

Architects, Public Architects, and P3 Development: Innovation, Challenges, Lessons Learned

Course Number WE203

Wednesday, May 18th, 2016

Learning Units 7.5 LUs

PHILADELPHIA!

AIA Convention 2016
May 19-21, Philadelphia



AIA

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Questions related to specific products and services may be addressed at the conclusion of this presentation.

Speakers List

- Lee Solomon, NYCHA, Deputy Director
- Rasmia Kirmani-Frye, NYCHA, Director
 - President, Fund For Public Housing
 - 212.306.8210/rasmia@fundforpublichousing.org
- Amy Stokes, NYCHA, Deputy Director
- Bomee Jung, NYCHA, VP
- Terri Matthews, NYC DDC, Director



NextGeneration NYCHA

May 18, 2016

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NYCHA INTRODUCTION

- 1. The current NYCHA context.**
- 2. And how did we get here?**
- 3. Next Generation NYCHA**



1 in 14 New Yorkers calls NYCHA "home"



77,000
SENIORS
62 YEARS OLD OR OLDER



110,000
CHILDREN
UNDER 18 YEARS OLD



40%
OF HEADS OF HOUSEHOLDS
ARE 62 YEARS OLD OR OLDER



25%
OF NYCHA EMPLOYEES
ARE RESIDENTS OF
PUBLIC HOUSING



\$23,000
AVERAGE
HOUSEHOLD
INCOME



61%
ARE EMPLOYED
(OF NON-DISABLED,
WORKING AGE ADULTS)



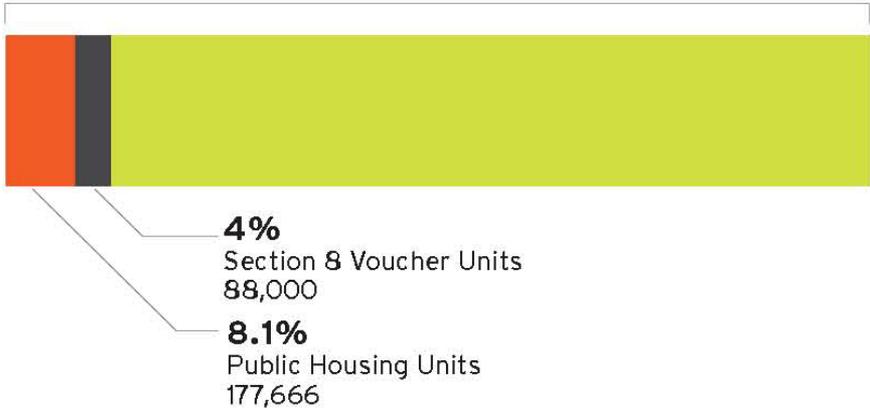
41%
ON FIXED INCOME
(SOC. SEC., SSI, PENSION, OTHER)



12%
RECEIVE PUBLIC
ASSISTANCE

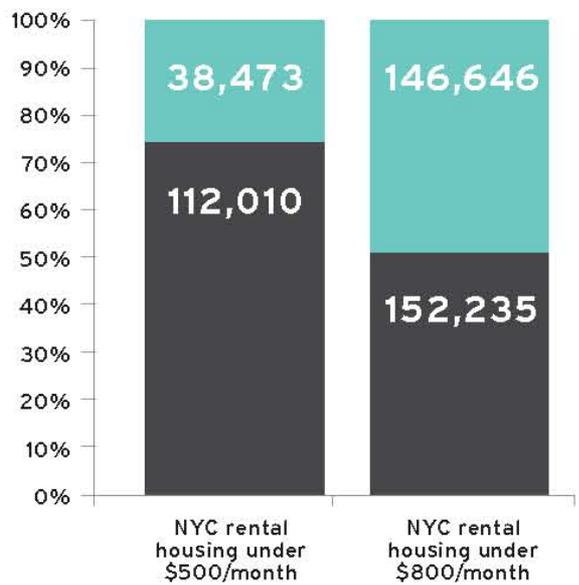
Majority of Low-Income Housing in NYC

New York City Rental Housing Units
2,184,297



NYCHA provides:

- **74%** of all NYC rental housing less than \$500/month
- **51%** of all NYC rental housing less than \$800/month



NYCHA's Portfolio is Large and Varied...

NYCHA'S PORTFOLIO IS LARGE AND VARIED...



THAT CONSIST OF  **178,000** APARTMENTS

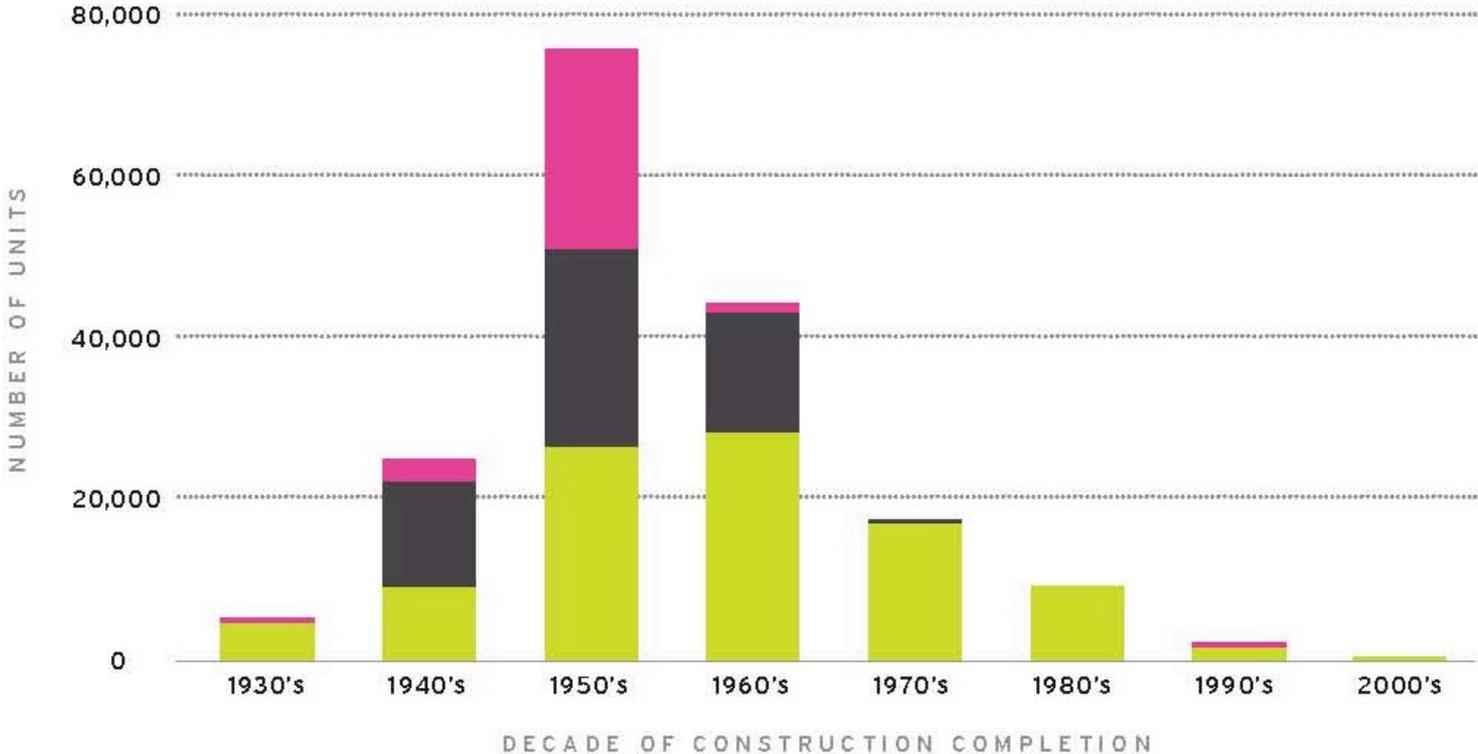
CONTAINING OVER  **175 MILLION**
SQUARE FEET OF SPACE



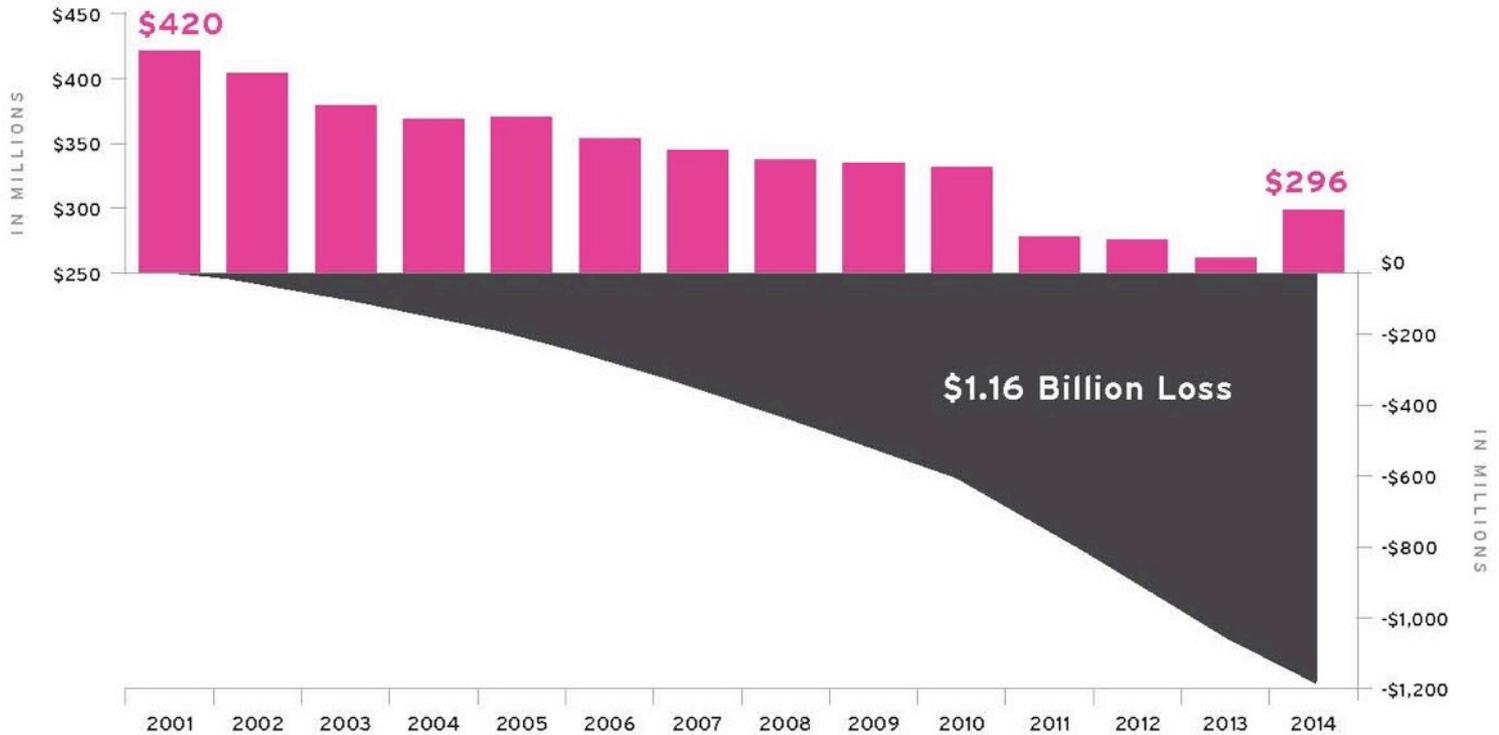
THE LARGEST DEVELOPMENT: A **SIX-BUILDING**
APARTMENT COMPLEX WITH **7,000 RESIDENTS**

THE SMALLEST DEVELOPMENT: A **SINGLE-STORY**
SENIOR BUILDING WITH **13 RESIDENTS**

And It Is Aging.



30% Decrease in Federal Capital Funding Since 2001



Data Source: NYCHA Finance

■ Annual Federal Capital Grant
■ Cumulative Loss versus 2001 Funding Level

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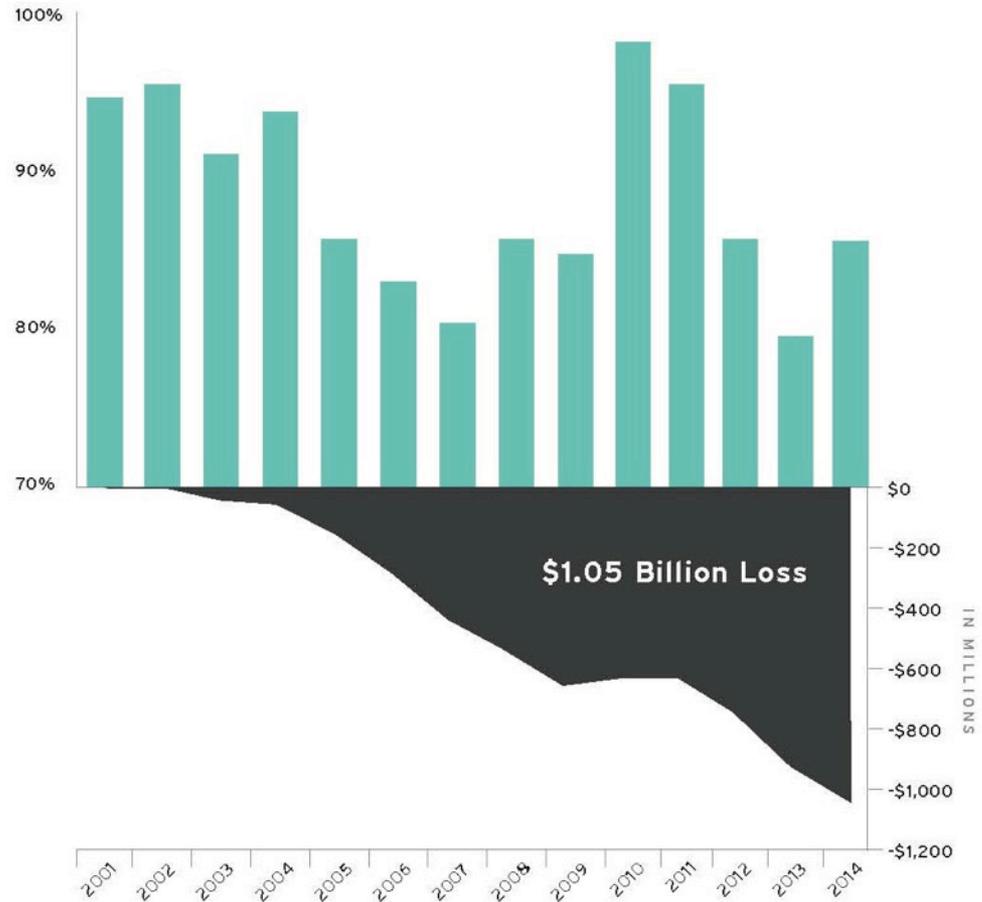
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\$1 Billion Loss in Operating Funding Since 2001

Annual Proration and Federal Operating Funding Cumulative Loss by Year

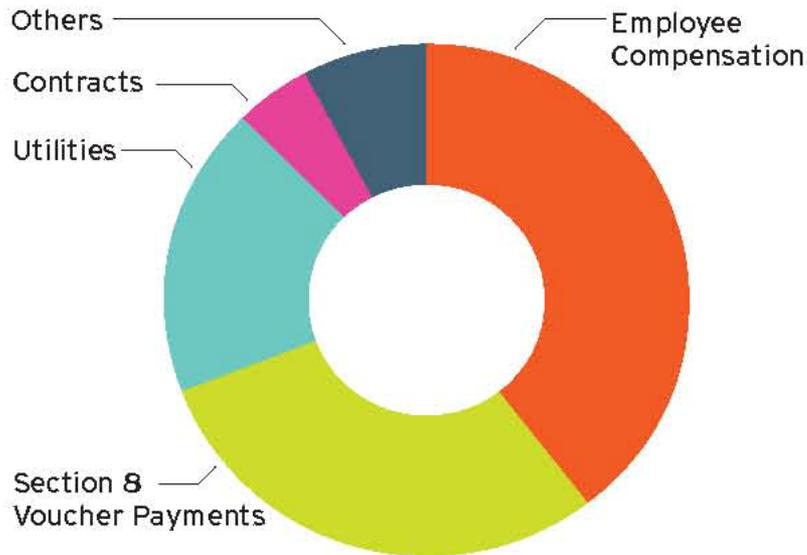
Of the total operating funding NYCHA is eligible for on an annual basis from HUD, NYCHA receives only a portion, due to lower Congressional appropriations. This is known as a prorated amount. This graph shows NYCHA's actual federal funding as a percent of its total eligible funding, and calls out the cumulative loss in eligible funding since federal disinvestment began in 2001.

