

Hunts Point

RESILIENCY

PUBLIC MEETING
January 17, 2017

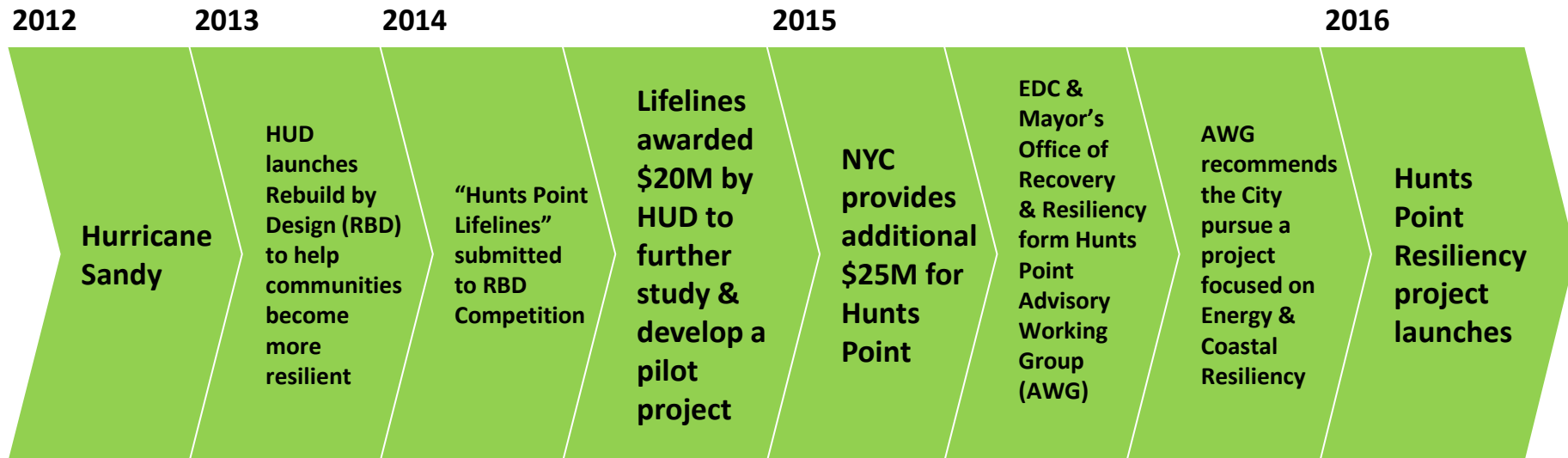


Meeting Today

1. Desired Outcomes
2. Project Status and Updates
3. Presentation: Technology Screening Criteria & Short List
4. “Gallery Walk:” More Information about Technology
5. Group Discussion: Maximizing Community & Sustainability Benefits
6. Wrap-up:
 - Stakeholder Engagement Updates
 - Next Steps
 - Meeting Evaluation

Project Background

- US Department of Housing & Urban Development (HUD) launched the Rebuild by Design Competition in 2013, in response to Hurricane Sandy
- *Hunts Point Lifelines* was selected; a total of \$45 million was awarded to advance resiliency concepts from the proposal
- The City convened an Advisory Working Group to identify resiliency concepts to study and implement projects on (1) Energy Resiliency (*funded pilot project*) and (2) Flood Risk Reduction.



On April 22nd, 2015, Mayor Bill de Blasio released a new long-term strategic plan to address our most pressing challenges.

This plan builds on existing efforts and strengthens and expands the City's commitment to a multilayered approach to resiliency.

Our Four Visions



Our Resilient City



Neighborhoods



Every city neighborhood will be safer by strengthening community, social, and economic resiliency



Buildings



The city's buildings will be upgraded against changing climate impacts



Infrastructure



Infrastructure systems across the region will adapt to enable continue services



Coastal Defense



New York City's coastal defenses will be strengthened against flooding and sea level rise

Project Goals

The Hunts Point Resiliency Project will result in the **implementation of a Resilient Energy pilot project** and the **identification of feasible Flood Risk Reduction projects** for which to seek additional funding.

The Hunts Point Resiliency Project seeks to advance solutions that:

- Address critical vulnerabilities for both community and industry
- Protect important citywide infrastructure
- Protect existing and future industrial businesses and jobs
- Support the community's social, economic, and environmental assets
- Use sustainable, ecologically sensitive infrastructure



