



IMPACT PLANNING • EVALUATION • AUDIENCE RESEARCH



## FORMATIVE EVALUATION: ROUND 1

### NEW YORK AT ITS CORE

*Prepared for:*  
Museum of the City of New York  
New York, NY

# TABLE OF CONTENTS

<b>SUMMARY AND RECOMMENDATIONS</b>	<b>3</b>
RECOMMENDATIONS	6
<b>STUDY BACKGROUND</b>	<b>8</b>
METHODOLOGY	9
DATA ANALYSIS AND REPORTING METHOD	10
<b>INTERVIEW FINDINGS: MILLENNIALS &amp; WALK-INS</b>	<b>11</b>
INTRODUCTION TEXT	12
BIG CHALLENGES	14
NEIGHBORHOOD EXPLORATION	19
IPAD ACTIVITY- DENSITY	21
SELFIE STATION	26
<b>INTERVIEW FINDINGS: TEACHERS</b>	<b>27</b>
INTRODUCTION TEXT	28
BIG CHALLENGES	29
NEIGHBORHOOD EXPLORATION	31
IPAD ACTIVITY- DENSITY	33
SELFIE STATION	36
<b>APPENDICES</b>	<b>37</b>

## SUMMARY AND RECOMMENDATIONS

The Museum of the City of New York (MCNY) contracted Randi Korn & Associates, Inc. (RK&A) to evaluate exhibit prototypes for the “Future of the City Lab” (also known as Gallery 3), an interactive gallery that will be part of the museum’s new permanent exhibition, *New York At Its Core*. The purpose of the evaluation is to provide MCNY with useful information about visitors’ engagement with the prototypes to inform future development of the “Future of the City Lab.” This evaluation focuses on five specific exhibits (components): the Introduction Text, the Big Challenges Wall, a Neighborhood Exploration, the “Density” iPad Activity, and the Selfie Station.

**The findings presented here are among the most salient. Please read the body of the report for a more comprehensive presentation of findings.**

RK&A conducted in-depth interviews with visitors representing three groups—NYC schoolteachers, millennials, and walk-in visitors. On page 5, we present a table that shows the strengths and weaknesses of each prototype exhibit tested in the evaluation. Page 6 presents a list of recommendations. Below is a detailed explanation of the major trends that emerged across exhibits.

### CONTENT RESONATES ACROSS AUDIENCES

The evaluation included a purposefully diverse group of participants—recruited millennials, recruited teachers, and walk-in visitors consisting of a mix of foreign tourists and local residents of various ages. Regardless of their perspective, nearly all participants were intrigued by the content for Gallery 3. The content resonated with visitors on several levels—for example, some local residents related to struggles of affordable housing; others, who work in urban planning, had a professional understanding of the transportation issues; some foreign tourists live in cities facing similar challenges; and, other tourists live in small towns but have a deep curiosity about New York City. One new resident of New York City said the content made her think about what it feels like to live in a city of millions. Similarly, nearly all participants enjoyed the challenge of designing a building (in the “Density” iPad activity) because it encouraged creativity and problem-solving.

### CONTENT SEEMS TO EMPHASIZE PROBLEMS OVER PROPOSED SOLUTIONS

Despite the fact that the content resonated with visitors, the data show that some felt Gallery 3 emphasizes challenges over solutions, to a fault. This opinion was subtle—it was not always explicitly stated or the first thing visitors said. But, it came across when visitors said the Big Challenges worried them, or that they felt depressed by the Neighborhood Exploration, or that the iPad “Density” activity felt disconnected from reality. Visitors crave an understanding of how the challenges New York City faces will be addressed by those in power (for example,

various city officials)—not just an opportunity to play with solutions. Overall, however, visitors were still able to enjoy the content despite sometimes feeling disappointed by the lack of officially proposed solutions.

