules?

Low



I live in a neighborhood with mostly historical brownstones.

Medium

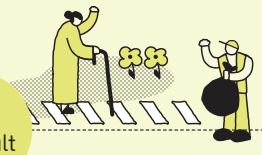
High

I live downtown with lots of tourists and street commotion.

STREETS

how difficult is it for DSNY uniformed staff to navigate the neighborhood's streets?

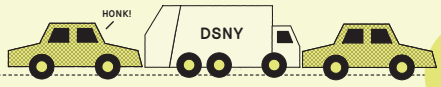
Not Difficult



My neighborhood streets are usually quiet, with a few people and cars.

Somewhat

Very Difficult



My neighborhood streets have lots of pedestrian and vehicular traffic (including cars/trucks, buses, and bike lanes) most of the day, making waste pick-up challenging.

RECOMMENDATIONS

DSNY should create a Waste Equity Map.

The Waste Equity Map should document the types and duration of waste education, services, and infrastructure investments that various communities have received over time. The map should also make waste systems transparent by displaying and allowing the public to follow where their waste goes, including the locations of waste transfer stations, the SMR Materials Recycling Facility, industrial composting facilities, and others.[19] This map should inform investment strategies moving forward, focusing on historically underserved communities.

DSNY should consult City agencies and community institutions to expand permanent sites for special waste collection in convenient locations.

DSNY should consult the Department of Parks and Recreation, Department for the Aging, Department of Transportation, and community institutions like houses of worship and community centers to determine ideal sites for permanent, containerized special waste sites — like textile waste, e-waste, and bulk waste — that residents can rely on. DSNY should provide building managers with educational materials to inform residents of nearby drop-off sites. DSNY should also consult CBOs and BIDs who are able to determine additional drop-off sites with substantial community input.

DSNY should continue to support local composting initiatives to reduce the volume of organics at the curb while improving local green spaces.

DSNY should continue to support existing organics collection networks, in addition to launching curbside composting, to maintain community benefit. For example, small-scale composting sites — on-site at buildings or off-site — could improve conditions for local street trees, public community gardens, and other green spaces. Local microhaulers such as BK ROT, Vokashi, and GreenFeen OrganiX already serve residential buildings and locally process their organics. This continued investment by DSNY would also support local, green jobs and reduce emissions.[20]

DSNY should collaborate with The Mayor's Fund to Advance New York City to expand neighborhood-based incentives that build buy-in for new sanitation strategies.

The Mayor's Fund should expand their Love Your Block program,[21] which supports existing neighborhood associations to take on beautification projects, to offer additional funding streams for creating, supporting, and adding neighborhood block associations, especially in communities with historical disinvestment. Residents involved in neighborhood associations communicate better and participate more in community activities, like neighborhood clean-ups.[22] Building on DSNY's existing community engagement programs, such as Adopt-a-Bin and equipment loans, DSNY should expand its outreach for community-led initiatives, like supporting more farmer's markets, block parties, clothing exchanges, etc. Annual "Cleanest Block" awards could incentivize neighborhood associations to lead local waste management improvements.

Case Study

Pitkin Avenue BID in Brownsville, Brooklyn

BID Facts

- The Pitkin Avenue BID, formed in 1993, serves over 200 diverse businesses in the area.
- The BID collaborates with many other community partners and city officials, including Community Board 16, Council Member Darlene Mealy, Assembly Member Latrice Walker, NYPD's 73rd district, Brooklyn District Attorney Gonzalez's office, the Department of Transportation, the Department of Small Business Services, City Cleanup Corps, the Gregory Jackson Center, the Brownsville Safety Alliance, and the Brownsville Community Justice Center.

Waste System

- The Pitkin Avenue BID is located in an area that experiences current and historical disinvestment, high crime rates, and illegal dumping of commercial and residential waste.
- The BID's basic services include sanitation, marketing and placemaking, beautification projects, retail attraction and retention, and quality-of-life initiatives.
- The BID hosts two community clean-ups every year. In 2022, the BID mulched 200+ tree beds, planted over 80+ tree beds, placed 20 additional tree guards, placed ten dog waste stations, and directly employed seven Brownsville residents.
- They were also chosen for the 2022 Waste Management Grant to pilot waste containerization along Pitkin Avenue.

Takeaways

- BIDs can offer diverse programs — community clean-ups, street tree care, wellness cultural events, and business resource fairs — that encourage stronger participation in local waste initiatives and foster belonging among the community.
- BIDs can greatly increase community care and invest in their neighborhoods, which improves neighborhood safety and business opportunities.
- BIDs should prioritize community partnerships and community engagement.