Project Timeline

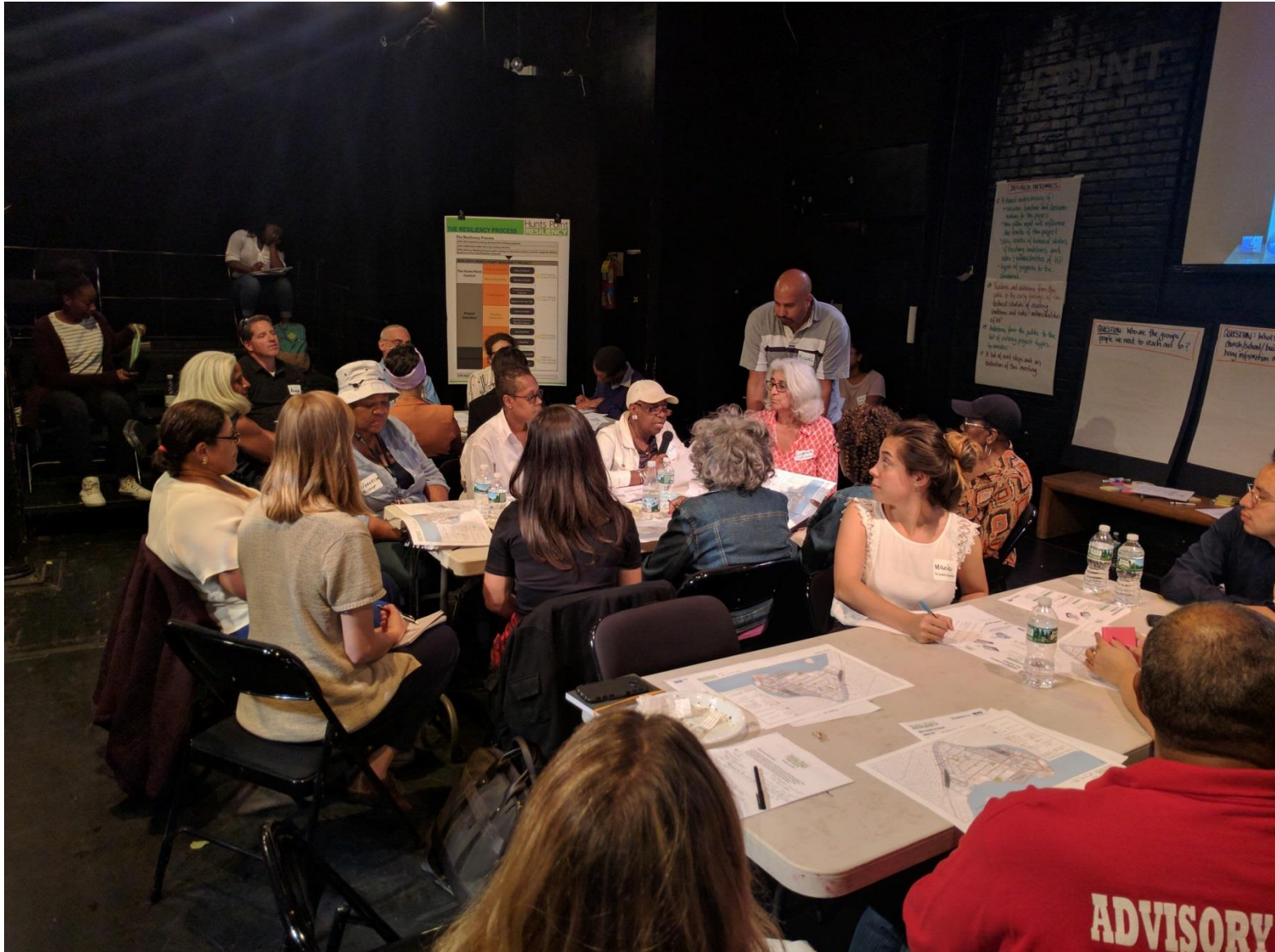
Tasks	2016						2017											
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
0	Stakeholder Engagement																	
1	Existing Conditions Analysis																	
2	Risk & Vulnerability Assessment			Public meeting #1, 10/16														
3			Evaluation of Project Technologies															
4					Feasibility Assessment		Public meeting #2, 1/17											
5							Preferred Pilot			Public meeting #3, 3/17								
6							Conceptual Design											
7												Environmental Review						

Recap: October 2016 Meeting

- Discussed key findings of risk and vulnerability assessment on building-level power outages, coastal flooding, heavy precipitation, and social resilience
- Asked for input on critical community facilities

What we heard	Follow-up actions
People are experiencing basement backups.	Analyzed basement backup instances and are coordinating with DEP.
Transportation in and out of Hunts Point is critical.	Coordinating with DOT to assess traffic lights for energy backup and critical routes for flood-proofing.
Information about critical community gathering places.	Identified list of critical community facilities for resiliency projects.
Need more information about back-up generation and shoreline stabilization.	Providing information today about energy and flooding technologies.
Conduct robust community engagement.	Neighborhood Outreach Team is helping us to improve engagement capacity; ongoing AWG and EST engagement.