#### **DATA VISUALIZATIONS NEED SIMPLIFICATION**

Not surprisingly, some visitors had trouble interpreting the various charts, graphs, and other data visualizations on the Big Challenges Wall; and, even some who did not name specific confusing elements said they found the number of graphs and charts overwhelming. It is important to remember that many people perceive that they are “not good with numbers,” and thus skip components that include a lot of quantitative elements. Similarly, even those who are more comfortable with statistics want to see this data presented in a variety of ways (i.e., they do not want to spend time looking at the “same” or similar visualizations over and over). Further, some visitors said they wished the visualizations were more visually connected to New York City—that is, they appreciated when the data were “mapped” onto the city rather than presented in a bar or line graph. For example, they liked seeing the subway line and the projected population growth drawn on the island of Manhattan in the “Cost of Construction” and “Population Growth” graphics. Considering that the visualizations will be presented alongside many other intriguing exhibits in the final exhibition, it is to the museum’s advantage to simplify them as much as possible so they a) are less intimidating for those with a lower comfort level with quantitative information, b) communicate at a glance, and c) visually connect to New York City whenever possible.

#### **VISITOR GENERATED CONTENT WILL APPEAL TO A PORTION OF VISITORS**

When it comes to visitor-generated content, such as sharing an explanation of their building design or responding to a statement about the future of New York City, visitors have mixed feelings. Some are only interested in consuming this kind of information (by viewing other visitors’ contributions), some are willing to share their designs without an explanation, and others said they might contribute an explanation. However, most are not interested in sharing their photographs. Teachers were especially hesitant to say whether they could allow their students to share personal information or photographs in the exhibition without parental permission.

#### **SCHOOL GROUPS MAY NEED SUPPORTING MATERIALS AND PROGRAMMING**

Classroom teachers responded to the prototypes in much the same way as the other visitors. However, they pointed out ways school children may experience the content and exhibits differently than typical adult visitors. For instance, school children (especially those in elementary school but even those in middle school) are not mature enough to understand the nuanced problems of a big city. Elementary school teachers and one middle-school teacher said much of the text would require an educator to explain the main ideas. Further, some said the content may be uncomfortable for some students, since many of them represent New York City populations that struggle the most with the Big Challenges (like poverty). And finally, even though teachers think the iPad “Density” activity is great opportunity to teach urban planning, some said students may be more interested in being “outrageously” creative and thus would not pay close attention to the implications of their choices (unless perhaps if the activity was a competition-based game). It is difficult to design an exhibition that appeals to adults in the same ways it appeals to school-aged children so the museum may want to use these evaluation results to inform programming and/or supplemental materials for school groups.