Data Source: NYCHA Finance

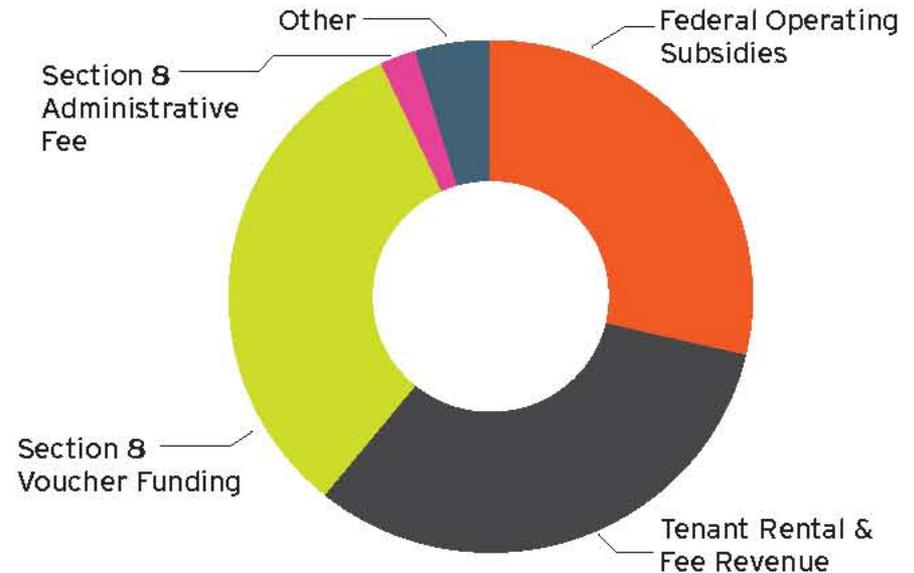


2015: \$98m Operating Deficit

Expenses
\$3.214 Billion

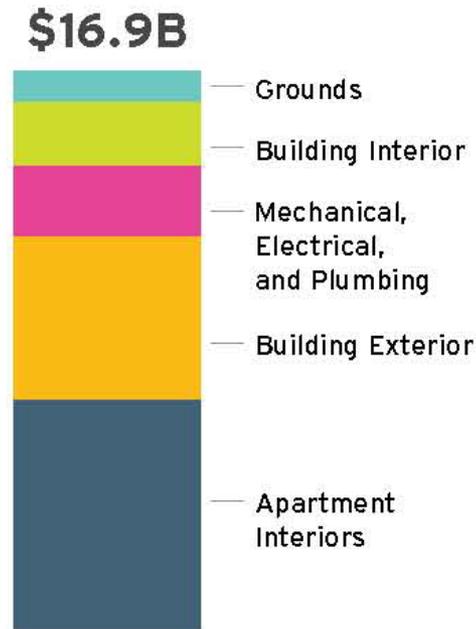


Revenue
\$3.116 Billion



Exteriors Key before Other Improvements

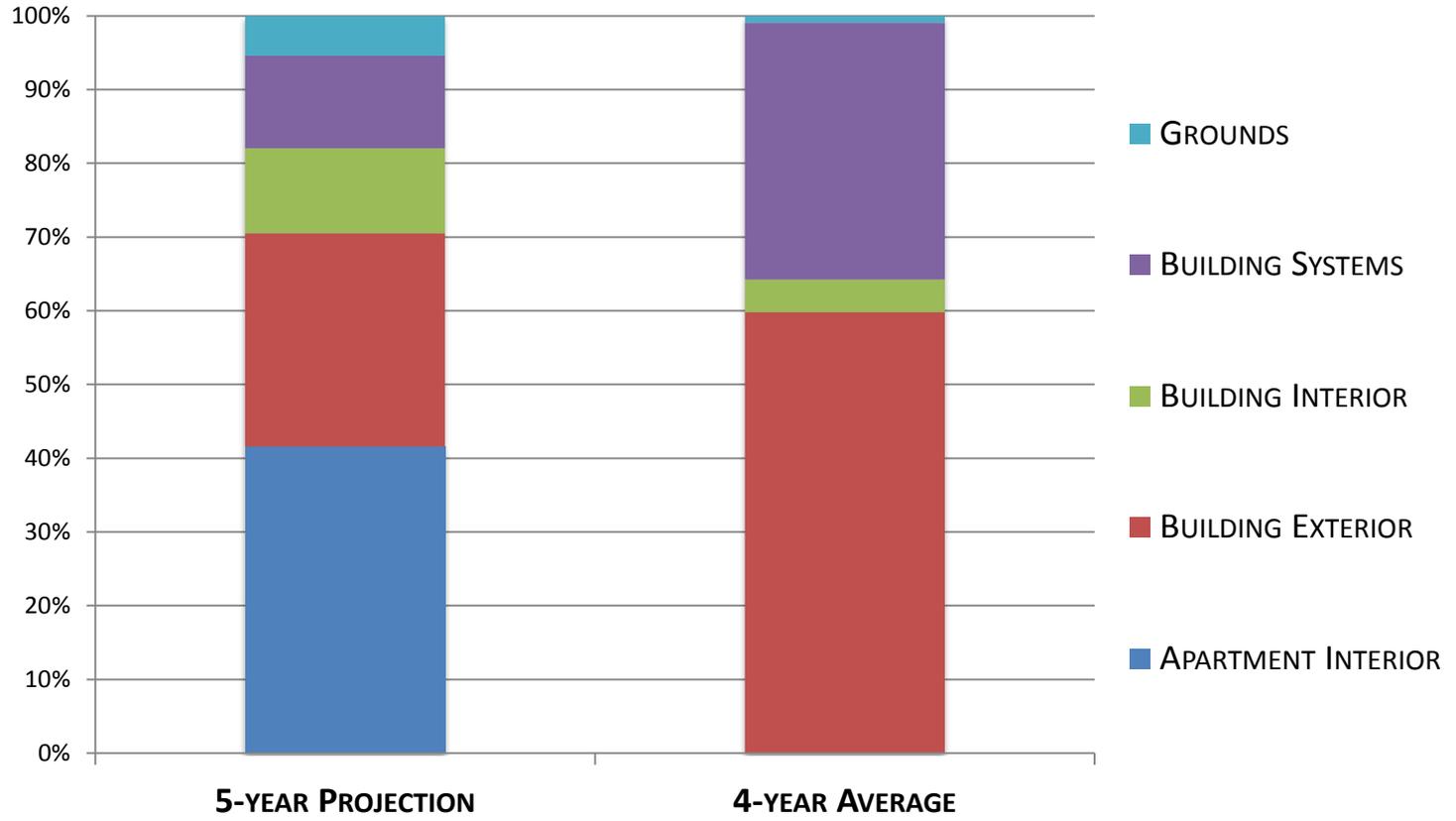
5-Year Unmet Capital Needs



Capital Needs Far Outstrip Available Funds

Total Need:
\$16.6 Billion

Annual Bids:
\$535 Million



Why NextGen, Why Now?

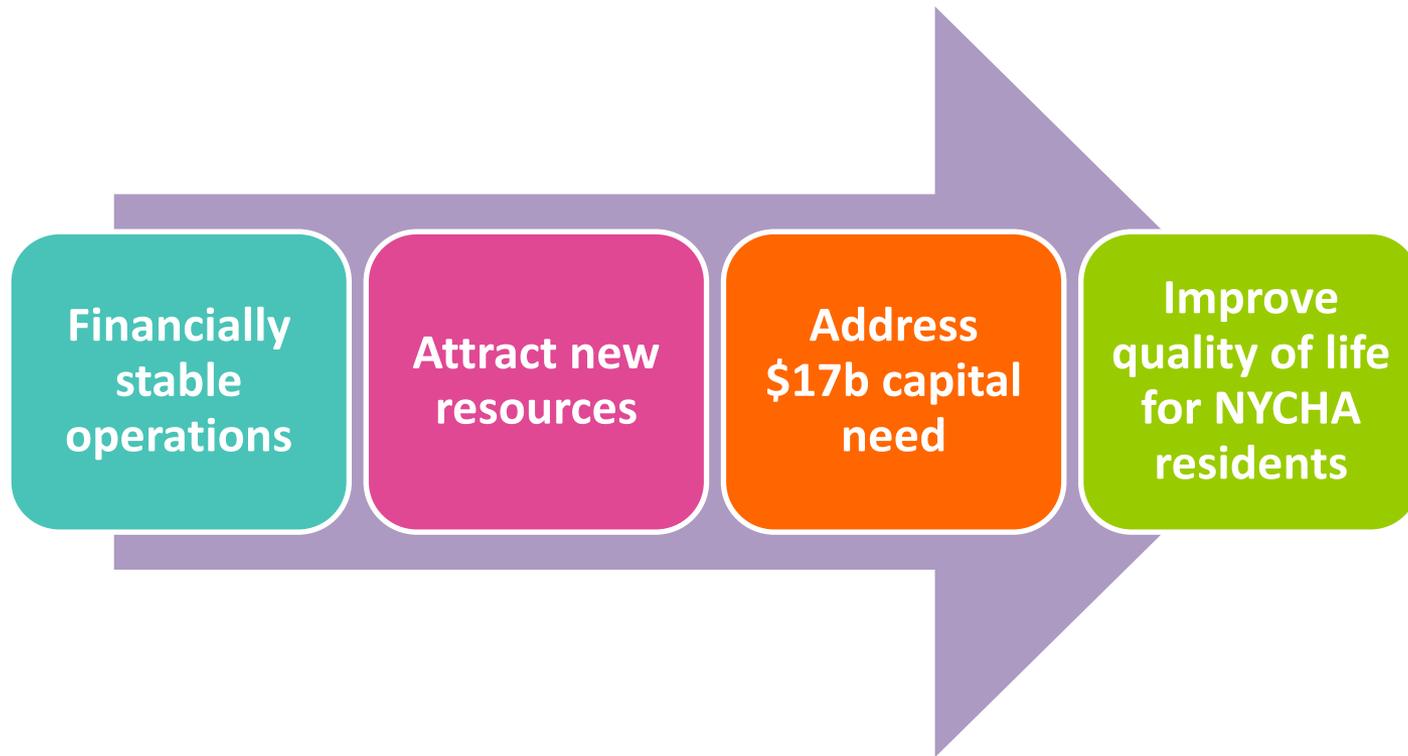
NYCHA must change to preserve the precious resource of public housing

- Aging buildings in need of repair
- Significantly reduced government funding
- Structural deficit
- Large senior population aging in place
- Low-income families in need of affordable housing

What Will NextGen Accomplish?

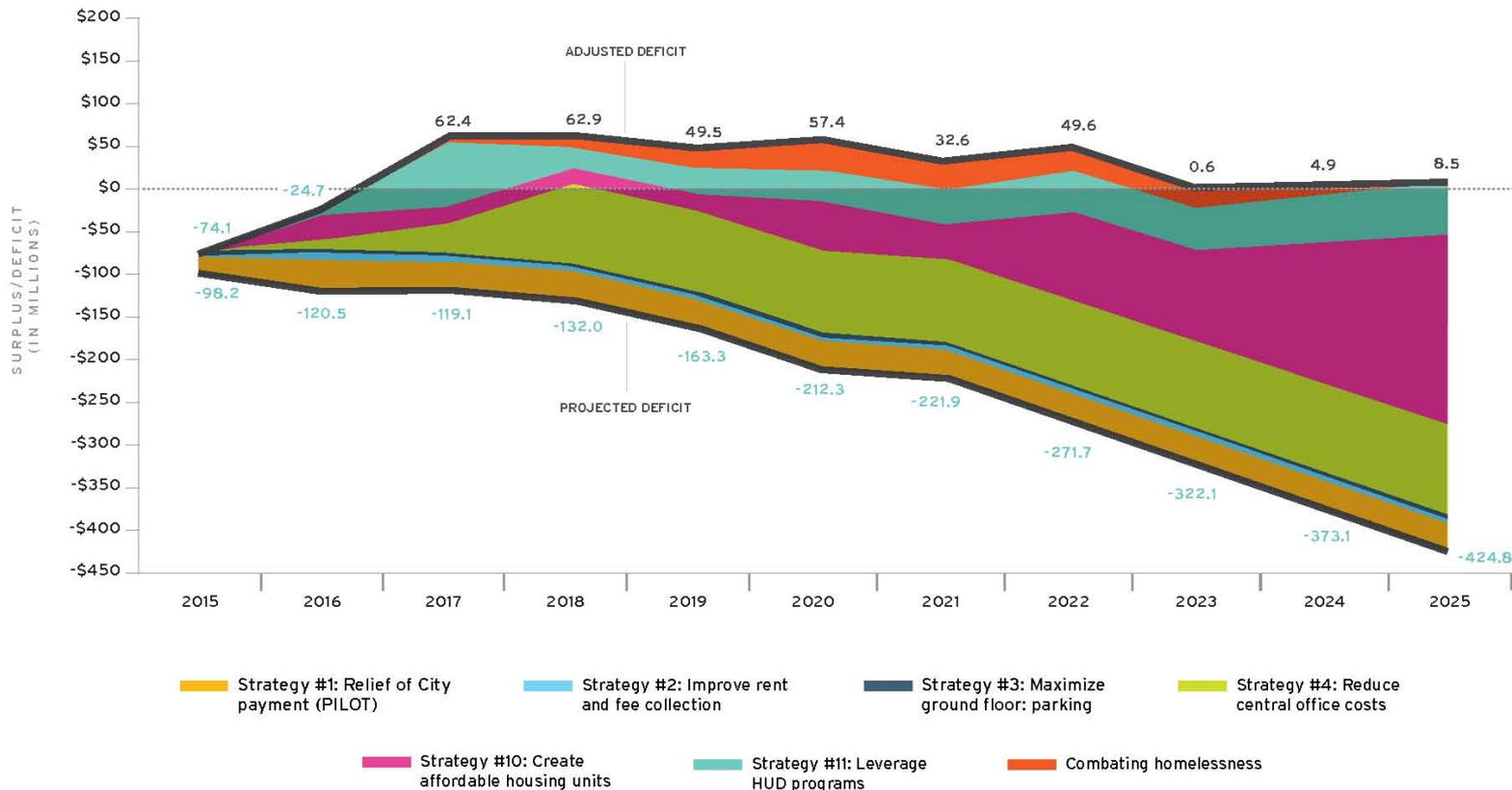
Status quo ⇒ **\$2.5b cumulative operating deficit**