Recap: October 2016 Public Meeting



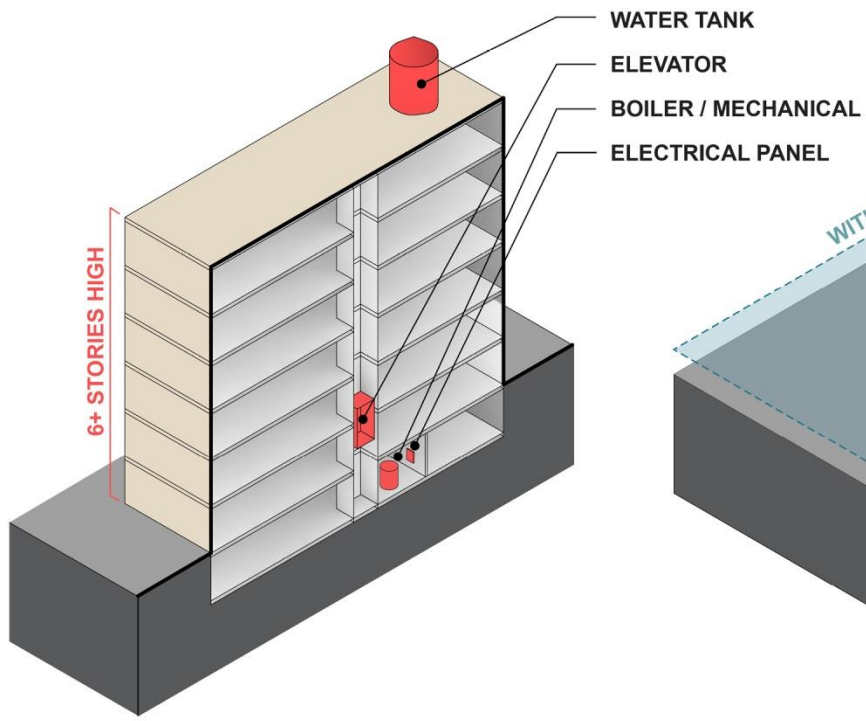
Recap of October 2016 Public Meeting

Key Findings from Risk and Vulnerability Report

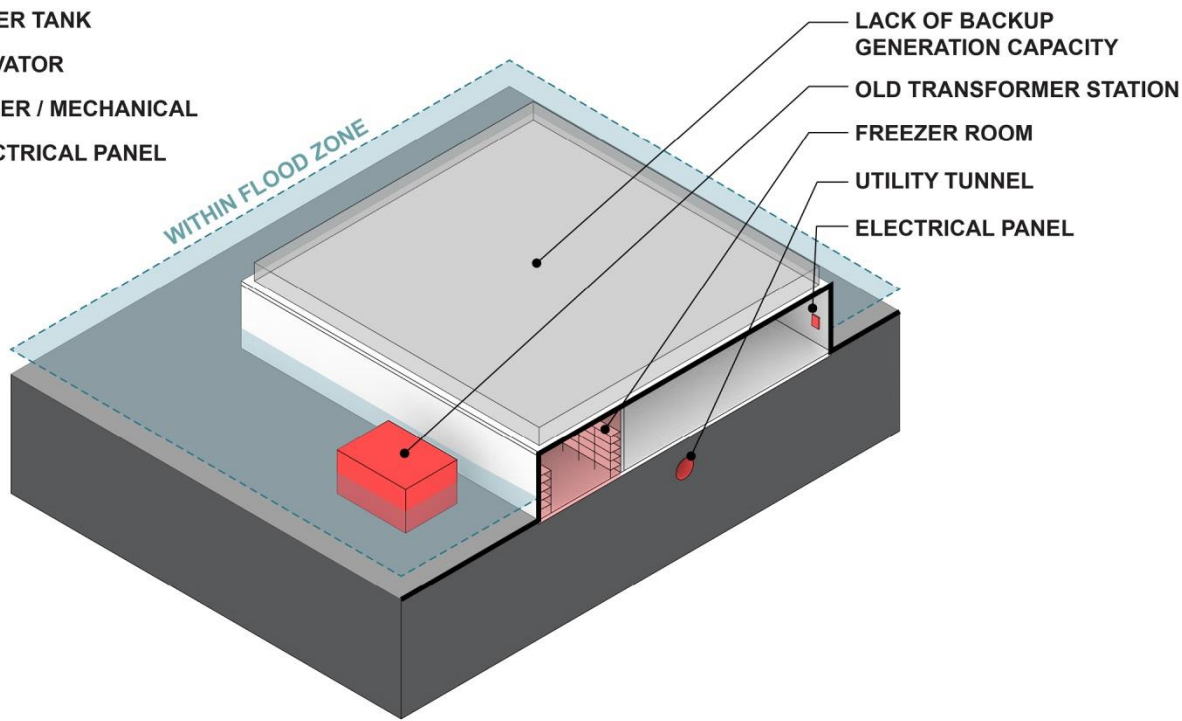
1. Building-level **power outages** are a significant and shared threat to residents and businesses in Hunts Point.
2. Due to considerable elevation change, the upland and low-lying areas face different levels of risk from **coastal flooding** now and in the future.
3. Extreme **rain/snow storms** are not a major threat in Hunts Point.
4. The number of community organizations and history of organizing in Hunts Point can lay the foundation for **strong social resiliency**.

Key Finding #1: Building-level Power Outages

RESIDENTIAL



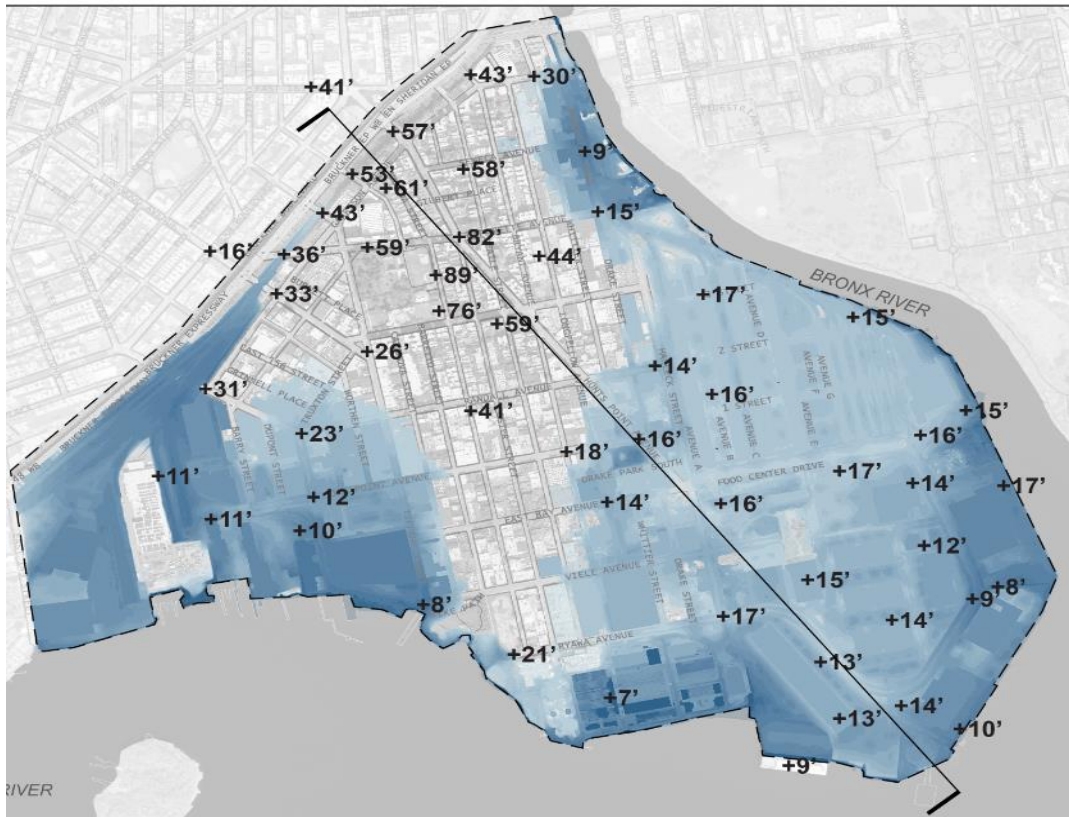
INDUSTRIAL



Almost all residential buildings in Hunts Point are outside of the floodplain.

- | BUILDING VULNERABILITY FACTORS | |
|-----------------------------------------------------------|------------------------------|
| ▪ Location within floodplains | ▪ Elevators |
| ▪ Basement below grade and in floodplain | ▪ Water tank |
| ▪ Age of infrastructure | ▪ Backup generation capacity |
| ▪ Location of boiler, mechanicals, and electrical service | ▪ Perishable contents |