## SUMMARY OF RESULTS FOR EACH EXHIBIT PROTOTYPE

INTRODUCTION TEXT	
<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>◆ Effectively introduces the challenges NYC faces</li> <li>◆ Communicates that the gallery is interactive</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>◆ Too text heavy and content is broad</li> <li>◆ May be too complex for children to understand</li> </ul>
BIG CHALLENGES	
<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>◆ Simple text and graphics convey facts/issues that resonate with visitors</li> <li>◆ Comparisons to other cities facilitate deeper understanding and interest</li> <li>◆ Straightforward examples allow for personal connections</li> <li>◆ Provides excellent starting point and touchstone for other exhibits</li> <li>◆ Teachers said the challenges would inspire meaningful classroom discussions</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>◆ Emphasis on challenges without solutions produces some worry</li> <li>◆ Some issues too complex for children</li> <li>◆ Living with Nature does not feel unique to NYC</li> <li>◆ Living Together (diversity) does not seem like a “big challenge” but rather a condition of the city that many see as an asset, not a challenge.</li> <li>◆ Data visualizations overwhelming and complicated (for some); issues are somewhat idiosyncratic</li> <li>◆ Many school children may represent NYC populations that struggles with these challenges the most, which could make for an uncomfortable experience</li> </ul>
NEIGHBORHOOD EXPLORATION (SOUTH BRONX)	
<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>◆ Brings Big Challenges to life</li> <li>◆ Communicates specific issues, like asthma and crime, that “stick” with visitors</li> <li>◆ Historic photos are intriguing</li> <li>◆ Community Voices humanize content (but video is preferred)</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>◆ Conveys more problems than solutions, feels depressing</li> <li>◆ Too history-focused, feels boring</li> <li>◆ Content does not feel cohesive</li> <li>◆ Too text-heavy; would be boring for children</li> </ul>
IPAD “DENSITY” ACTIVITY	
<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>◆ Enjoyable and fun</li> <li>◆ Connection to Big Challenges is clear</li> <li>◆ Gives visitors a taste for being an urban planner; effectively communicates challenges faced when designing a building and possible ways to address them</li> <li>◆ Allows for creative freedom</li> <li>◆ Prefer Version 2 since it is complex, like real life</li> <li>◆ Interested in sharing and viewing designs</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>◆ Does not adequately explain how design choices affect end results (on the results screen, but also throughout the design process)</li> <li>◆ Does not feel grounded enough in reality</li> <li>◆ Eco-score is unclear</li> <li>◆ Version 1 is over-simplified and cartoony (but may be more appropriate for children)</li> <li>◆ Most do not want to share a selfie</li> </ul>
SELFIE STATION	
<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>◆ Most are interested in questions that inspire a positive, emotional response</li> <li>◆ Most are also interested in questions that are concrete and action-oriented</li> <li>◆ Many said they would respond to a question and read others’ responses</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>◆ Most are not interested in answering a question that feels abstract or grandiose</li> <li>◆ Most do not want to share a selfie</li> <li>◆ Some only interested in reading others’ responses</li> <li>◆ Teachers think they may need parental permission to allow students to leave a photo or response</li> </ul>

## RECOMMENDATIONS

RK&A conducted a Reflection Workshop at MCNY to address specific issues and/or problems that emerged from the data. The ideas generated in the workshop are integrated into the recommendations proposed below.

- ◆ Shorten the Introduction Text. Consider eliminating or greatly reducing the paragraph that describes the interactive nature of the gallery since visitors will be able to see these elements when they enter the space.
- ◆ Consider ways to introduce “solutions” alongside challenges throughout the exhibition; for example, show photographs of designs for future buildings or clips from interviews with architects in the proposed “map” show (discussed in the workshop).
- ◆ Keep the simple and straightforward approach of the Big Challenges text/questions; they quickly communicate the challenges in an understandable way that resonates with visitors.
- ◆ Retain the comparisons with other cities in the Big Challenges; comparisons give visitors, especially non-locals, a way to make meaning from the challenges New York City faces.
- ◆ Consider simplifying the data visualizations in the Big Challenges, since a portion of visitors struggled to interpret them, and/or reducing the number of data visualizations, since some found them overwhelming. Also, consider continuing to test the charts and graphs to ensure visitors understand their messages.
- ◆ Consider ways to present the “Living with Nature” challenge so that it feels more specific to the environmental problems of New York City as opposed to a global issue.
- ◆ Consider reframing the “Living Together” challenge so that it feels more like a challenge and less like a condition; for instance, by focusing on the challenges that emerge in diverse cities, like segregation and its implications for a specific sector, like education.
- ◆ Consider ways to more explicitly highlight the connections/overlaps between challenges; for example, by explicitly addressing how both income inequality (Making a Living) and diversity (Living Together) affect education in the city.
- ◆ Consider rethinking how information is organized and presented in Neighborhood Exploration. Even though visitors understand the section illustrates the Big Challenges through real-life examples, they struggled to find it compelling and dynamic. While the prototype was limited (a PowerPoint slideshow), there may be ways to improve it. For example, create a video-based presentation of Community Voices and maybe add other video elements as well; show historic and contemporary photographs side-by-side; and place greater emphasis on how the neighborhood is addressing the challenges (i.e., solutions over problems).
- ◆ Design the iPad activities in a way that gives visitors feedback to help them understand how design choices affect end results—this should be done on the results screen as well as throughout the design process, where appropriate.
- ◆ Ensure any metrics included in the iPad activities reflect real-life measures that visitors can quickly and easily understand (e.g., number of people housed), rather than abstract concepts like the eco-score.