Implement strategies ⇒ **Break-even**



NextGen gets NYCHA out of “the red”

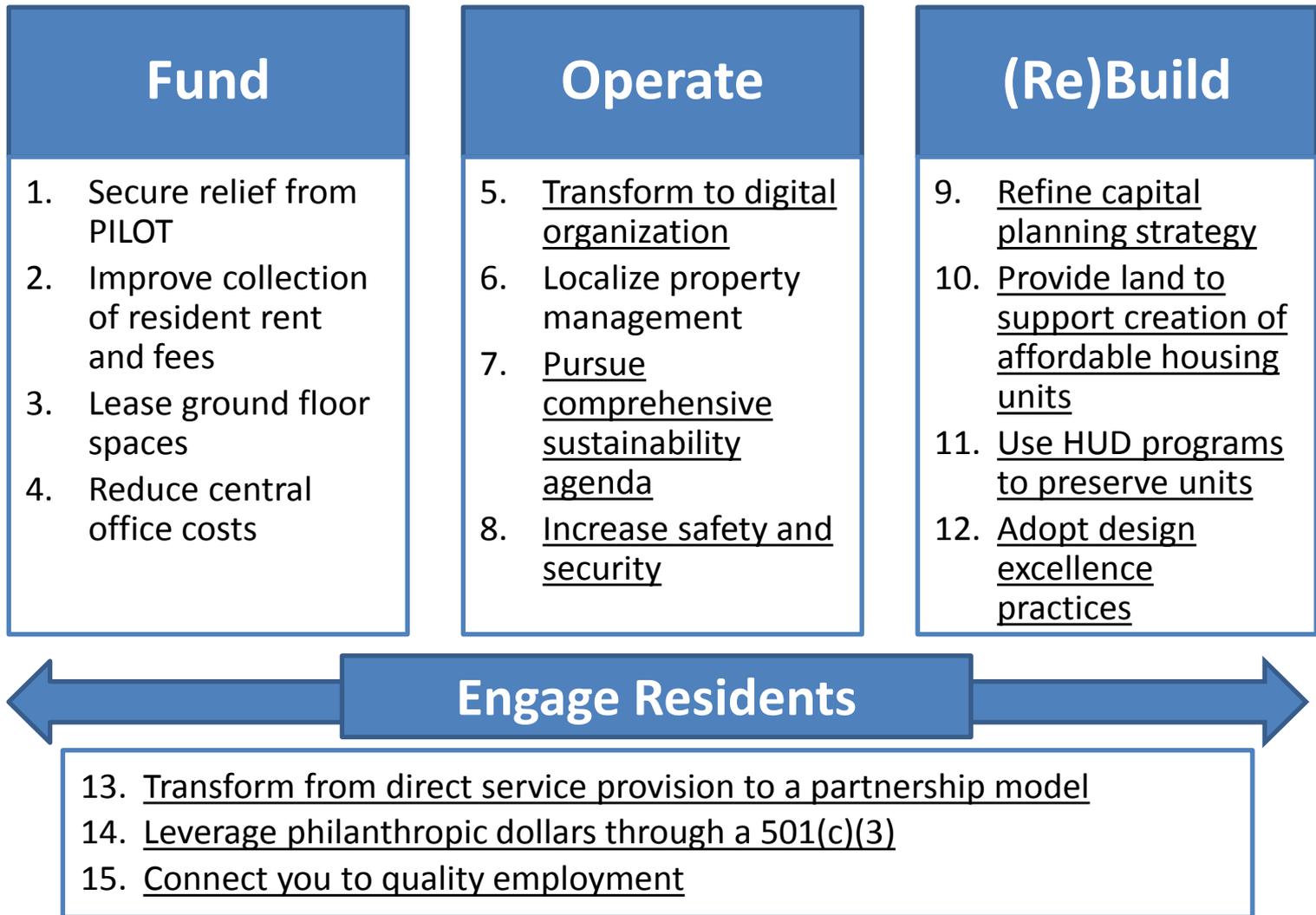
Financial Impact of Select NextGeneration NYCHA Strategies



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Next Generation NYCHA Strategies



NextGeneration NYCHA Transparency

NYCHA Metrics +
Hot Water Outages

Heat &

Live stream Board +
Plan meetings

Annual

Information
Online

2011 PNA +
project contracts +
Sandy Recovery summaries

Capital

All contract awards



The Fund for Public Housing

Shola Olatoye, Chair
Rasmia Kirmani-Frye, President

May 2016

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**The Fund for Public Housing:
MISSION is to Collaborate, Invest and Innovate**

The Fund for Public Housing, Inc., an independent not-for-profit organization, invests in the well-being of New York City Housing Authority residents, and their surrounding communities. We collaborate with public and private industry entities to reimagine and improve the way public housing works.

Fund for Public Housing Framework: Raise \$30M - \$10M for Each Focus Area

PEOPLE:
Residents thrive and reach their full potential

PLACE:
The physical environment is responsive to needs and connected to the surrounding community

WORK:
New structures are in place to generate employment opportunities and economic security

The Fund for Public Housing invests in the well-being of NYCHA residents. We collaborate with public and private entities to dramatically improve the way public housing in New York City works.

Health

Education

Human Capital

Sustainability

Technology

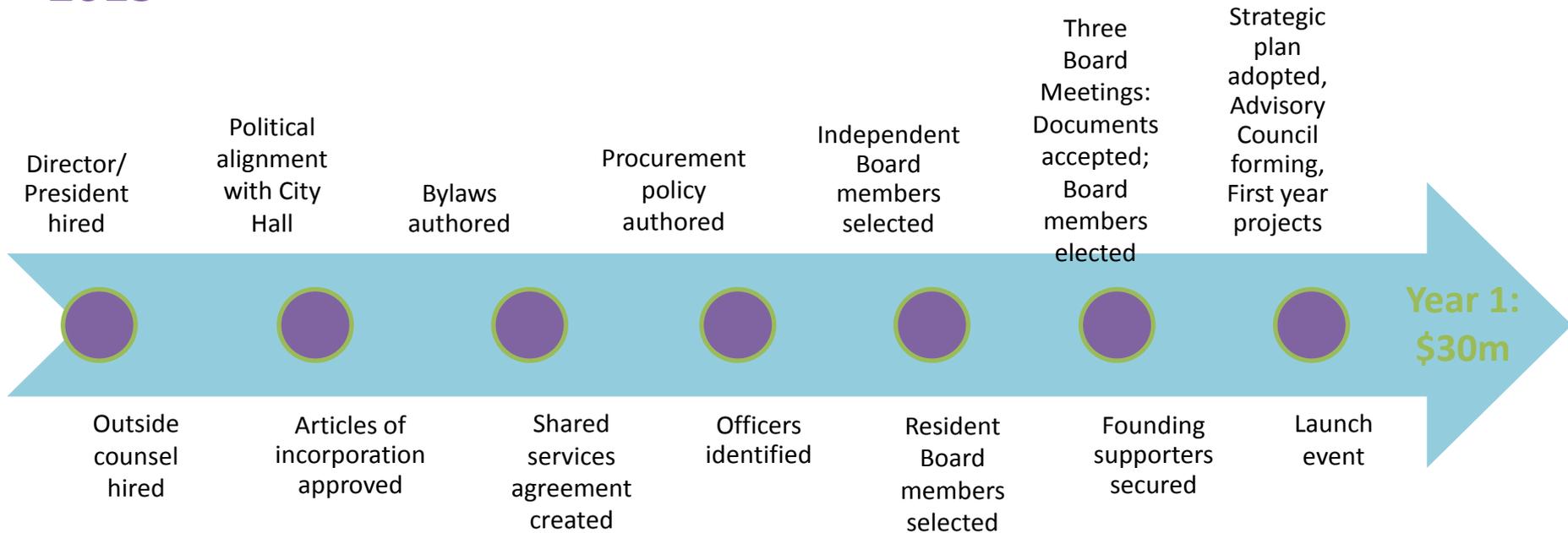
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Fund for Public Housing Milestones

March
2015

May
2016



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FPH Board of Directors

- **Shola Olatoye**, NYCHA Chair and CEO: Board Chair
- **Scott Anderson**, President, Intersection
- **Jennifer Jones Austin**, CEO, Federation of Protestant Welfare Agencies
- **Melanie Hart**, Executive Vice President, NYCHA
- **Diatre Padilla**, The Architectural League of New York, Resident
- **Latiya Stanley**, Hunter College, Resident
- **Renu Pani-Chakravarty**, Associate General Counsel, NYCHA

Year One Goals: People

Focus Area	Project	Goal	Status
PEOPLE	Create a Resident Leadership Academy to help residents achieve professional success and support community development.	Identify institutional partner(s), develop curriculum, and select initial population of participants.	<ul style="list-style-type: none"> Working with CUNY's Murphy Institute to develop curriculum, negotiate partnership and raise funds
	Expand relationship with University Settlement	Decrease evictions, stabilize families, increase rent	<ul style="list-style-type: none"> Project planning and joint fundraising with University Settlement
	Support the establishment of NYCHA Youth Councils with Community Programs and Development	Identify young leaders throughout NYCHA to have a voice in decision-making	<ul style="list-style-type: none"> Capital One funding secured to pilot effort

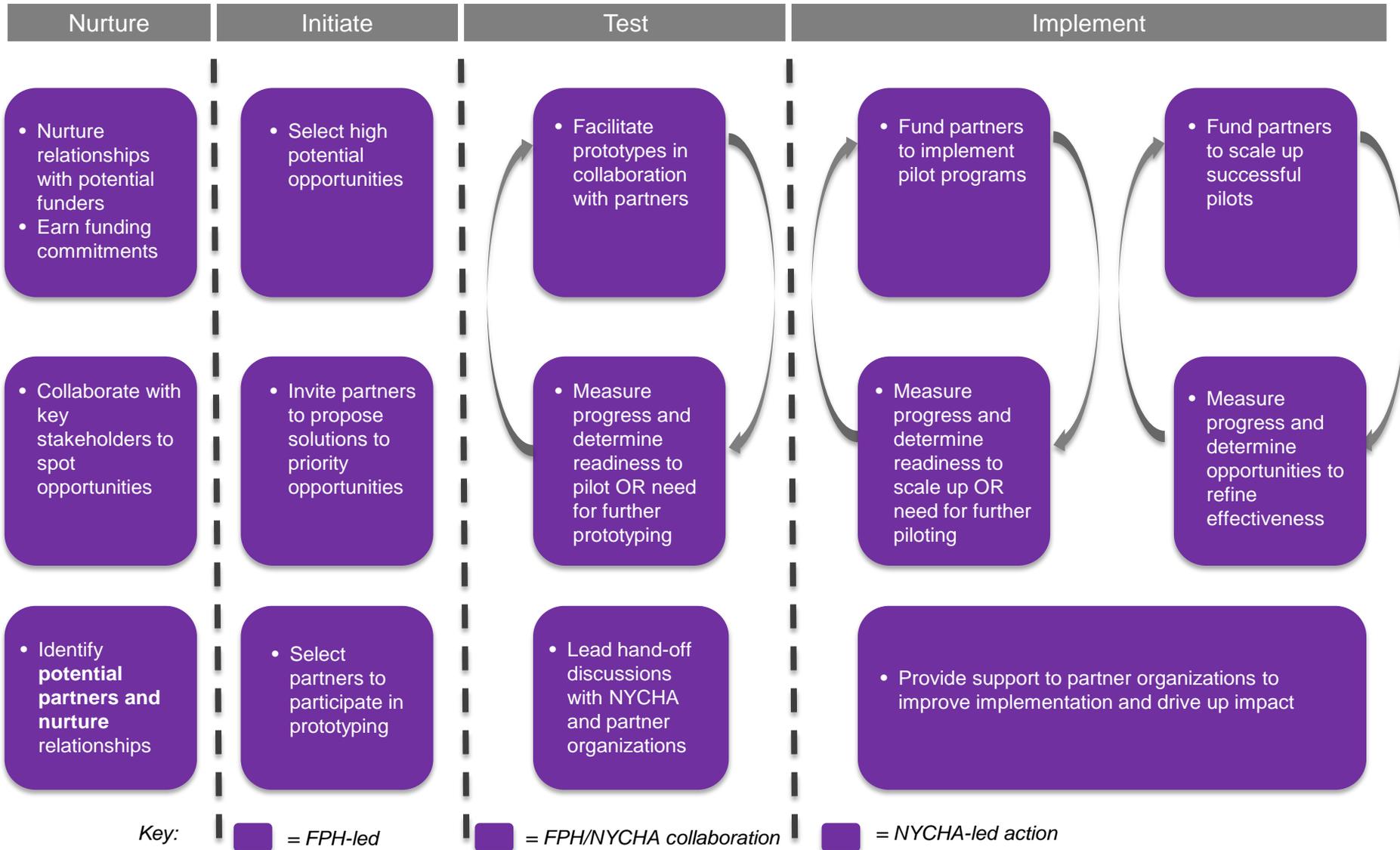
Year One Goals: Place

Focus Area	Project	Goal	Status
PLACE	Redesign NYCHA campuses to make them cleaner, safer, and more connected with surrounding neighborhoods.	Create new design guidelines and begin planning for reimagining of NYCHA campus - towards masterplanning	<ul style="list-style-type: none"> • Robin Hood proposal submitted • Partnering with Arch League and IPA • Scott Anderson, Board Member and Google and Sidewalk Labs engaged • \$100K from Deutsche Bank secured - FIRST INVESTOR
	Curated technology competition that solves NYCHA operational problems.	Tech companies want to help NYCHA solve operational problems. NYCHA uses innovation to become more efficient and effective landlord; resident quality of life improves. New audience.	<ul style="list-style-type: none"> • Grand Central Tech as competition co-organizer

Year One Goals: Work

Focus Area	Project	Goal	Status
WORK	Create capability development programs in technology and physical plant services to expand resident career opportunities and support NYCHA development needs.	Hire an internship manager to recruit 28 residents to participate in NYCHA technology internships and provide on-the-job training for a cohort of 30 residents to enter heating plant careers.	<ul style="list-style-type: none"> proposal submitted Partnering with REES Explore private sector partners to sponsor, like boiler companies
	Expand a resident-owned worker cooperative model to enable resident entrepreneurs to launch and grow businesses. (Resident owned worker cooperatives)	<p>Legally establish the food cooperative, purchase two food trucks, train team members, and launch.</p> <p>Explore cooperatives that respond to gaps in property management.</p>	<ul style="list-style-type: none"> Citi Community Development and "Doorways to Opportunities" investment secured Part of Robin Hood proposal MDRC experts in cooperative models and Unions are now pro-coop

Fund for Public Housing and NYCHA: Process and Roles



Faster and Stronger Social Impact

Over the next three years, we endeavor to raise an endowment of \$200M that will support public housing innovation for years to come. The Fund for Public Housing offers the possibility of faster, stronger social impact and long-term return on investment.