Key Finding #2: Coastal Flooding

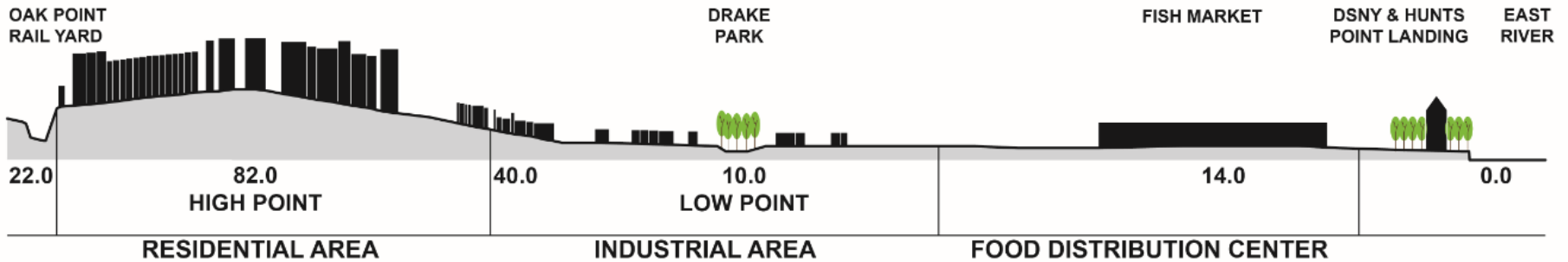
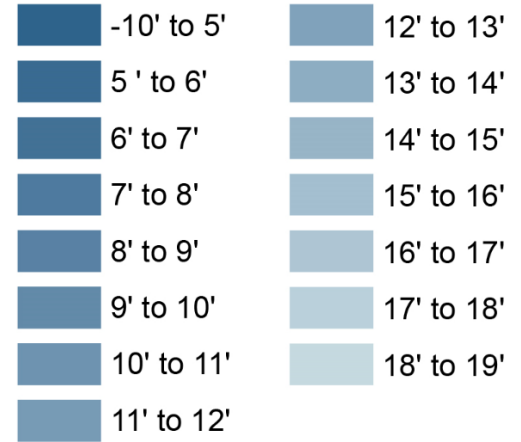


LEGEND

— — Study Area

LAND ELEVATION

+0' Spot Elevation



VERTICALLY SCALED 500%

Summary of Vulnerabilities and Strengths

	Vulnerabilities	Strengths
Residential	<ul style="list-style-type: none">▪ Lack of back-up generation▪ Limited access to cooling centers▪ Socioeconomic factors	<ul style="list-style-type: none">▪ High ground▪ Community assets▪ Low- and mid-rise buildings (which are not vulnerable to loss of water during prolonged power outages)
Industrial	<ul style="list-style-type: none">▪ Old, critical transformers and electrical systems▪ Location in floodplain▪ Perishable products	<ul style="list-style-type: none">▪ Loading docks create opportunities for elevation▪ Initial investments in backup generation

Progress Since October 2016 Public Meeting

Data Collection

- Energy usage and rates from Con Edison
- Site visits and interviews with markets, businesses, and community organizations for detailed feasibility assessments

Task 3: Identification and Preliminary Evaluation

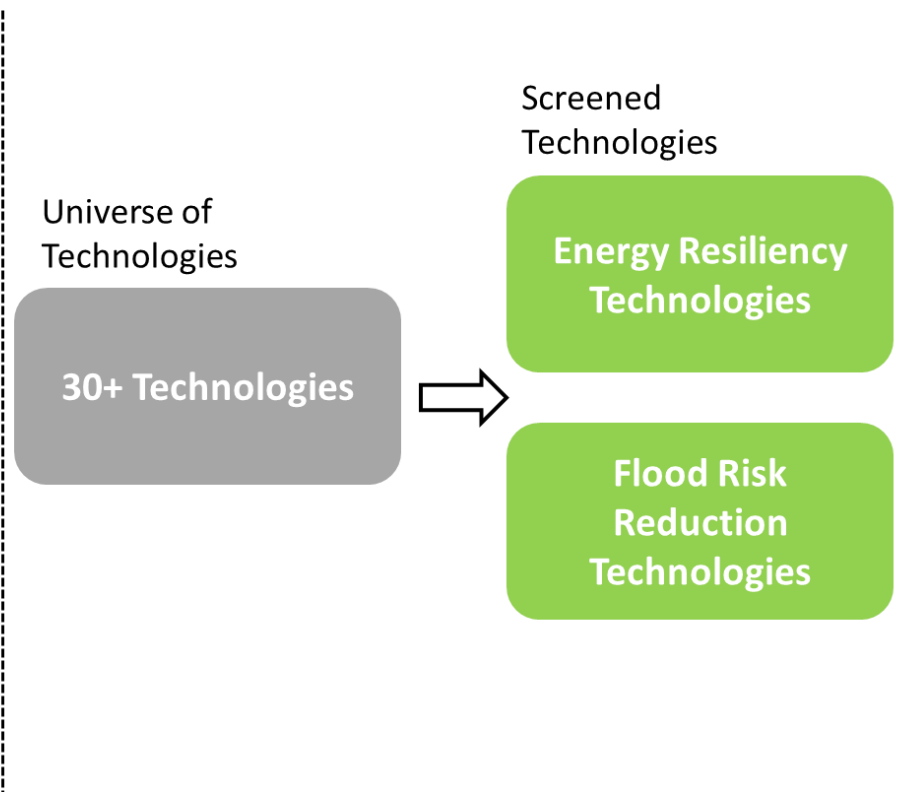
- Screened 25 technologies to 10 based on feasibility criteria
- Developed order of magnitude costs

Task 4: Feasibility Assessment and Analysis

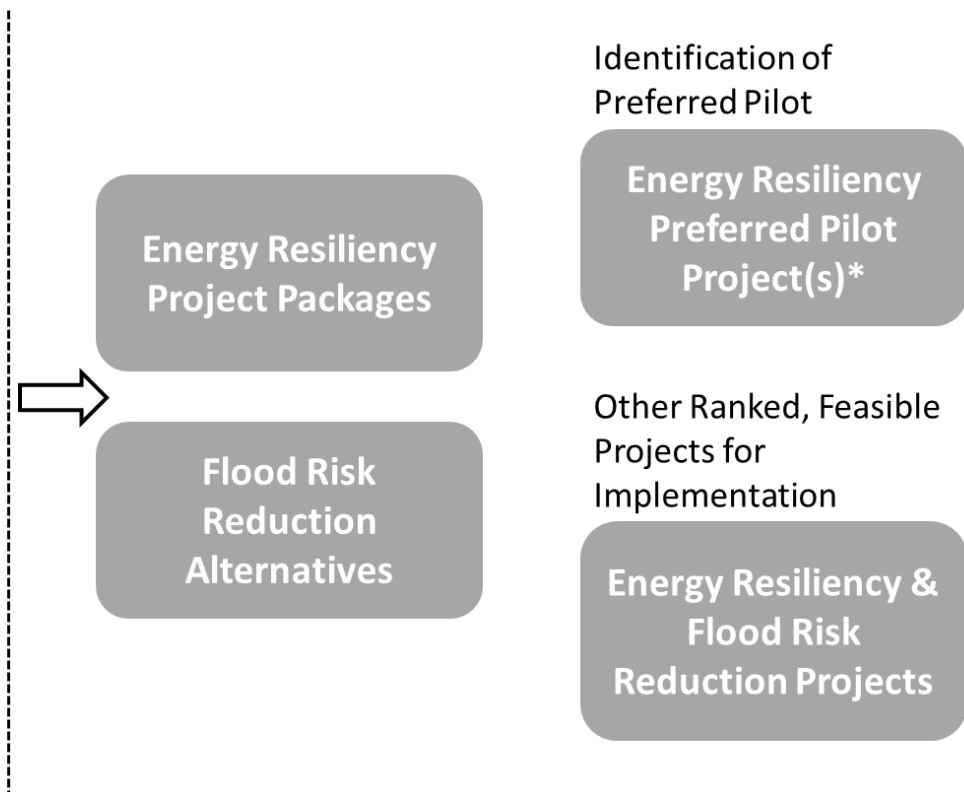
- Undergoing feasibility assessment
- Developing preliminary ideas for packaging options
- Identifying costs and benefits to be analyzed as part of Sustainable Return on Investment