- ◆ Show visitors real-life proposed solutions to the challenges they will experience in the iPad activities. For example, include an architect’s design for a building of the future that visitors can compare to their own.
- ◆ Consider ways to capitalize on some visitors’ desire to freely create their vision(s) for the city. For example, by adding a “what-if?” interactive that presents challenging questions and allows visitors to freely design a solution.
- ◆ Consider integrating ways for visitors to contribute content that do not compromise their privacy. For instance, allow visitors to share their designs but do not include a selfie station.

## STUDY BACKGROUND

The Museum of the City of New York (MCNY) contracted Randi Korn & Associates, Inc. (RK&A) to evaluate exhibit prototypes for the “Future of the City Lab,” an interactive gallery that will be part of the museums’ newest exhibition, *New York At Its Core*. The purpose of the evaluation is to provide MCNY with useful information about visitors’ engagement with the prototypes to inform future development of the “Future of the City Lab.” This evaluation focuses on five specific exhibits (components): the Introduction Text, the Big Challenges Wall, a Neighborhood Exploration, the “Density” iPad Activity, and the Selfie Station.

Specifically, the objectives of the study were to explore:

### **Introduction Text**

- ◆ What about the content of the Introduction Text resonates and makes sense (or doesn’t resonate or make sense) to visitors?
- ◆ What questions do visitors have about the content of the Introduction Text?
- ◆ How well does the Introduction Text orient visitors to the rest of the prototypes?

### **Big Challenges Wall**

- ◆ What about the content of the Big Challenges Wall resonates and makes sense (or doesn’t resonate or make sense) to visitors (including text and data visualizations)?

### **Neighborhood Exploration**

- ◆ What about the material holds/does not hold visitors’ attention?
- ◆ What about the Community Voices is interesting (and would they prefer video)?
- ◆ What connection do visitors see between the activity and the Big Challenges?

### **iPad Activity: Density**

- ◆ What decision-making process and/or prior knowledge do visitors use in the activity?
- ◆ What confusion or misunderstanding do visitors experience about the content or design as they move through the activity?
- ◆ What about the activity attracts and holds visitors’ attention?
- ◆ How goal-oriented are visitors versus wanting to just be creative?



- ◆ Which of the two interfaces does the visitor find more intuitive?
- ◆ What connection do visitors see between The Big Challenges Wall and the activity?
- ◆ How comfortable are visitors sharing their photographs and ideas with others in the exhibition?

#### **Selfie Station**

- ◆ How comfortable are visitors sharing their photographs and ideas at the exhibit?
- ◆ How interested are visitors in seeing other visitors' contributions?

## **METHODOLOGY**

RK&A conducted in-depth interviews with visitors representing three groups—NYC schoolteachers, millennials, and walk-in visitors.

Millennials and teachers were recruited in advance by MCNY, primarily through the MCNY Young Members Association list serve and other existing contact lists. RK&A intercepted walk-in visitors on either the second or third floor of MCNY as they exited exhibitions, following a continuous random sampling method. In accordance with this method, RK&A chose an imaginary line and intercepted the first eligible visitor group to cross that line. Eligible visitors included English-speaking, adult-only groups. If a visitor declined to participate in the interview, RK&A logged the visitor's gender, estimated age, and reason for refusal.

In-depth interviews are exploratory, producing detailed information about the nuances of participants' thoughts and opinions. Interviewees are encouraged to express their opinions and feelings and to share with the interviewer the meaning they associate with the exhibit prototypes.