NEW YORK CITY
HOUSING
AUTHORITY

AFFORDABLE HOUSING DEVELOPMENT: FOCUS ON FINANCING AND DESIGN OF NYCHA REAL ESTATE DEVELOPMENT PROJECTS





Agenda

- **Real Estate Development in NextGen NYCHA**
- **Public/Private Partnerships in Financing**
- **Areas that Impact Financing**
- **Public Architects in the Pre-Closing Process**
- **Best Practices for NYCHA Real Estate Development Design**
- **Examples**

NextGen NYCHA

Fund

- 1) Secure relief from PILOT
- 2) Improve collection of resident rent and fees
- 3) Lease ground floor spaces
- 4) Reduce central office costs

Operate

- 5) Transform to digital organization
- 6) Localize property management
- 7) Pursue comprehensive sustainability agenda
- 8) Increase safety and security

(Re)Build

- 9) Refine capital planning strategy
- 10) Provide land to support creation of affordable housing units
- 11) Use HUD programs to preserve units
- 12) Adopt design excellence practices

Engage Residents

- 13) Transform from direct service provision to a partnership model
- 14) Leverage philanthropic dollars through a 501(c)(3)
- 15) Connect you to quality employment



Public/Private Partnerships in Financing

In order to build new affordable housing and preserve NYCHA housing the Authority uses various financing sources from private capital markets and public agencies.

- Tax-exempt bonds, issued by the City or State, are typically used to raise debt for projects.
- Tax credit equity is invested via private investors, typically banks.
- An affordable housing development project usually has a credit enhancement from a bank, FHA, Fannie Mae, etc.
- Subordinated financing comes from other City/State government agencies.

Bond Financing and Tax Credit Equity

- Tax-Exempt Bonds subject to volume cap are the primary source of debt financing for these rehabilitation projects.
- The size of each transaction and the frequency of transactions per year is limited by the available volume cap bonds. NYC HDC and NYS HFA are the only Housing Bond Issuers for the city.

- **Equity - 4% LIHTC**

- Serves low-income populations
- Only eligible for units up to 60% Area median Income (AMI)
- “As-of-right” for projects financed with tax-exempt bonds
- 15 year compliance period
- Investors receive a federal tax benefit over a 10 year period

Project X



Eligible Basis	10,000,000
x Applicable Fraction	<u>100%</u>
Qualified Basis	10,000,000
x Applicable Percentage	3.2%
Annual LIHTC	320,000

Other Funding Sources

- **City/State Subsidy**

- The City/State invest money as mezzanine debt into many affordable housing transactions.
- The amount of the loan(s) is based on the area median income (AMI) levels being targeted in the transaction.

- **NYCHA Seller's Note**

- Acquisition prices based on capitalization value of net operating income and/or independent appraisals.
- At closing, acquisition is financed by Seller's Note. The deferred amount is considered a source of funds. The balance will be paid out of project cash flow over the term of the Note.

Areas that Impact Financing

- **Rental income can restrict the amount of permanent debt that can be raised to finance the project**
- **Maintenance and operating expenses vary based on items like market pricing (e.g. oil) and other supportive services**
- **High construction costs can make financing tight**
- **All these areas that impact financing can directly impact the overall design and site planning of a final project**

Rental Income

- **Tax Credit Rents**

- Calculated as 30% of area median gross income and accounting for the number of bedrooms in the apartment.
- Usually includes a utility allowance.

- **Section 8 Rents**

- Subsidy amount based on fair market rent and a rent reasonableness study.
- Residents pay 30% of their income towards rent.
- The balance of the rent is paid through federal subsidy up to the established fair market rent.

- **Public Housing Rental Assistance Demonstration (RAD) Rent**

- Subsidy amount based on public housing subsidy, which is lower than Section 8.
- Residents pay 30% of their income towards rent.



Maintenance and Operating Expenses

- **Underwriting Standards**

- Bond issuers and lenders generally have standards that they like deals to be underwritten to.
- Many hesitant to underwrite to lower energy costs unless historical data is sufficient.

- **Reserves**

- Typically \$250 per unit of operating reserves
- Can vary depending on risk and lender

- **Other Requirements**

- Other reserves such as a social service reserve may be required to pay out of operating
- Park or ancillary property maintenance



Construction Costs

- **Project Scale**
 - Lot specific challenges
 - Larger projects can lead to more units but also more expensive construction (e.g. wood-frame to steel)
- **Community Concerns**
 - Integration with surrounding community
 - Address community opposition (e.g. may need to include other items like parks)
- **Price of construction labor**
 - Highly market specific
 - Level of workforce unionization and financing sources
- **Regulations**
 - May prohibit innovative building techniques

Typical Pre-Closing Milestones

Public architects work on incorporating design and site planning into projects throughout the pre-closing process



* Critical touch points for public architects in the process

Best Practices for NYCHA Real Estate Development Design

- **Direct involvement of residents and resident concerns being addressed in the forefront**
 - Town halls
 - Visioning sessions
 - Small working groups
 - Tenant Associations
- **Support alternative strategies**
 - RFP design guidelines that support areas like sustainability
 - Development proposals that are innovative and can help control costs (e.g. passive housing)
- **Good site planning**
 - Integration with the current NYCHA developments
 - Upgrading amenities that can serve entire community
 - Fabric of neighborhood

NextGen NYCHA Visioning Sessions

- NYCHA is currently planning new construction at NYCHA Holmes (MN), Wyckoff (BK), Ingersoll (BK), Van Dyke (BK) and Mill Brook (BX) developments
- NYCHA has engaged residents through site visioning sessions to get feedback on the proposed sites for development and building features



Arbor House for North Atlantic

Basics

- Bronx
- 124-unit affordable units
- 60% AMI or below residents with NYCHA preference

Key Elements of Design

- Rooftop hydroponic farm that serves residents and community
- Artwork by local and notable artists
- Living green wall in lobby providing fresh oxygen
- Platinum LEED Certification
- Construction primarily used local and recycled products and 95% waste was recycled and diverted from landfills
- Met NYC Active Design Guidelines
- Community space



Developer: Blue Sea Development Company / Architect: Danois Architects

Integration with NYCHA

- Located at Forest Houses
- Pedestrian walkways to integrate site
- Integrated landscaping
- Access to rooftop farm

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Milbank-Frawley

Basics

- Upper Manhattan
- Existing NYCHA development
- Part of a portfolio rehab of six-developments

Existing Problems

- Entries inconsistent to overall design language
- Poor condition and integration of storefronts
- Unappealing entries to courtyard
- Building entries had a poor choice of materials and limited natural light
- Signage was outdated, no common standards and insufficient information
- Limited landscape program
- Heavily used green space with few amenities



Design Strategy

- Inventory existing physical problems
- Implement practical solutions for existing problems
- Design overlay and social strategy

Milbank-Frawley



Retail component in disrepair

Escape stairs deteriorated

Poorly designed and dated entry elements

Window guards/AC units inconsistent

Change red paint

Courtyard landscape/hardscape neglected and undeveloped

Original architectural details in need of renovation and maintenance

Signage, utilities, lighting, security outdated and poorly designed

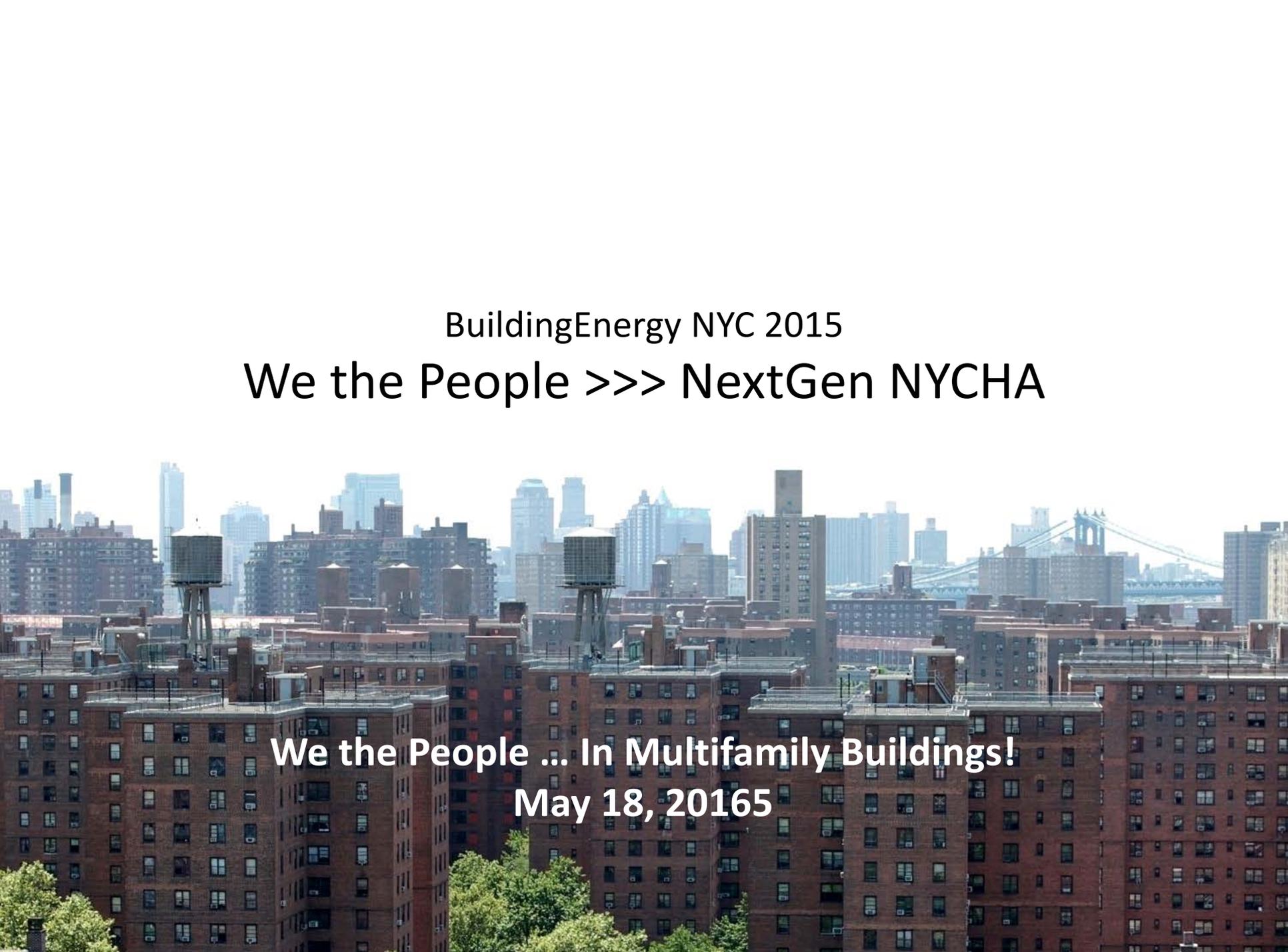
Milbank-Frawley

Solutions

- New design language for hardware and security features
- Redesigned entries that take advantage of natural light
- Contemporary signage and incorporated into architecture
- Updated utility infrastructure while also concealing and improving with new architectural framework
- Activate green space with amenities that can be used by residents
- Improve street façade experience
- Tie in redesigned entry elements to existing



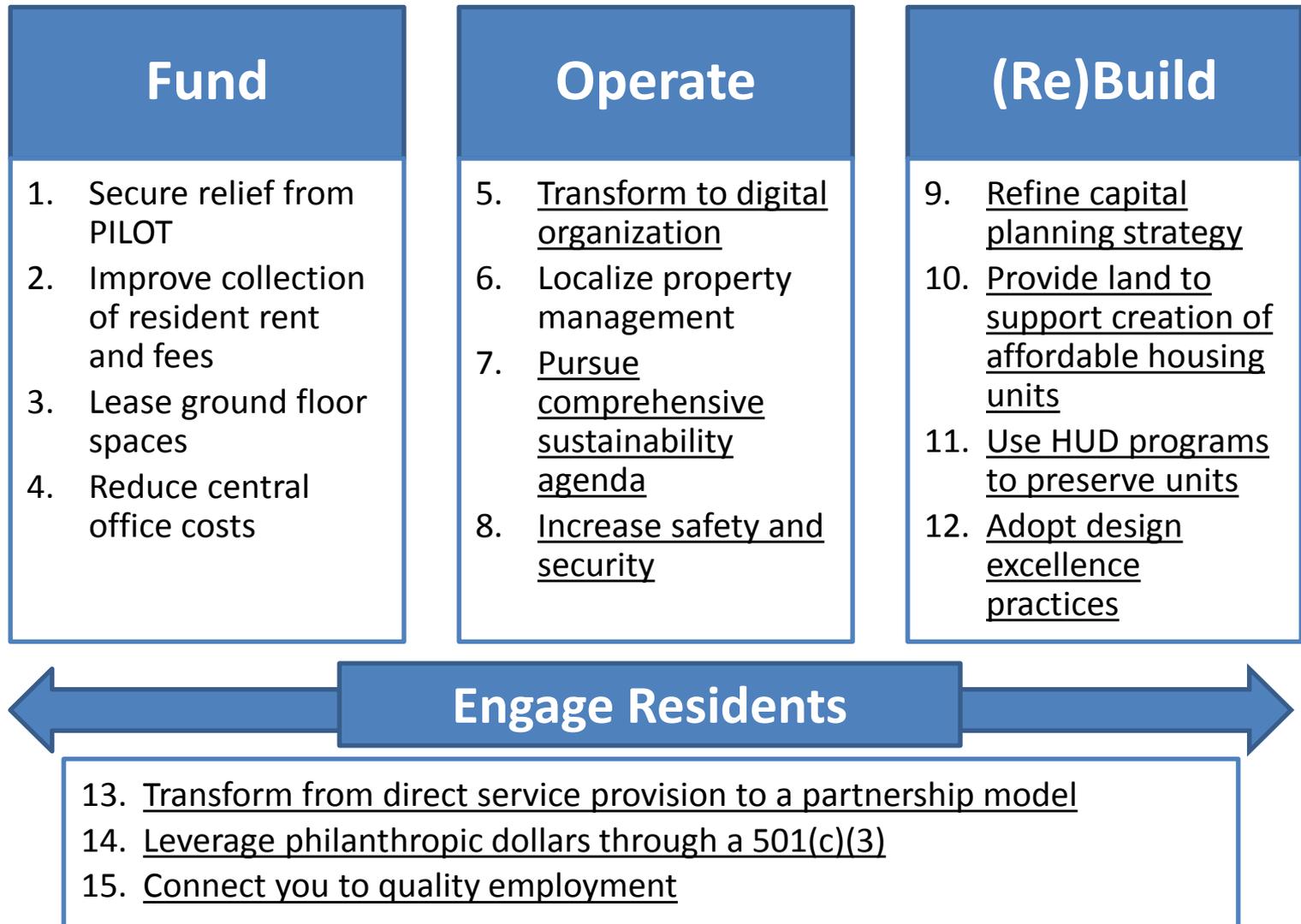
Developer: Triborough Preservation Partners / Architect: Global Design Strategies and OCV Architects



BuildingEnergy NYC 2015
We the People >>> NextGen NYCHA

We the People ... In Multifamily Buildings!
May 18, 2016

NextGeneration NYCHA Strategies



NextGen NYCHA Sustainability Agenda

- Focus on enhancing our **core capacity as a housing provider**
- Address all four key sustainability responsibilities:
 1. **Healthy indoor environments** / IEQ
 2. **Energy** (Retrofits, management, distributed generation strategy)
 3. **Water** (Retrofits, in-building and on site management)
 4. **Waste** (Reduction and management)
- Extend the discipline of **performance metrics** beyond energy
- **Integrate sustainability** into the “common practice” in Development, Capital, and Operations divisions
- **Engage residents** in sustainability through highly effective partnerships