Identifying Resiliency Projects

TASK 3: Identification & Evaluation of Technologies



TASK 4: Feasibility Assessment & Analysis



* To be funded with \$45M from HUD and City.

TECHNOLOGIES SCREENING CRITERIA & SHORT LIST

Screening Criteria Overview

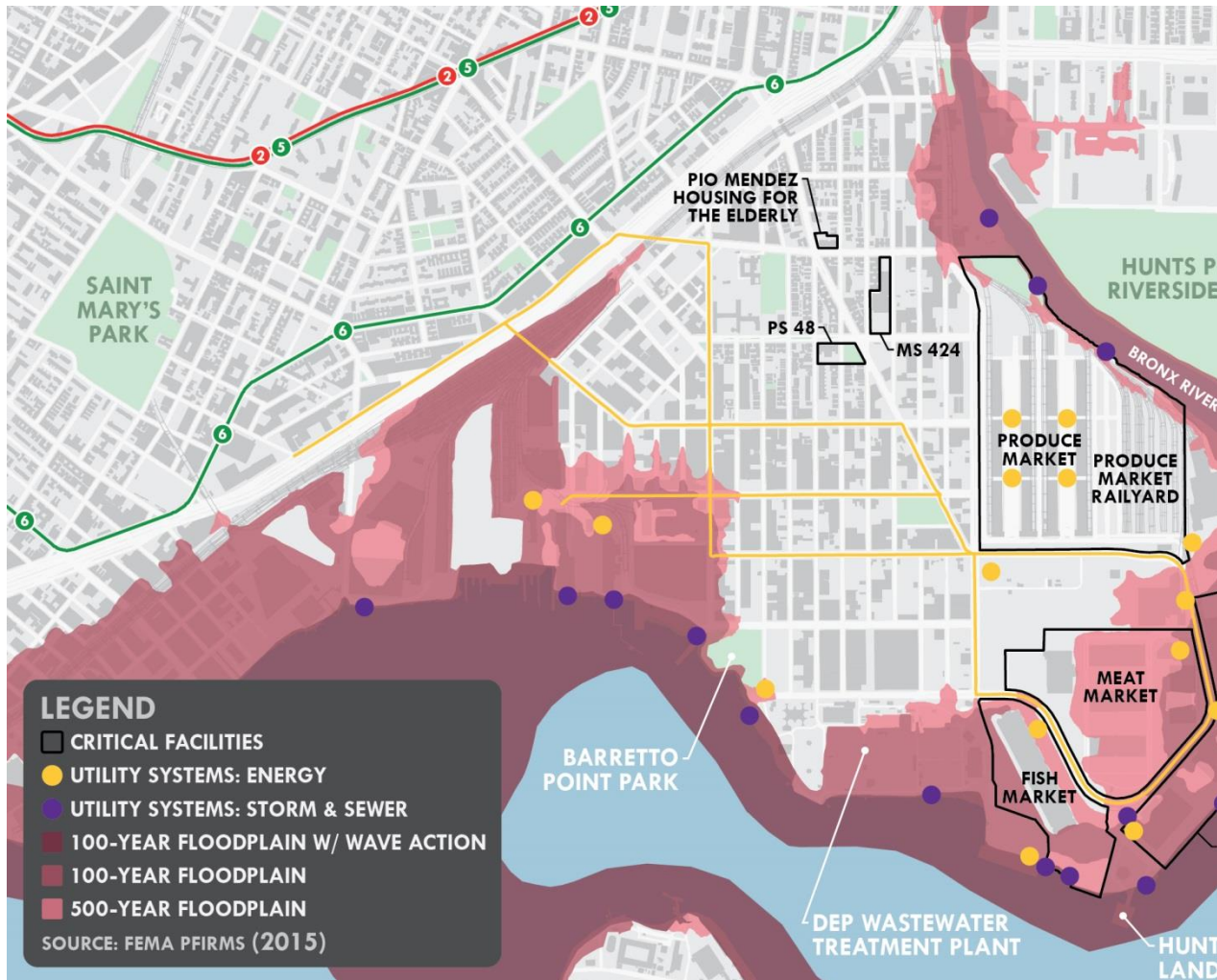
HUD Grant Requirements

- Advance resiliency
- Independent utility
- Financial feasibility

Other Categories of Screening Criteria Based on City and AWG Input

- Resiliency (additional criteria specific to Hunts Point)
- Constructability
- Sustainability
- Community Benefits
- Implementation Schedule
- Financial

Critical, Vulnerable Facilities (2050-2100)



We recommend the title of the map covers both energy and

Also, based on our T2 vulnerability (you today) and community for installations, we recommend the following:

- Oak Point Railyard (in white)
- Recreational Center
- Prison Barge (in white)
- Baldor (in white)

We suggest taking off the y consider the feeders vulnerable horizontal assets, and it will

Finally, we suggest amending clear that the black outline Vulnerable Facilities with M in white for "Critical, Vulnerable Addressed" or something