An interview guide was developed to capture participants' thoughts about different exhibition themes and content (see Appendix A for the interview guide). The interview guide was intentionally open-ended to allow participants to discuss the topics and experiences most meaningful to them. RK&A took detailed notes and audio recorded the interviews. Following the interview, RK&A captured relevant demographic information. All participants received a \$25 gift card to the MCNY store as a token of appreciation.

## DATA ANALYSIS AND REPORTING METHOD

The data are qualitative, meaning that results are descriptive. In analyzing the data, the evaluator studied the transcripts and notes for meaningful patterns and grouped similar responses as patterns and trends emerged. The objectives of the study, as well as our professional experience, informed the analysis. Findings are reported in narrative, supplemented with exemplary quotations from participants. Trends and themes in the data are presented from most- to least-frequently occurring.

Verbatim quotations from interviews (edited for clarity) illustrate participants' thoughts and ideas as fully as possible. The interviewer's questions appear in parentheses.

Qualitative methods typically produce a wealth of data from a smaller number of people. In thinking about qualitative data, one should consider trends relative to one another. That is, more weight should be given to comments made by many visitors versus those made by a few visitors; however, the reader could consider the comments made by a few visitors when thinking about findings, as one person might offer valuable insight.

When describing the findings, this report uses qualitative data terms such as “most” and “several,” as is appropriate for the sample size and the type of data collected. Proportions, such as one-half or one-third are used where appropriate. Such descriptive language is intended to provide readers with a sense of the general trends. Readers should regard the trends as general categories rather than rigid numerical counts.

## INTERVIEW FINDINGS: MILLENNIALS & WALK-INS

Over four days in September 2015, RK&A conducted in-depth interviews with 20 millennials and 17 walk-in visitors at MCNY about exhibit prototypes for the Future of the City Lab (also referred to as Gallery 3). MCNY recruited millennials in advance to participate in the evaluation, mostly through their Young Members Association—all are New York City locals ages 18-35. Walk-in visitors were recruited by RK&A on the days of testing—they include adult New York City locals, US-based tourists, and foreign tourists. The participation rate for walk-in visitors was 70 percent. The total sample includes:

**Mostly females:** 65 percent of millennials and 58 percent of walk-in visitors are female.

**Primarily young adults<sup>1</sup>:** 95 percent of millennials and 70 percent of walk-in visitors are under the age of 35 years.

**Many tourists:** 53 percent of walk-in visitors are foreign tourists, and 17 percent are U.S.-based tourists.

**Highly educated individuals:** 44 percent of the sample has a bachelor's degree, and 30 percent have a graduate degree.

**Mostly individuals who identify as White:** 66 percent of the sample identifies as White; 7 percent identify as multi-ethnic.

**Many first-time visitors:** 50 percent of millennials and 60 percent of walk-ins are first-time visitors to MCNY.

Data from both of groups were combined for analysis since their responses are similar. Though the data were examined collectively, distinct trends that emerged among foreign tourists, non-millennials, and NYC locals are noted when appropriate.

---

<sup>1</sup> Since we used a random sampling procedure for recruiting walk-in visitors, we would have expected the sample to include older individuals and/or a greater range of ages. When possible, we did attempt to purposefully recruit older-looking individuals, but sometimes these individuals did not speak English. Though we do not know for sure, one explanation for the younger sample may be the two temporary exhibitions on the third floor which focused on folk music and hip-hop in New York City.

## INTRODUCTION TEXT

Participants<sup>2</sup> were first asked to read the Introduction Text and to describe their overall takeaways, as well as any confusing or unclear aspects of the text.