Bricks and Roofs



State of the Art in 1939

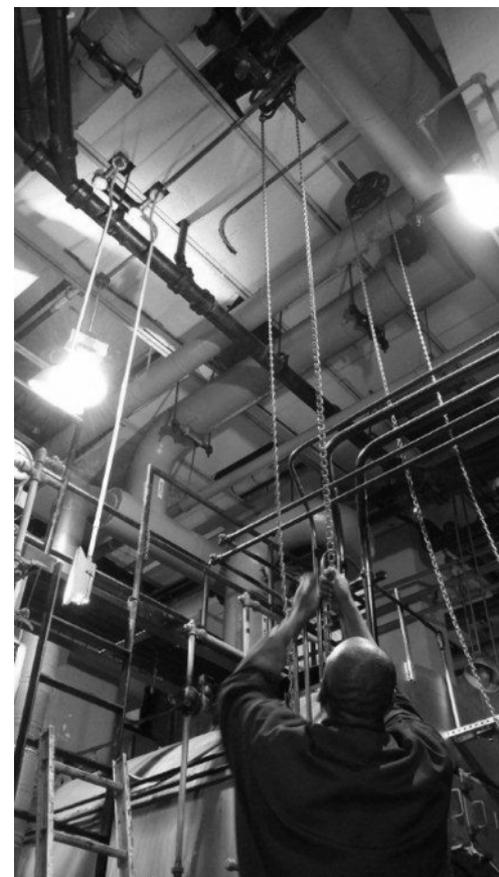
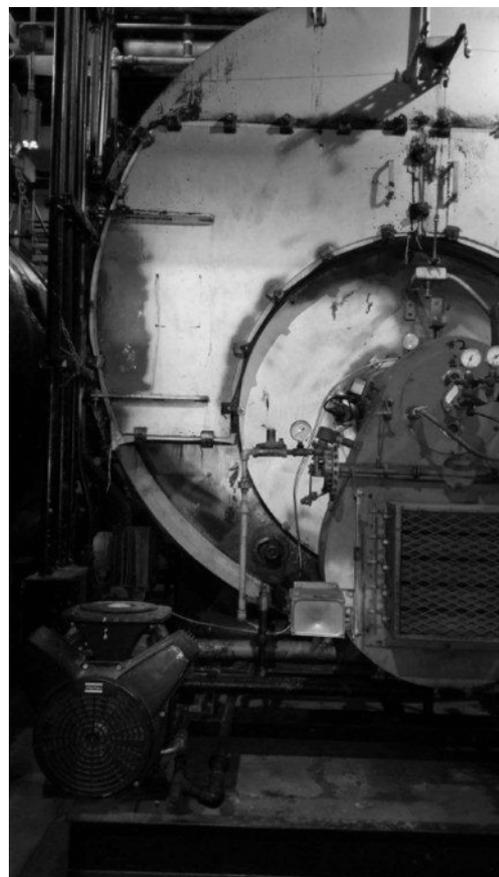
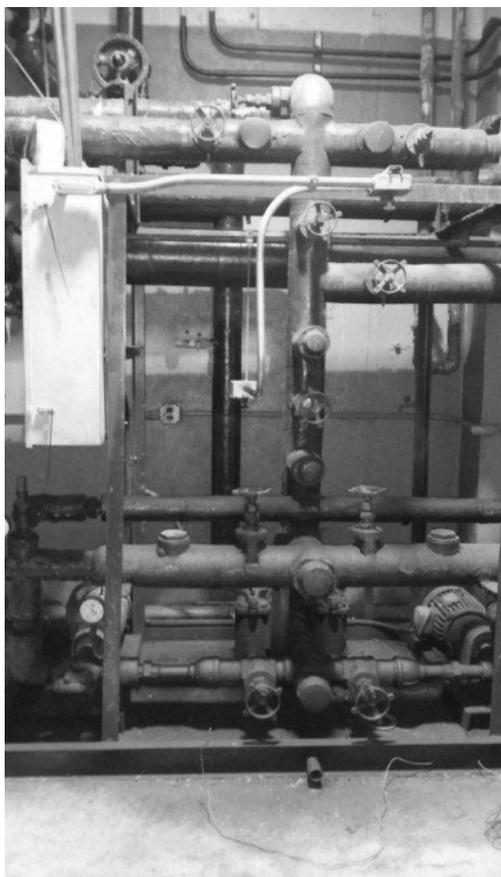


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By and large, still there.

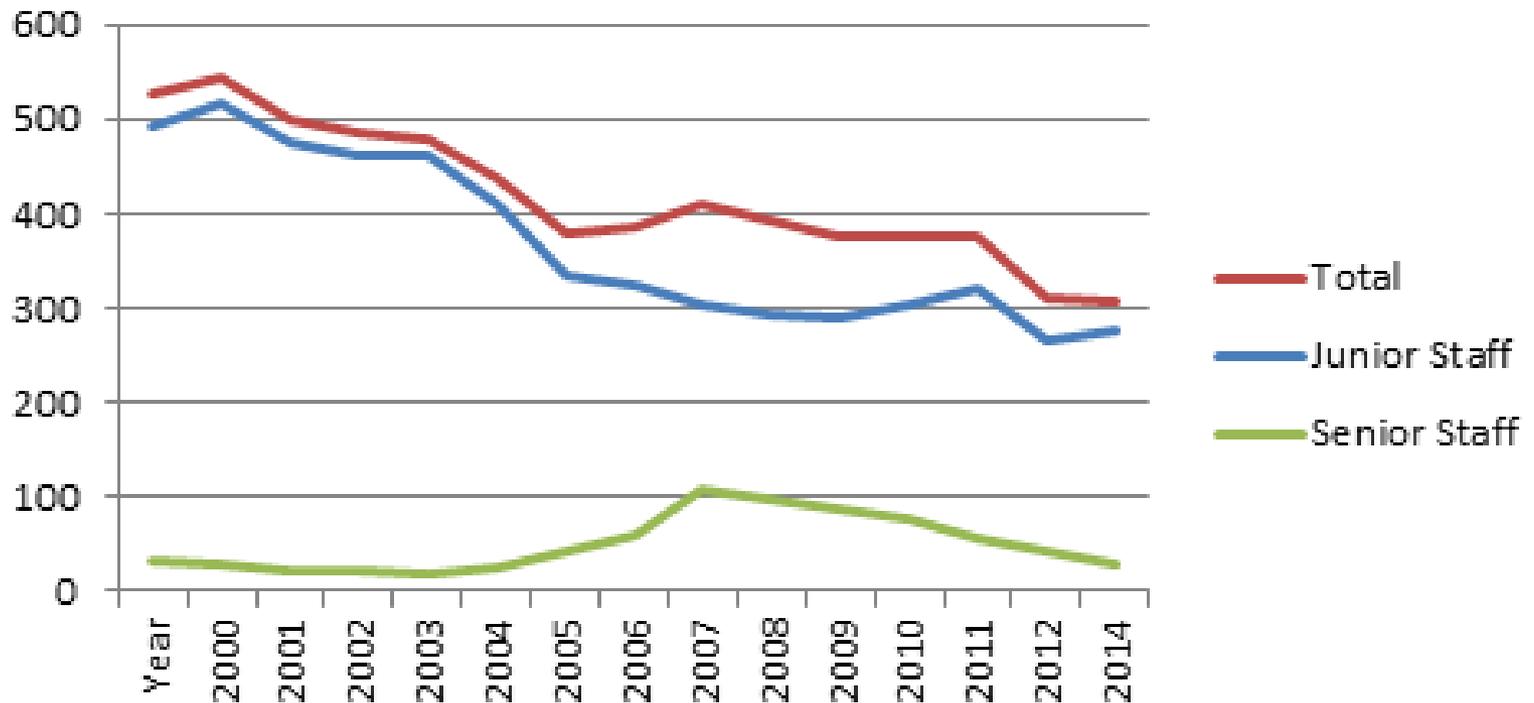


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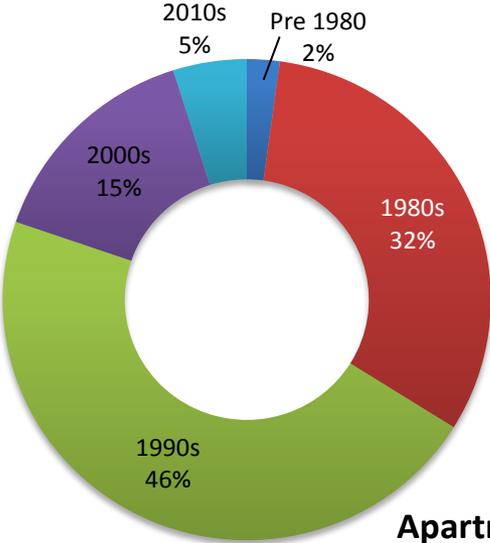
Meanwhile...

42% Decrease in Heating Technician Count
2000-2015

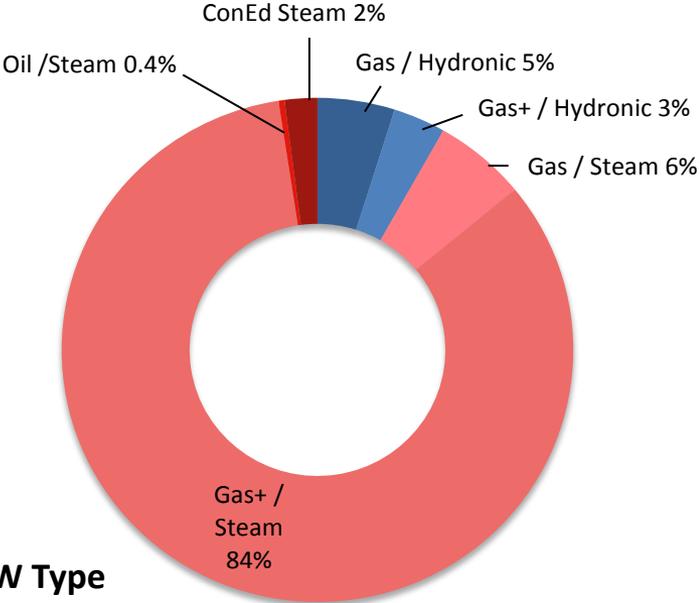


What's the installed technology?

Apartments by Boiler Vintage

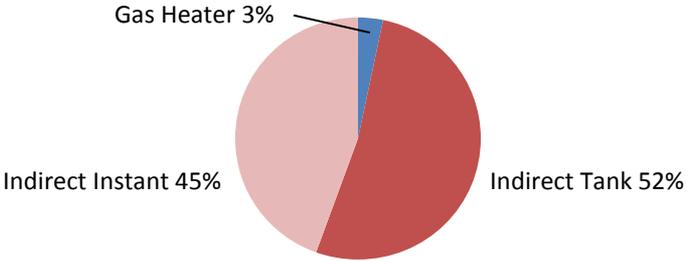


Apartments by Fuel & Distribution Type

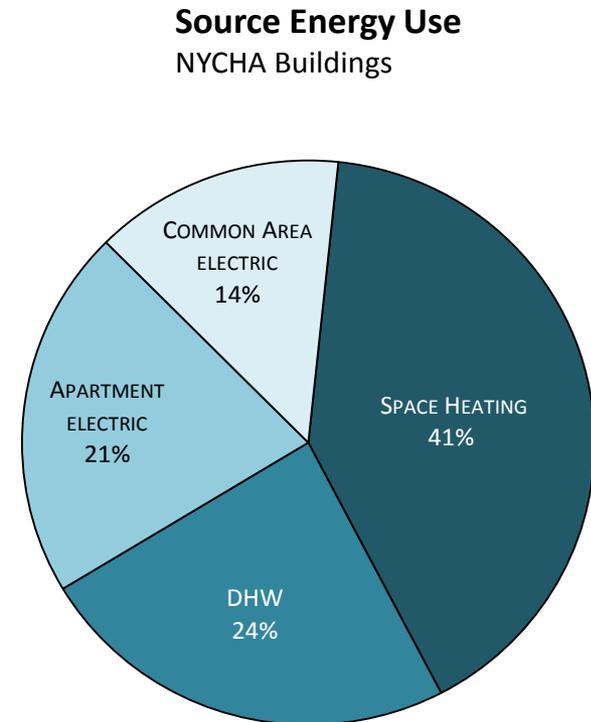
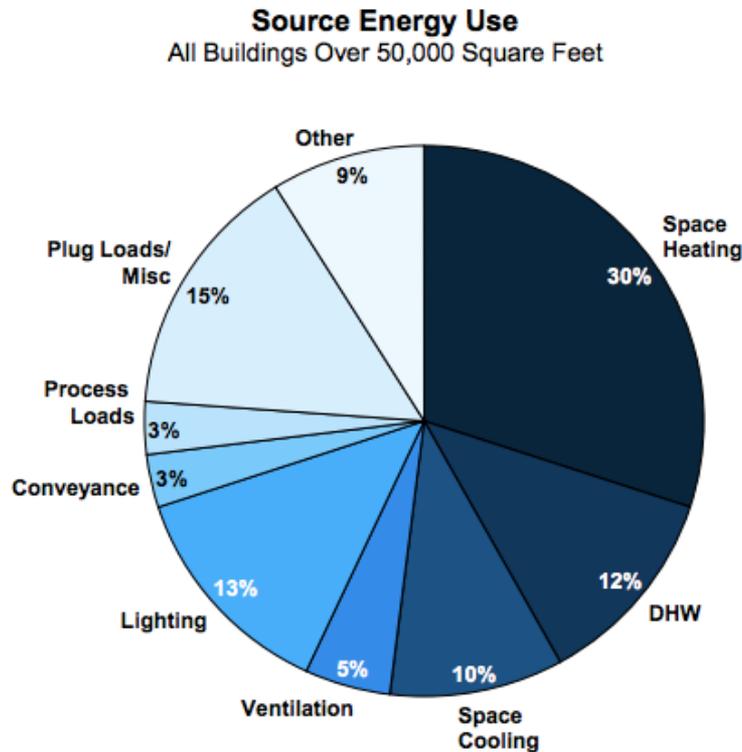