Case Study

Pitkin Avenue BID in Brownsville, Brooklyn

Endnotes

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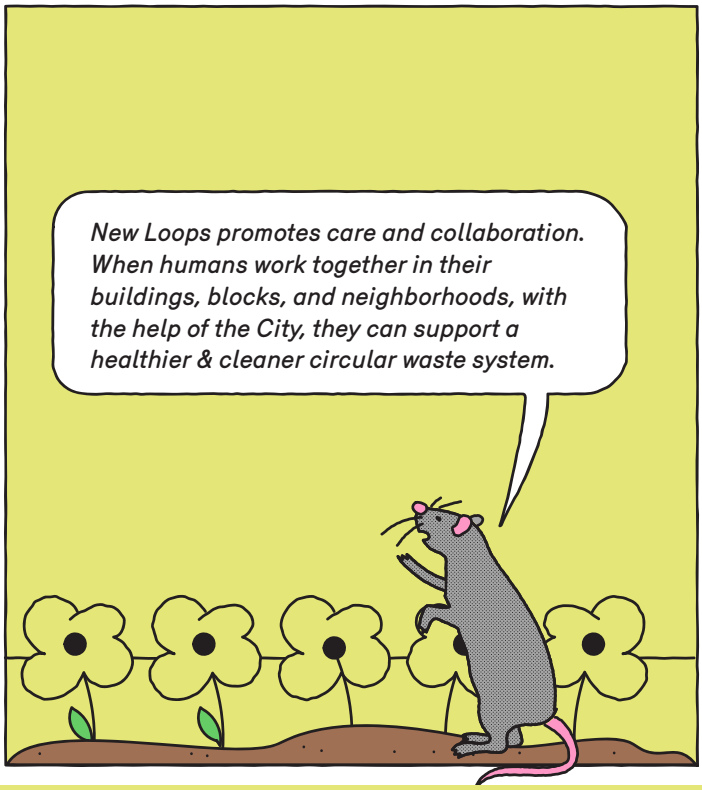
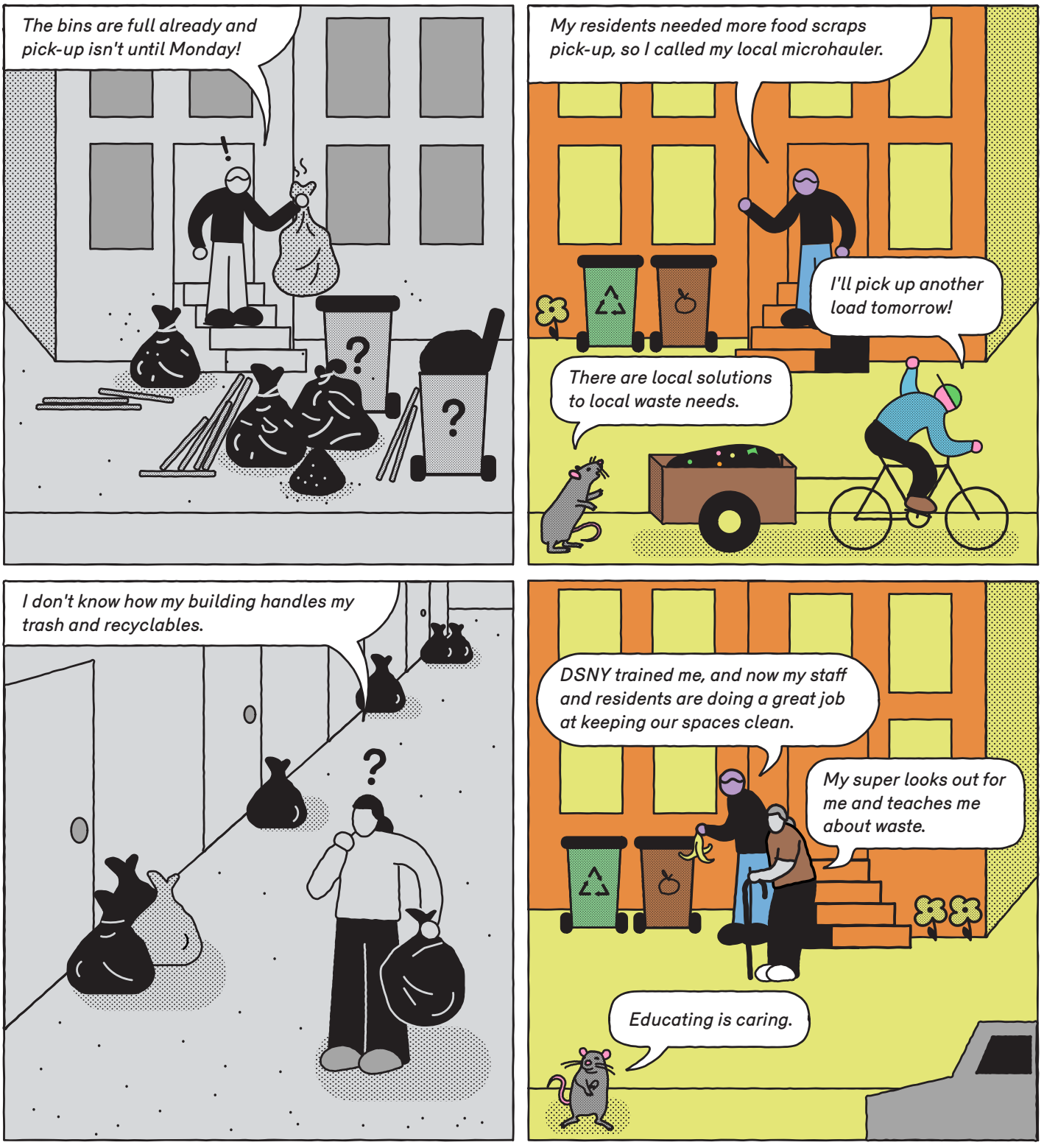
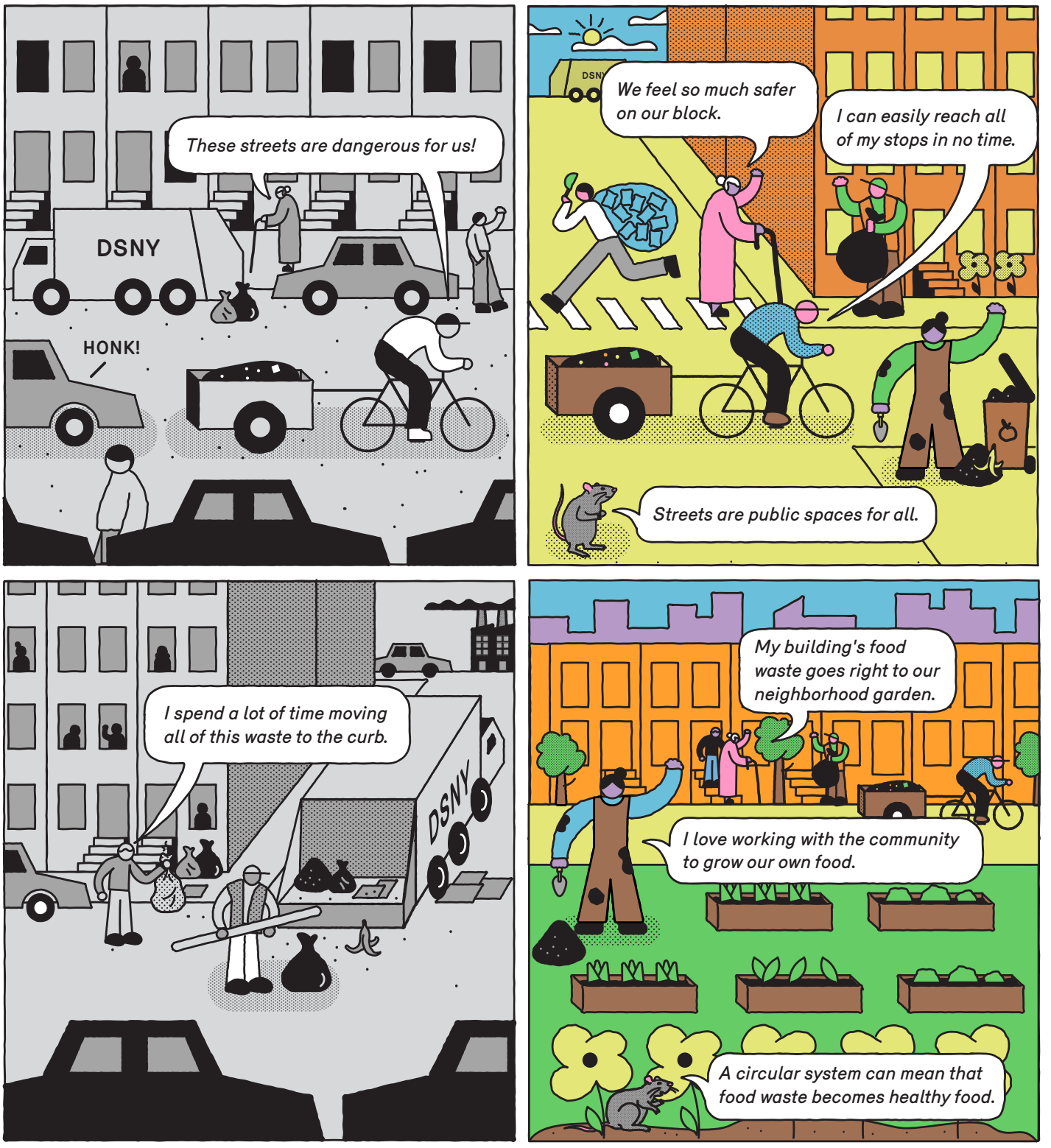
New Loops

A Comic Tale of New York City's Waste System
Narrated by Lou P. the Rat




The bins are full already and pick-up isn't until Monday!
My residents needed more food scraps pick-up, so I called my local microhauler.
I'll pick up another load tomorrow!
There are local solutions to local waste needs.
I don't know how my building handles my trash and recyclables.
DSNY trained me, and now my staff and residents are doing a great job at keeping our spaces clean.
My super looks out for me and teaches me about waste.
Educating is caring.


These streets are dangerous for us!
DSNY
HONK!
We feel so much safer on our block.
I can easily reach all of my stops in no time.
Streets are public spaces for all.
I spend a lot of time moving all of this waste to the curb.
DSNY
My building's food waste goes right to our neighborhood garden.
I love working with the community to grow our own food.
A circular system can mean that food waste becomes healthy food.

URBAN DESIGN FORUM

New Loops: How Buildings, Neighborhoods, and New Yorkers Shape Waste