Critical Facilities and Future Threats

Critical Facilities	Future Threats (2050-2100)
Produce Market	Outage, Heat
Meat Market	Outage, Surge, Heat
Fish Market	Outage, Heat
<i>Oak Point Railyard</i>	<i>Surge</i>
Pio Mendez Housing for the Elderly	Outage
<i>Vernon C. Bain Correctional Facility</i>	<i>Surge, Heat</i>
Certain road intersections	Surge, Outage
600 Food Center Drive (Citarella/Sultana)	Surge
Krasdale	Surge
Certain electrical transformers	Surge, Outage
<i>Hunts Point Wastewater Treatment Plant</i>	<i>Surge</i>
Primary School (PS) 48	Outage, Heat
Middle School (MS) 424	Outage, Heat
Hunts Point Recreational Center	Outage, Heat

Existing Backup Power

Facility	Quantity of Generators	Size (Total kW)
Krasdale	2	125 each
Baldor	2	1,000
Dairyland/ Chefs Warehouse	2	750 (1300 Viele Avenue warehouse) and 1,500 (240 Food Center Drive warehouse)
Hunts Point WWTP	6	2,000 each (excess backup capacity available)
Jetro/Restaurant Depot	1	200
Pio Mendez Houses for the Elderly	1	Covers load for common areas
Vernon C. Bain Correctional Center	2	2,000 each

Technologies Screened: Energy Resiliency

Power Generation

- **Combined Cycle Microgrid**
- Reciprocating Engine Microgrid
- **Emergency Reciprocating Engines**
- Simple Cycle Combustion Turbine
- Reciprocating Engine CHP
- Fuel Cell Applications
- Tidal Power
- **Anaerobic Digestion**

Solar Generation & Storage

- **Solar PV and Battery Storage**
- Rooftop Solar PV
- Ground Mounted Solar PV
- **Power Hub**

Other

- Ice Storage
- Electrification of Produce Market Parking Lot
- Produce Market Switchgear Replacement
- Compressed Natural Gas Vehicles

Top reasons why retained:

1. **Clear resiliency benefit**
2. **Scalability**
3. **Cleaner Emissions**
4. **Range of uses during and outside of emergencies**

Top reasons why screened out:

1. **Not Resilient**
2. **Untested**
3. **Higher Emissions**

Screening Results: Flood Risk Reduction

Area-wide

- Area-wide Levees
- **Area-wide Floodwalls**

Facility-Level

- **Elevate Building**
- **Elevate Critical Equipment**
- **Facility-level Floodwalls**
- Deployable Flood Barriers
- Deployable Pumps
- **Hardening**

Top reasons why retained:

1. **Reliable**
2. **Scalable**
3. **Permitting Ability**

Top reasons why screened out:

1. **Space Availability**
2. **Elevations**
3. **Cost Prohibitive**

Screening of a Multi-purpose Levee in Hunts Point

Spatial Impact of Area-wide Levee



GALLERY WALK (40 MINUTES)

1. ENERGY RESILIENCY TABLES

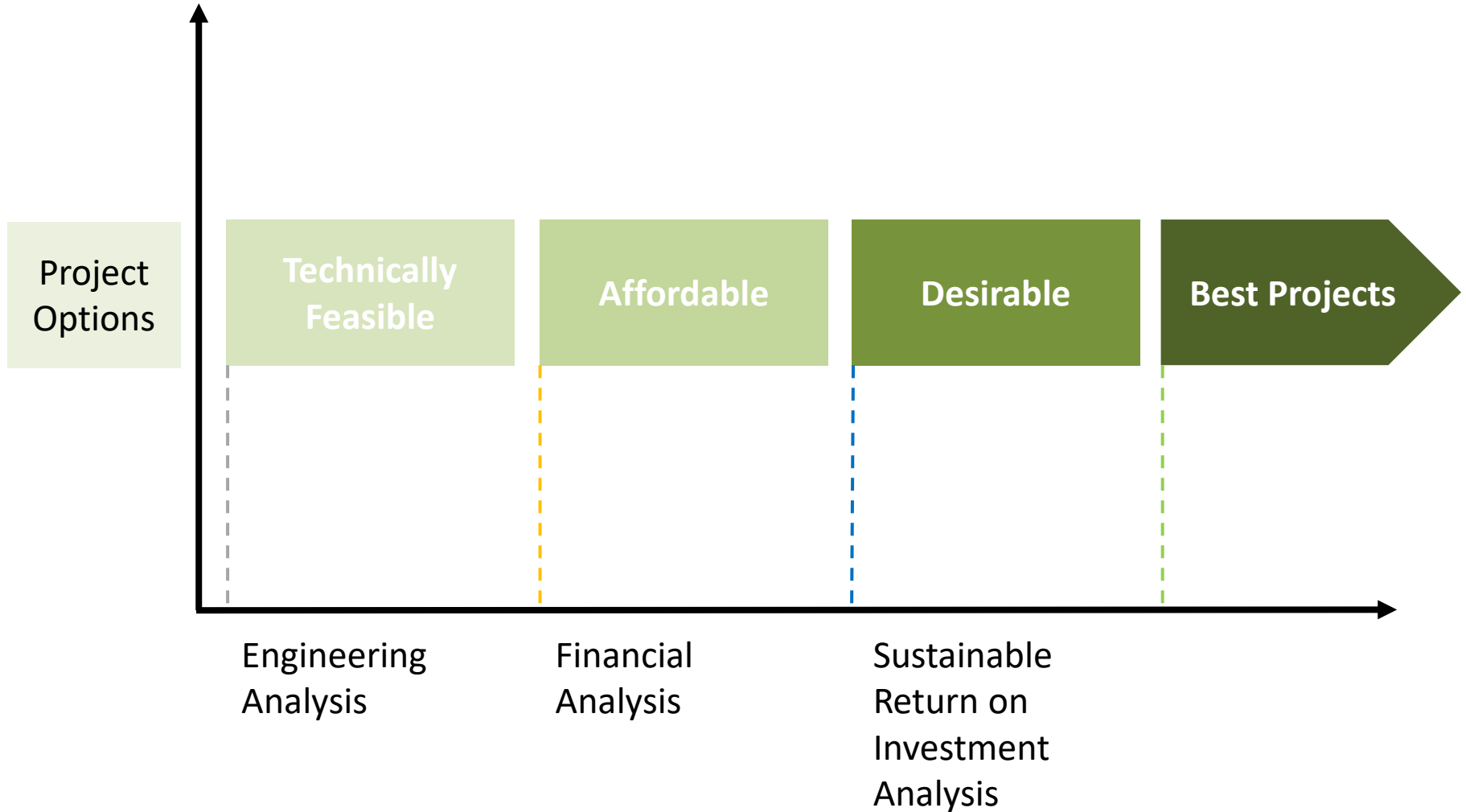
**COMBINED CYCLE MICROGRID; EMERGENCY
RECIPROCATING ENGINES; POWER HUB; ROOFTOP
PHOTO VOLTAIC (PV) WITH BATTERY STORAGE;
ANAEROBIC DIGESTION**