Gas+ is firm gas with dual-fuel burners

Apartments by DHW Type

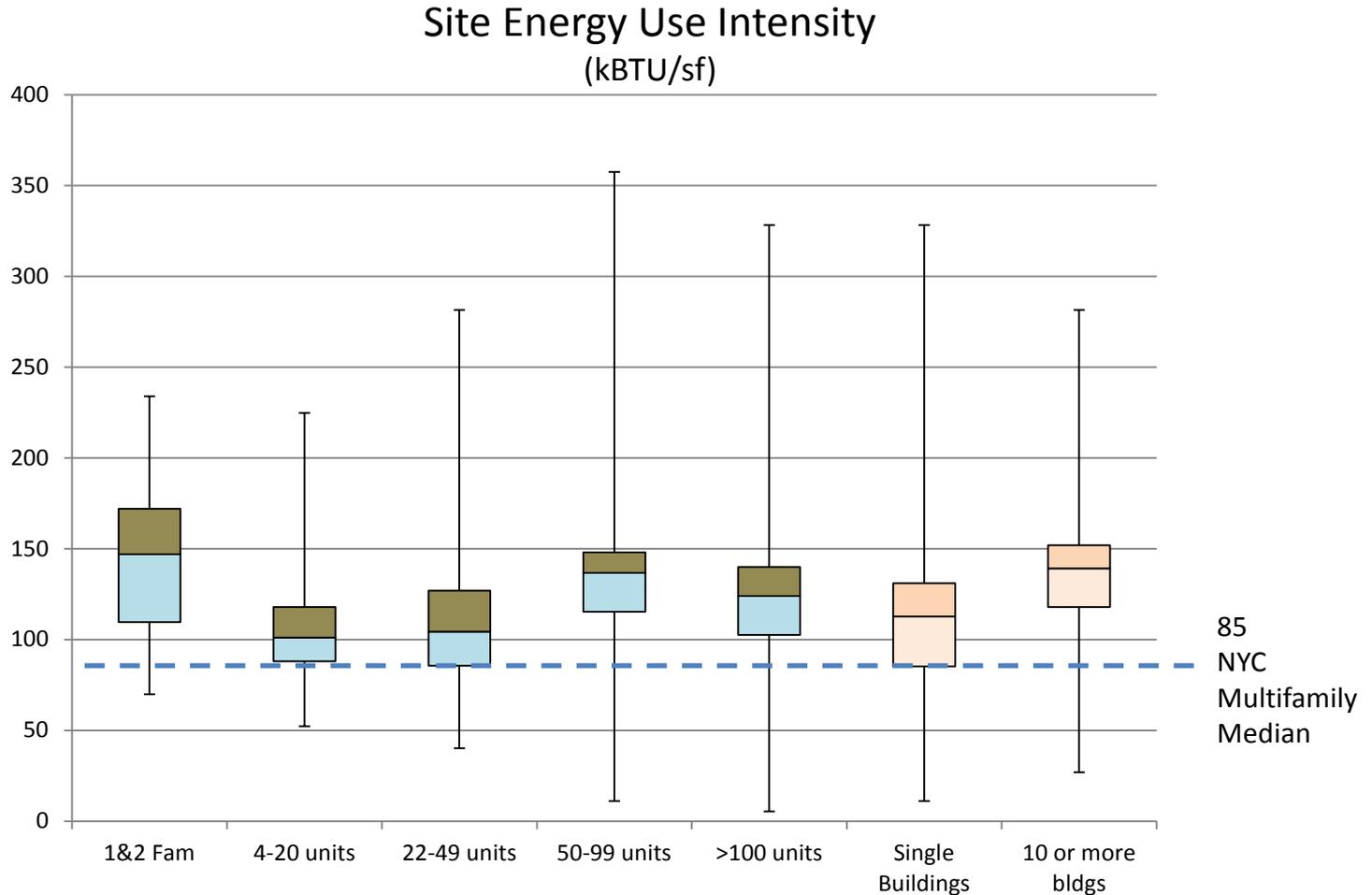


Energy: Where's it going?

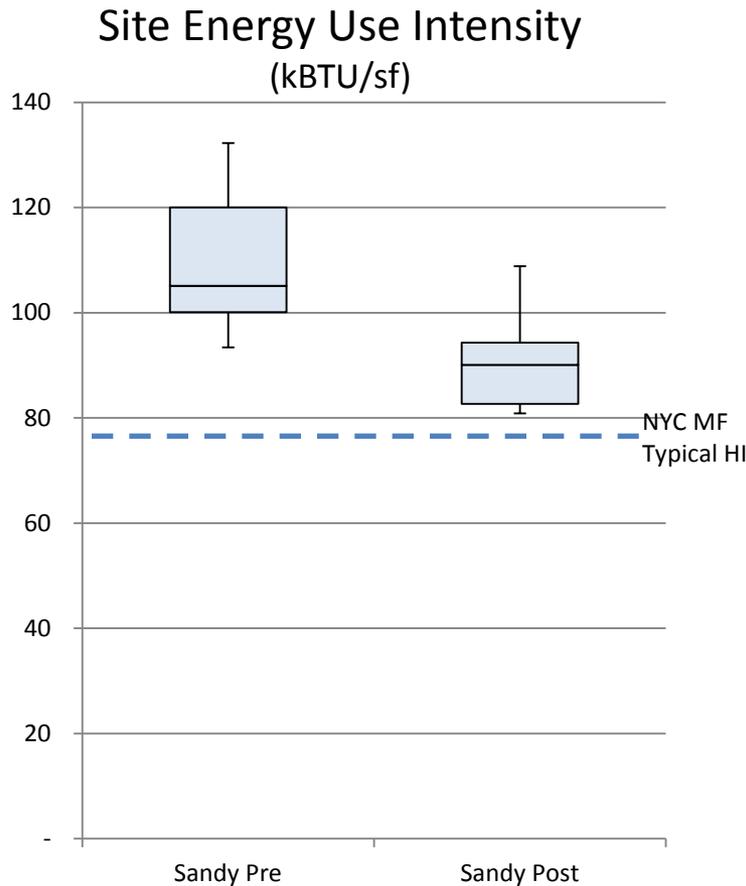


NYC Mayor's Office of Sustainability

Energy: How are we doing?



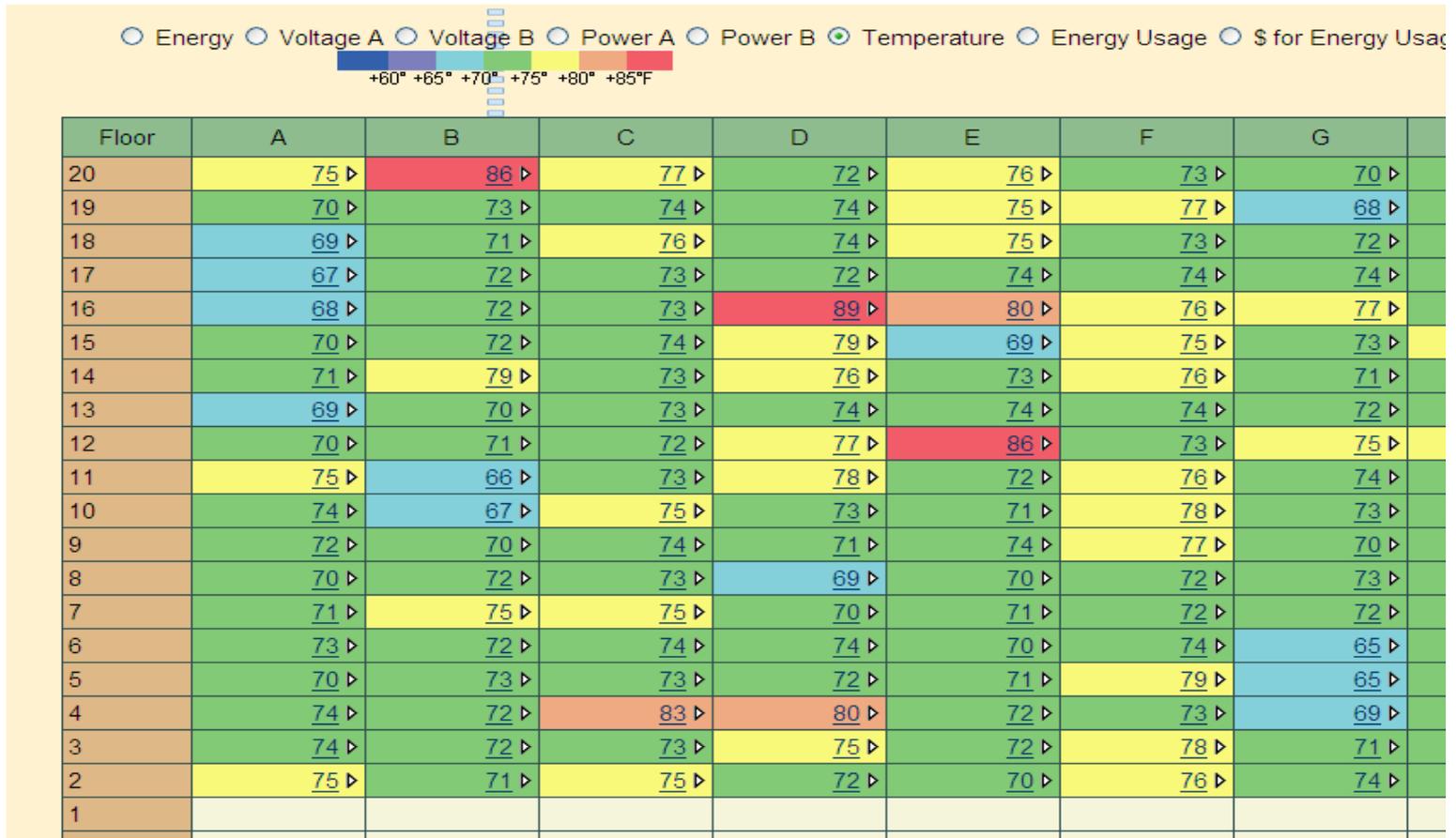
Energy Efficiency Retrofits



Typical Scope of Work

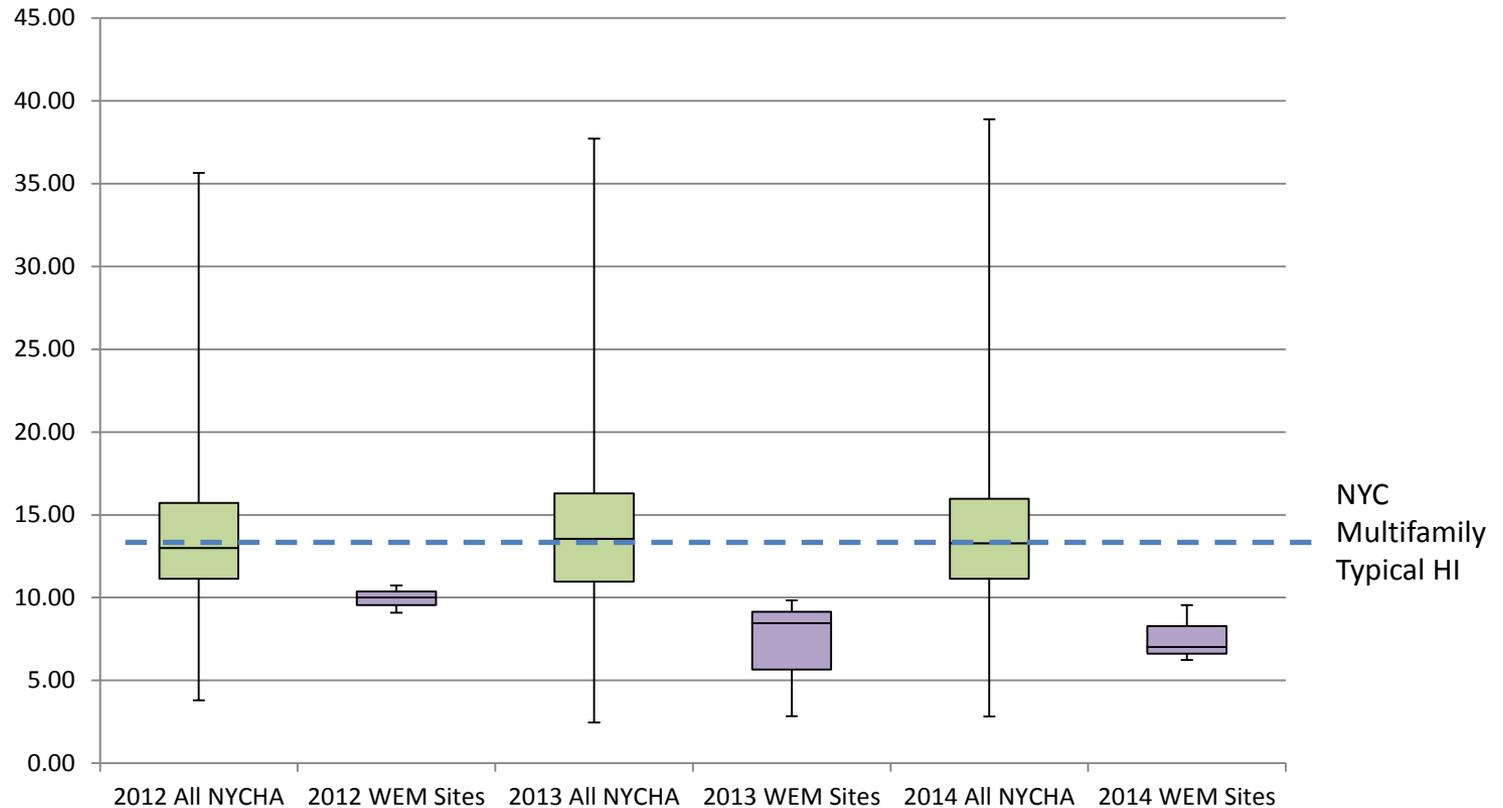
- Water-saving Fixtures
- Lighting - Exterior & Site
- Lighting - Common Area
- Lighting - Apartment
- Envelope - Roof Insulation
- Energy Star Appliances
- Controls - Wireless Energy Modules
- Controls - Steam Traps
- Controls - Thermostatic Radiator Valves
- Boilers - Repair/Replace
- Boilers - Instant Hot Water
- Boilers - Cogeneration

What's real-time monitoring telling us?



Energy: How are we doing?

Heating Index 2012-2014
(BTU/SF/HDD)



Improving Communications



- ✓ Create, view, and schedule work tickets
- ✓ View inspection appointments for your apartment
- ✓ Subscribe to alerts for outages in your development
- ✓ Maintain your contact information

Recycling in all developments by end of 2016



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Making Sustainability Visible

GREENNYCHA

home garden & greening resident green committees news resources calendar contact us

NEW YORK CITY HOUSING AUTHORITY

SEARCH



why the resident green committees
MATTER TO YOU

Resident Green Committees (RGCs) are groups of concerned New York City Housing Authority (NYCHA) residents who are committed to fighting climate change and preserving public housing. We plan projects, organize events, and educate our neighbors about environmental and energy issues. The RGCs are part of NYCHA's [Green Agenda](#), the Housing Authority's program to promote environmental sustainability and reduce energy costs. By increasing the energy efficiency of NYCHA buildings, and connecting residents with "green collar" jobs, NYCHA will decrease its carbon footprint, save on energy costs, and help preserve public housing. Resident participation is crucial to the success of the Green Agenda...

[Read the full story »](#)

 Find us on Facebook

Upcoming Events

October 13, 2015 – Fredrick Samuel RGC Meeting, 6:30 pm

October 14, 2015 – Pomonok RGC Meeting, 6:30 pm

[See All Events](#)

helpful links

- [citizens committee for new york city](#)
- [green city force](#)
- [green thumb nyc](#)
- [idealist](#)
- [materials for the arts](#)

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Fostering Partnerships



GREEN CITY FORCE IS LAUNCHING THE **LOVE WHERE YOU LIVE CHALLENGE AT ADAMS HOUSES!** STARTING MARCH 18TH

LOVE
WHERE YOU
LIVE

Reduce electricity consumption
Reduce greenhouse gases
Help to preserve public housing and the planet
A ceremony will be held to celebrate the winning development this summer!

Starting Monday, March 18th, Green City Force will visit your apartment to install free energy-saving light bulbs and provide tips on how to save energy and water! Corps Members are joining NYCHA residents in training for sustainability careers.

Learn more about the Challenge!

Upcoming Meeting
MONDAY, MARCH 18, 2013 **JOIN US!**
9:30 AM - 1:30 PM
Residents Association Meeting Room
880 Tinton Avenue
Bronx, NY 10455

Green City Force will provide residents with an overview of the Green Challenge.

Questions? Call Green City Force at 718-623-1400 x311

RETO AMA DONDE VIVES EN ADAMS HOUSES 18 DE MARZO DE 2013

AMA
DONDE
VIVES

Reduce el consumo eléctrico
Reduce los gases de efecto invernadero

El miércoles 18 de marzo, Green City Force visitará su departamento para instalar bombillas de alta eficiencia gratis y aconsejarle cómo ahorrar energía y agua. Los miembros del Cuerpo de Green City Force son jóvenes residentes de NYCHA que están recibiendo capacitación para empleos verdes y sostenibles.

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TOWN +GOWN

**Presentation to AIA Public Architects and P3 Development
Town+Gown as a Public Private Partnership
May 18, 2016**

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AIA 65

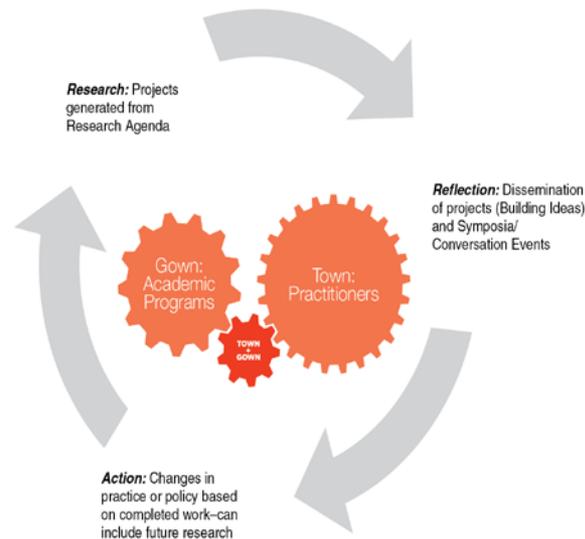
Problem: Long-standing intractable issues in built environment practice point to unresolved systemic dysfunctions that consistently negatively impact built environment processes and projects

Solution: **Town+Gown**

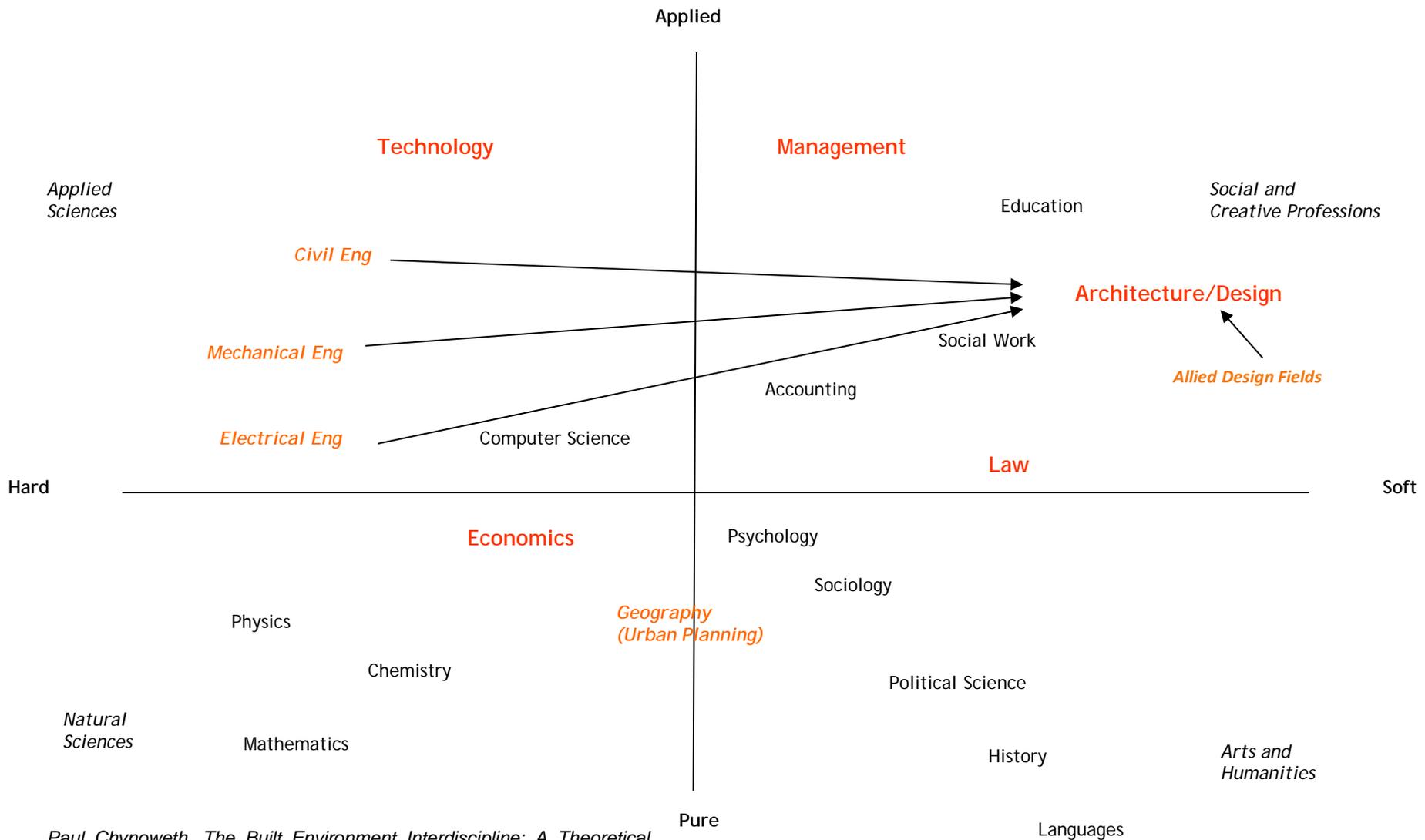
Town+Gown: Public-Private Collaborations in Knowledge Transfer

- provides **open-source platform and shared space** for analysis, documentation and discussion of **underlying systemic causes of dysfunction**, in real time and over time
- **links and supports** academics and government practitioners on applied research projects to **increase overall applied built environment research**
- uses **physical built environment as a laboratory** for interdisciplinary Built Environment field
- **assures equality** between academic and practitioner in **knowledge creation**
- provides **clearinghouse of evidence-based research** for **long-term transformative systemic changes** in practice and policy

Systemic action research program



Action research: “a comparative research on the conditions and effects of various forms of social action and research leading to social action” that uses “a spiral of steps, each of which is composed of a circle of planning, action and fact-finding about the result of the action”. Kurt Lewin



Paul Chynoweth, *The Built Environment Interdiscipline: A Theoretical Model for Decision Makers in Research and Teaching*, Proceedings of the CIB Working Commission (W089) Building Education and Research Conference, Kowloon Sangri-La Hotel, Hong Kong, April 10-13, 2006.

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Town+Gown: Experiential Learning Component

In-kind (i.e., free) exchanges where students provide newly learned skills and practitioners provide real problems with real data and practice information to produce actionable knowledge

- Experiential learning and service learning programs
 - Studios
 - Workshops
 - Capstones
 - Clinics
 - Community service
- Masters and doctorate programs with thesis and dissertation requirements
- Classes and independent study.

Town+Gown: Funded Research Component

Academic Consortium Contract with a pool of academic institutions that stand by to receive Mini RFPs and be awarded task orders for research services:

- Brooklyn Law School
- City University of New York
- Drexel University
- Fordham University
- Manhattan College
- New York Institute of Technology
- New York University
- Pace University
- Pratt Institute
- State University of New York
- The Cooper Union
- The New School
- Tufts University

Any combination of City agencies, State agencies and certain not-for-profit corporations, using their own funds, can utilize the Contract by submitting a Mini RFP to DDC as manager of Town+Gown and as Contract administrator.

Town+Gown: Completed Projects Ready for Action

- Predictive model to estimate public construction project contingency (or total change order) amounts (NYU/Poly/Tandon)
- Life cycle cost model to compare green infrastructure elements on roadway reconstruction projects (Columbia/SIPA)
- Hedonic difference-in-difference model to measure economic impact of City construction projects on surrounding neighborhood (Columbia/SIPA)
- Temporary prefabricated structure design (Pratt/Arch) and interior entrance space design (New York School of Interior Design) to signal public policy change
- Multipurpose underground utility corridor infrastructure ready for public private financing mechanisms

Town+Gown: Projects Underway

School	Project(s)
Fordham/Gabelli	Various data analytics projects with city data sets
Columbia/SIPA	<i>Public private partnership financing of green infrastructure</i>
Columbia/SIPA	“Stopping Trash Where It Starts” (data collection and analysis)
Pratt/Design	Behavioral-based communication design to support grey infrastructure avoidance
Brooklyn Law School	Risk management based comparative contract analysis
New York School of Interior Design	Vestibule interior design construction intent drawing project for public safety building
School of Visual Arts	Electronic bulletin board or “HUB” for public safety building
CUNY/Hunter-Planning	“Assessing and Planning for Community Needs in Brownsville, Brooklyn”
Columbia University	NSF Sustainability Research Network
CUNY/CCNY-Grove	NSF Construction and Demolition Waste Recycling
New School/Parsons-Architecture, Brooklyn Law School (with Fordham Law School)	Use of interior design to increase operational flexibility at juvenile detention facilities for juvenile justice programs

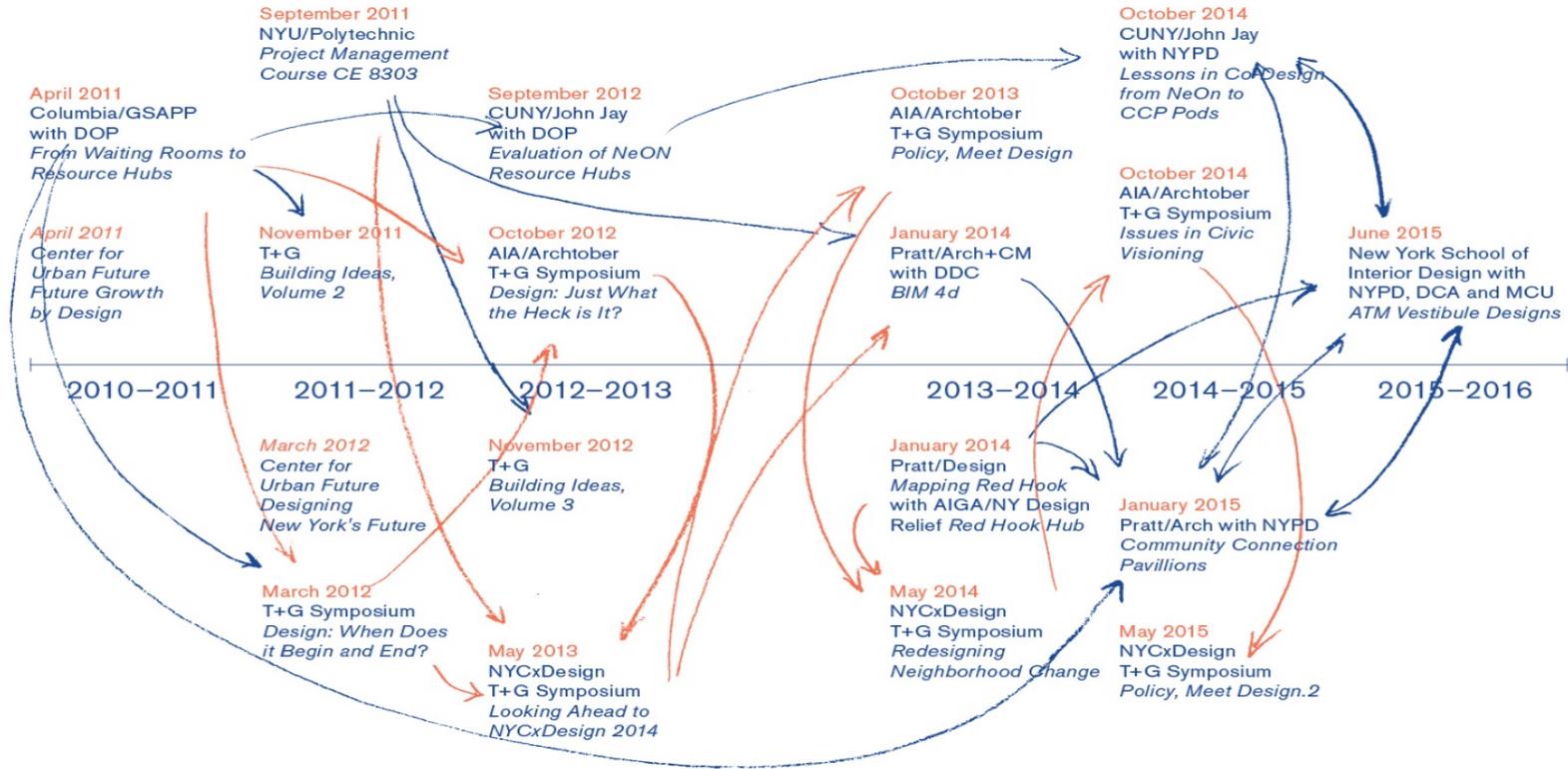
Town+Gown: Case Study Design-Based Research Projects

- Series of Town+Gown's systemic action research sets demonstrates how architectural and small-scale non-architectural interventions can provide public owners with manageable opportunities to use directed and replicable multi-dimensional design-focused processes to help them rethink and improve aspects of their programs and the delivery of program services:
- Department of Probation's *From Waiting Rooms to Resource Hubs* service design project with Columbia/GSAPP in 2010-2011 (the "NeON projects")
- New York Police Department's "peoples' precinct" project at the 73rd Precinct with the Pratt Institute/Architecture, the New York School of Interior Design and the City University of New York/John Jay College of Criminal Justice in 2014-2015 (the "Peoples' Precinct projects")

Town+Gown: Action Research is Messy

Design Pathways in Public Policy

This chart shows the intertwined design and public policy threads in Town+Gown's action research cycles since 2010-2011.