2. FLOOD RISK REDUCTION TABLES

**HARDENING; AREA-WIDE FLOODWALL; FACILITY-
LEVEL FLOODWALL; ELEVATING BUILDINGS;
ELEVATING EQUIPMENT**

COMMUNITY BENEFIT CRITERIA AND VOTING

Task 4: Detailed Assessment and Analysis



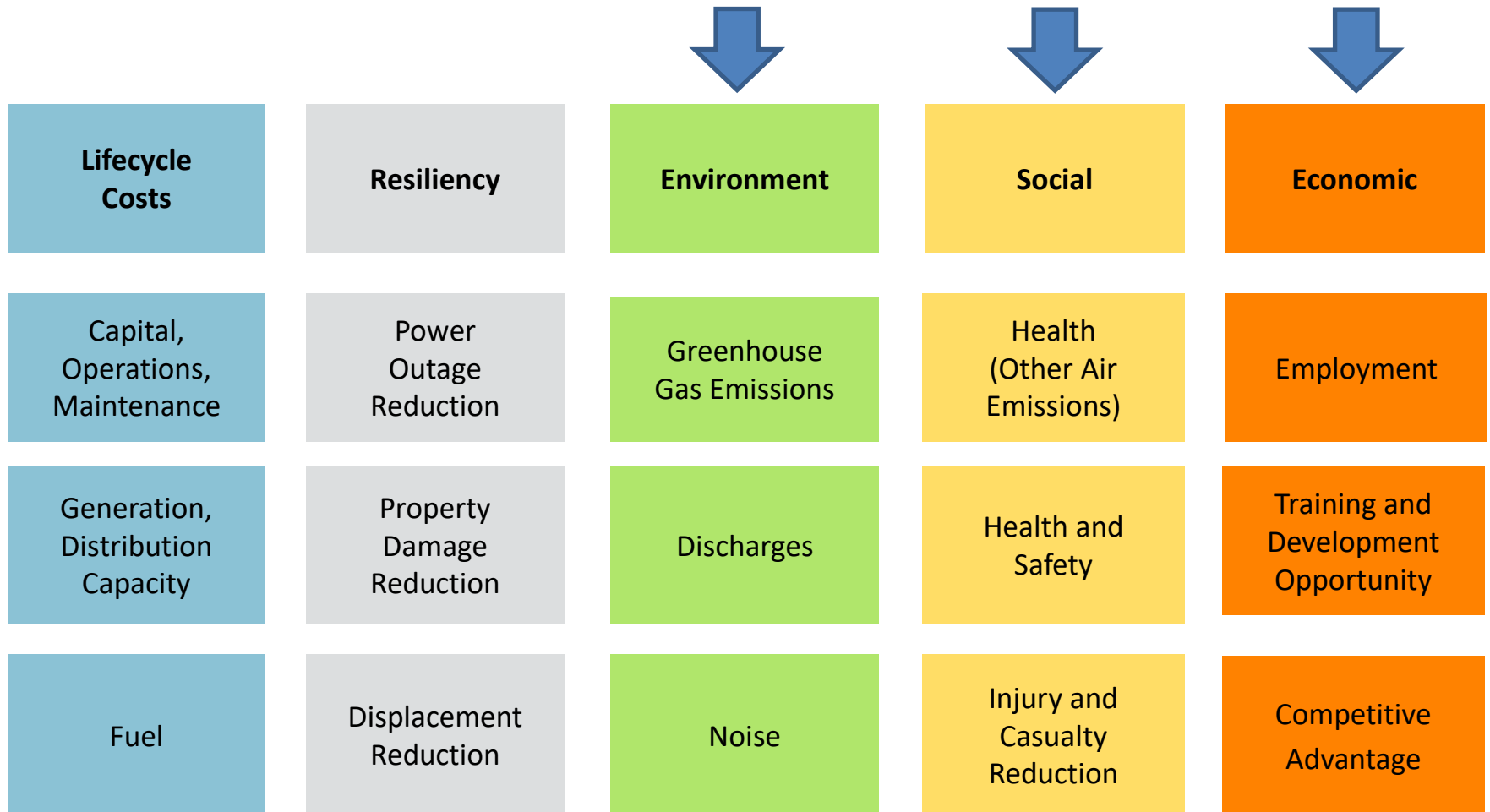
Task 4: Detailed Assessment and Analysis (cont.)

Feasibility Assessment steps include:

- Compare the technical, financial, and regulatory feasibility of the 10 screened technologies including:
 - Detailed, site-specific, feasibility analysis
 - Cost estimating
 - High-level benefit analysis

- Based on the above, **package** the technologies into project options to compare:
 - Districtwide solutions
 - Efficiencies and economies of scale
 - Community and sustainability benefits

Task 4: Sustainable Return on Investment



Sustainable Return on Investment

WRAP-UP:

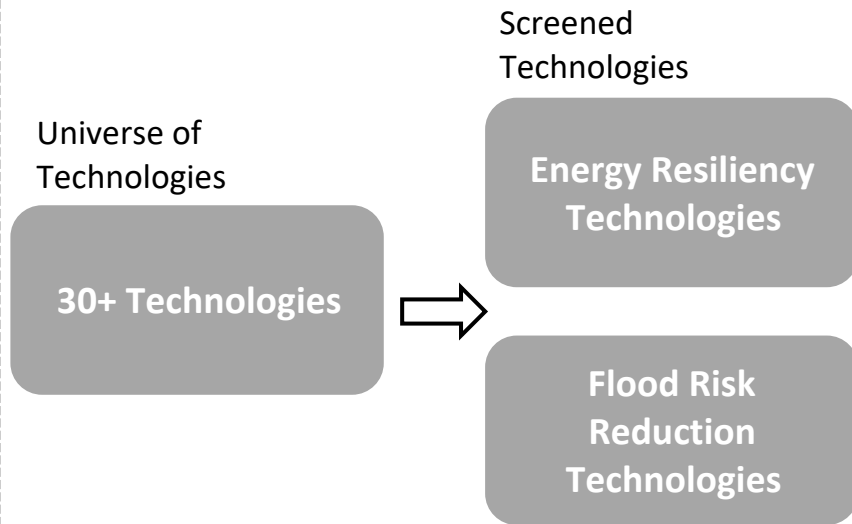
NEXT STEPS

STAKEHOLDER ENGAGEMENT UPDATES

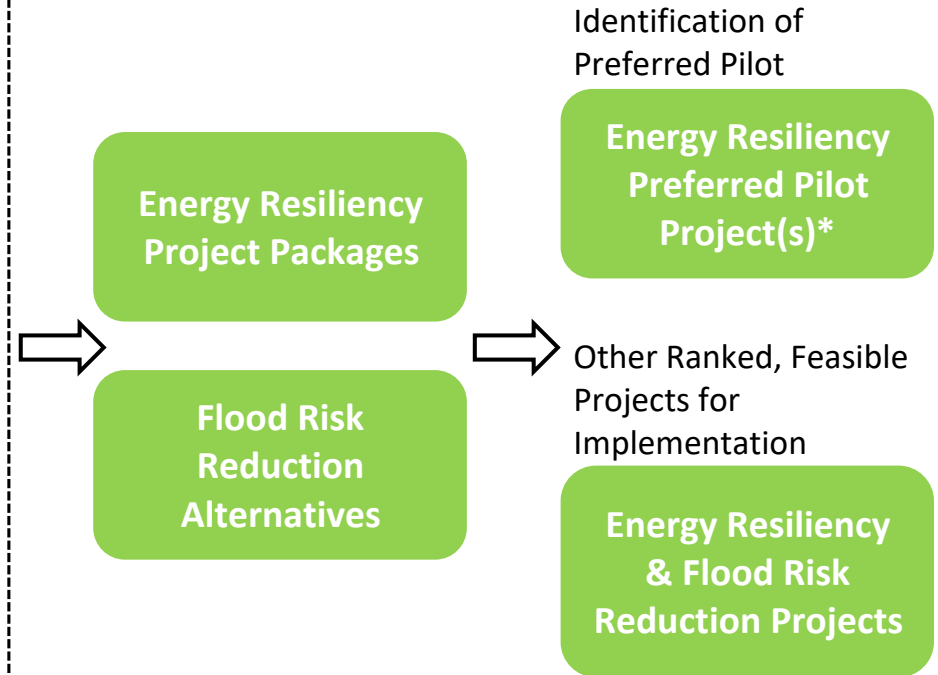
MEETING EVALUATION

Information to be Presented at Next Public Meeting

TASK 3: Identification & Evaluation of Technologies



TASK 4: Feasibility Assessment & Analysis



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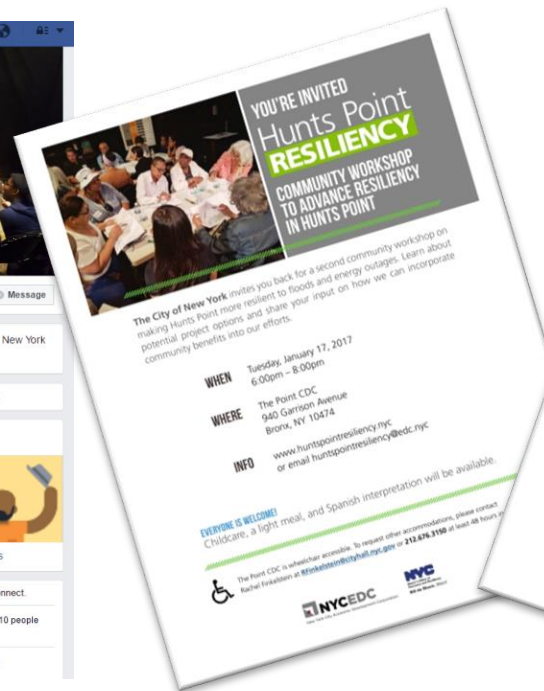
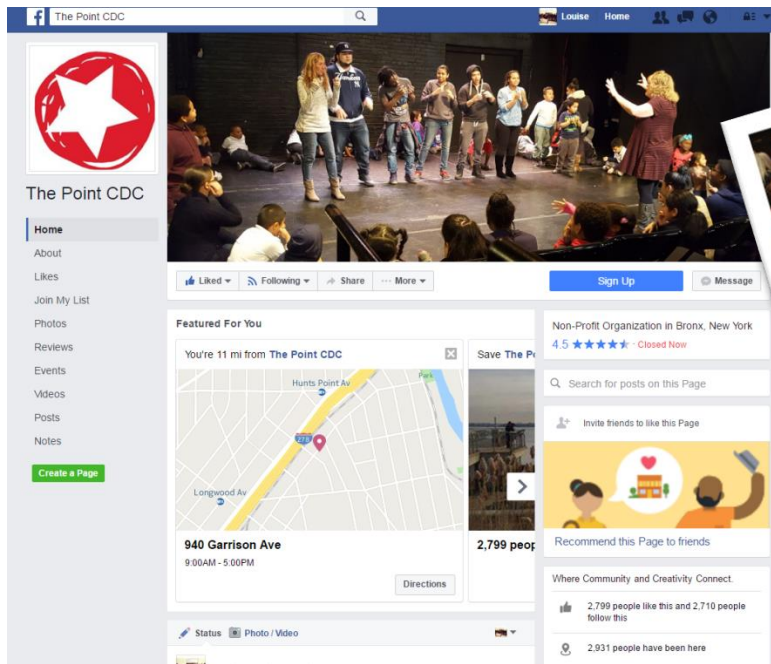
Neighborhood Outreach Team Updates



Nine members of the community comprise the Neighborhood Outreach Team; the Team is currently compiling the tools they need to share and present project information with the broader Hunts Point community .

Next Public Meeting

March 21, 6-8 pm at The Point



Staying in Touch

- Website – www.huntspointresiliency.nyc
- Email - Huntspointsresiliency@edc.nyc
- Social media (Twitter and Instagram)
 - EDC @NYCEDC
 - ORR @NYClimate
- Regular mail
 - New York City Economic Development Corporation
Attn: Charlie Samboy
110 William Street
New York, NY 10038

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