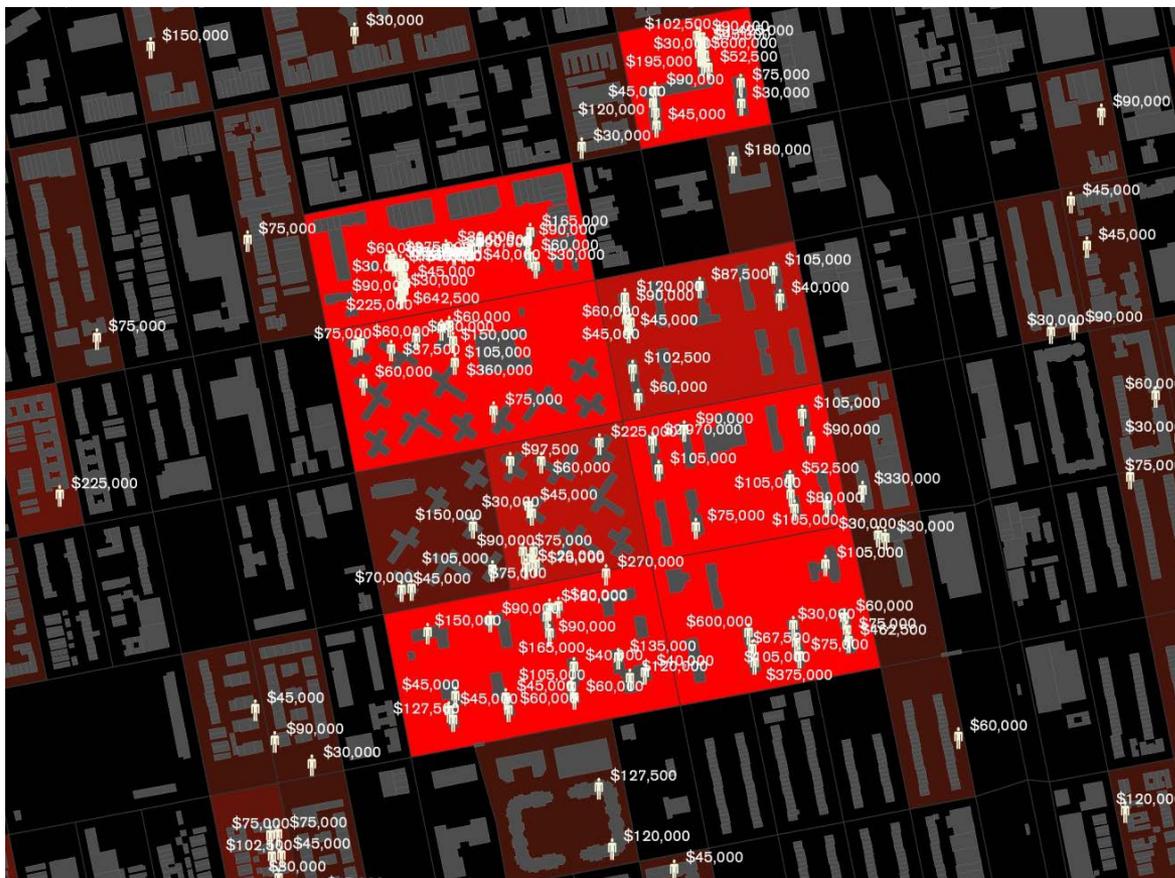
Policy, Meet Design

Design, Meet Policy

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The problem at 30,000 feet . . .



Source: Laura Kurgan, Associate Professor of Architecture, Planning, and Preservation from *Design: Just What the Heck Is It?*, a Town+Gown event in collaboration with the AIANY/Center for Architecture presented in association with Archtober, Architecture and Design Month, New York City, October 17, 2012

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The problem on the ground . . .

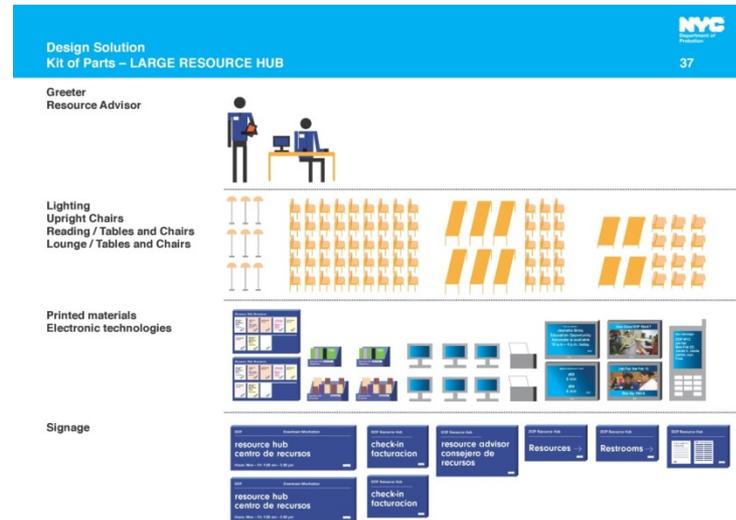
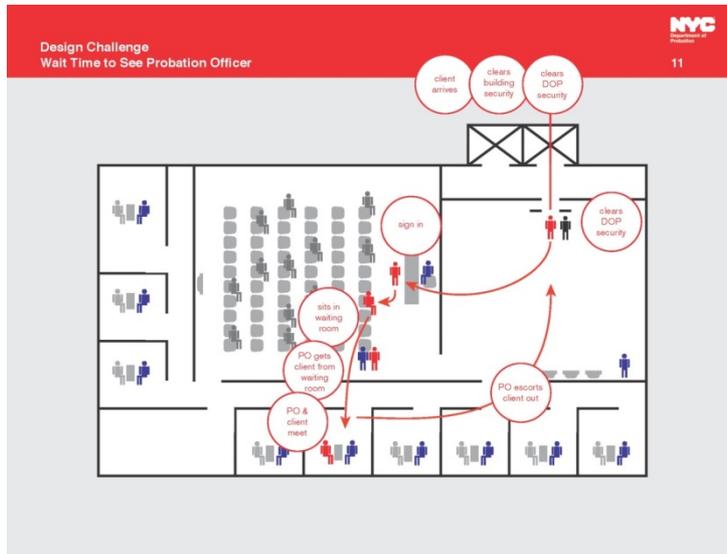


Source: Associate Professor of Architecture, Planning, and Preservation from *Design: Just What the Heck Is It?*, a Town+Gown event in collaboration with the AIANY/Center for Architecture presented in association with Archtober, Architecture and Design Month, New York City, October 17, 2012

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Service design as part of the solution . . .



Source: Associate Professor of Architecture, Planning, and Preservation from *Design: Just What the Heck Is It?*, a Town+Gown event in collaboration with the AIANY/Center for Architecture presented in association with Archtober, Architecture and Design Month, New York City, October 17, 2012

Interior design and action . . .



Source: Kevin Barnes-Ceeney, Director of Research, Prisoner Reentry Institute, John Jay College of Criminal Justice, from *Policy, Meet Design.2*, a Town+Gown Symposium Event in collaboration with Parsons Desis Lab, Public Policy Lab, AIGA/NY and NYCxDesign May 13, 2015.

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Exterior Design for Academic Demonstration “Community Connections Pavilion” Pod at 73 Precinct



NYPD/Pratt Institute-Architecture Project

Source: James Garrison, Adjunct Associate Professor, Pratt /Graduate Architecture and Urban Design

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Interior View of Academic Demonstration “Community Connections Pavilion” Pod at 73 Precinct



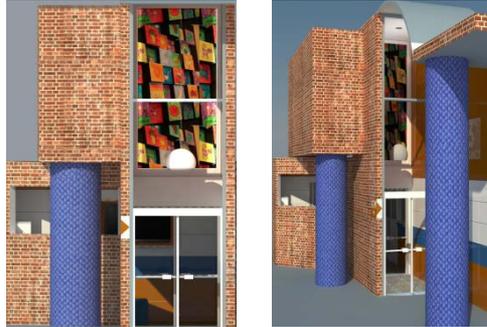
NYPD/Pratt Institute-Architecture Project

Source: James Garrison, Adjunct Associate Professor, Pratt /Graduate Architecture and Urban Design

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Demonstration Interior Design Project 73 Precinct Vestibule with ATM



Source: Francisco de Leon, Member of Faculty, New York School of Interior Design

NYPD/New York School of Interior Design Project

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New York State Law Impediments to Public Private Partnership Financing for Public Construction Projects

No general authorization for Design/Build service delivery methodology for all New York State public owners in order to establish cost to be financed

State constitutional gift and loan provision prohibitions require use of local development corporations or state-created authorities to facilitate any tax-exempt financing component

Feasible Public Private Partnerships

Department of Transportation's financing franchise agreement with Cemusa for the City's "street furniture"

Department of Sanitation Garage—real estate condominiums

Department of Education/Educational Construction Fund financing of schools

IRS Rev. Proc. 63-20 financing for under-roadway consolidated infrastructure

Department of Transportation: CEMUSA Street Furniture Franchise



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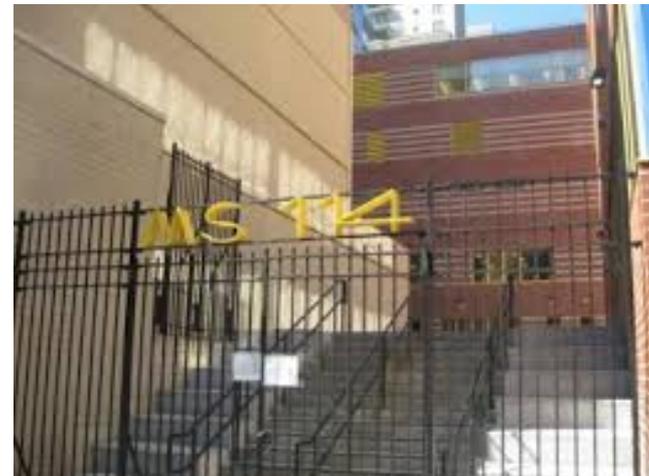
Department of Sanitation: Spring Street Garage Condominiums



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**Department of Education: MS 114 @ 331 East 91st Street, Manhattan
New York City Educational Construction Fund**



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Problem on the Ground for Smart Cities as They Encounter the Under-the-Roadway



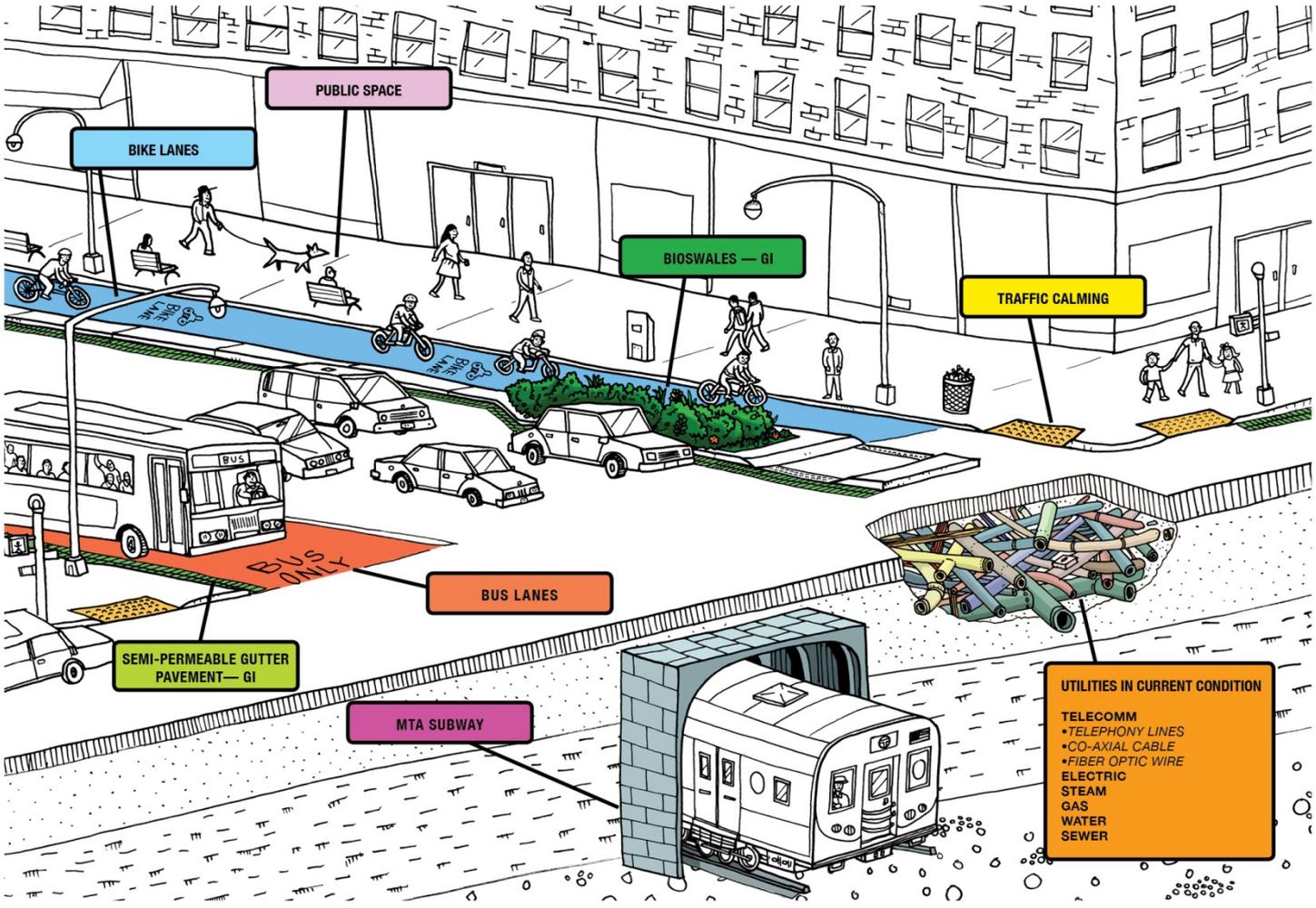
Wall and William Streets, early 1900s



William Street near Fulton Street. 2003

Source: Con Edison, Multi-utility Tunnels, presentation document, dated March 3, 2005

The Complete Roadway as a Complex Transportation Infrastructure System Above and Below

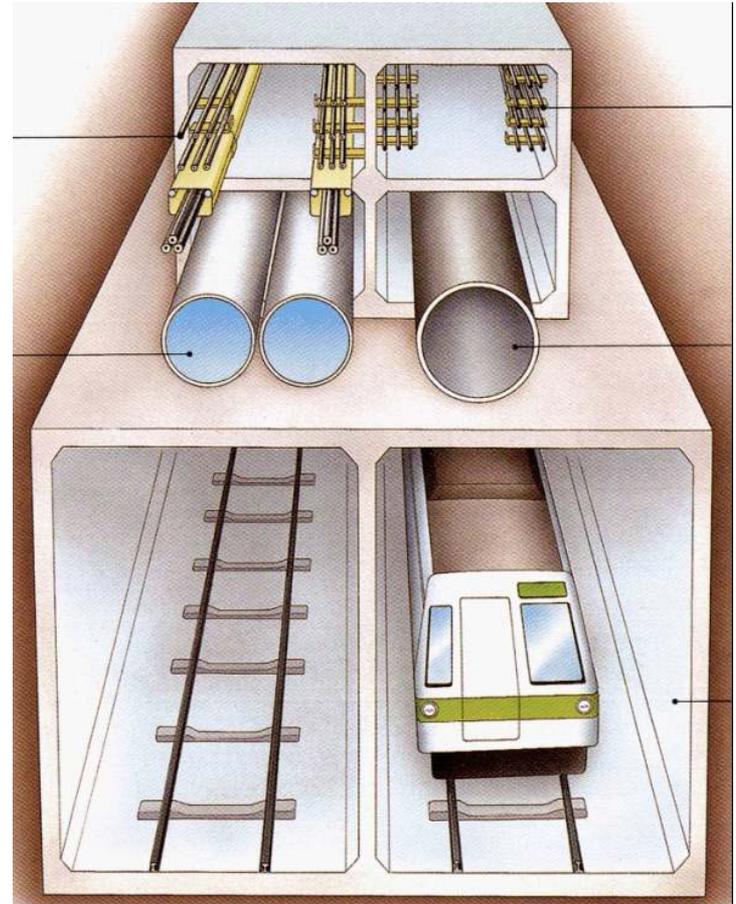


Source: David Akey, NYCCDC Creative Services

Engineering Design Solution Requires Public Private Financing to Implement



Source: Con Edison, Multi-utility Tunnels, presentation document, dated March 3, 2005





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