## OVERALL TAKEAWAYS

Several takeaways emerged as participants discussed their understanding of the Introduction Text:

- ◆ **Confronting challenges:** Most said they understood that the Future of the City Lab (Gallery 3) is about challenges and issues that New York City currently faces and how to address them in the future. The majority described this idea in a very general sense, stating for example that Gallery 3 focuses on “where we [New Yorkers] are now and what’s to come,” “the current challenges New York City faces and possible solutions,” and “the problems that the city will face [in the future].” They explained that the title, “The Future of the City Lab” primarily communicated this idea. Similarly, two also said they understood that Gallery 3 will also include information on New York City history, in order to provide a framework for thinking about the future. Along these lines, a few also mentioned the four “defining characteristics” of New York City that are listed in the second paragraph—money, diversity, density, and creativity; they agreed that these characteristics are “intriguing” and characterize the city “as a collective.”
- ◆ **Hands-on/interactive:** One-quarter said the third paragraph—in particular phrases such as “pick up an iPad” and “the Future of the City Lab is not a traditional exhibition”—conveyed that Gallery 3 will be an “interactive,” “hands-on,” and “experimental” space. A few of these participants, all millennials, said they are excited by this “forward-thinking” and “non-traditional” approach.
- ◆ **Relevant to other cities:** A few took away the idea that many issues New York City faces are also relevant to other cities; they said the phrases “New York is exceptional but also informative about the 21st-century urban condition” and “implications for cities worldwide” primarily communicated this idea.
- ◆ **Our choices shape the future:** A few said the last paragraph communicated the idea that the future is “unknowable” and that everyone’s choices and actions shape the future. One interviewee was reminded of how she works to affect change in the city by volunteering.

---

<sup>2</sup> Though all scheduled millennials and walk-in visitors read the Introduction Text, only 29 out of 37 were specifically asked about it in interviews (includes all scheduled millennials but only about one-half of walk-in visitors). This was because several walk-in visitors indicated that they had limited time to participate in an interview.

## UNCLEAR/CONFUSING ASPECTS

When asked what about the Introduction Text was confusing, unclear, or did not resonate, participants shared a few ideas:

- ◆ **Text too long:** Several said the text is “wordy” and “too long,” which makes it feel “old” and “like a textbook;” one also said this makes it difficult to determine the main idea. Along these lines, a few said the text is broad and lacks focus.
- ◆ **Too much focus on interactivity:** A few said the text’s focus on hands-on experimentation and exploration is unnecessary because visitors will realize this when they enter the space. One, for instance, complained that the text focused more on the fact that Gallery 3 is interactive and less on the information and/or topics visitors will explore.
- ◆ **Gallery title misleading:** A few questioned the choice of the term “lab” in the Gallery's title (“The Future of the City Lab”) and how it relates to the context of the exhibition. One, for instance, said it reminds him of his work in biology labs, while another said it simply reminds him of college classes.

## BIG CHALLENGES

Participants were asked to read the Big Challenges Wall (five individual panels that were hung on the wall) and to describe their overall takeaways, as well as any confusing or unclear aspects of the text.



A few of the Big Challenges prototypes, during testing.

## MOST INTERESTING ASPECTS

Overall, participants spoke concretely about the information presented in the Big Challenges and shared a variety of ideas when asked to discuss their takeaways, indicating a high level of interest and resonance. Their responses fell into three major categories, outlined below:

- ◆ **Name interesting facts/questions/challenges:** Many named specific facts and/or questions from one or more Big Challenges panels they found compelling. Several of these participants, for example, said it was interesting to learn about the high cost of expanding the subway system on the “Getting Around” panel. Others were surprised and intrigued to learn that more than one-third of all New Yorkers are foreign-born. A few others gleaned new information about wealth distribution in the city, such as the fact that New York’s poverty levels are increasing. While many of these participants simply listed particular facts they found compelling or surprising, a few others also talked more holistically about facing these challenges in the future. For example, one local participant said it was interesting to think about using the facts presented to make “intelligent decisions” to shape New York City “in the way we want it to go, rather than just going along for the ride.”
- ◆ **Comparisons to other cities:** More than one-half said they liked when New York City’s data was presented alongside data from other cities because it allowed them to see New York “in context as a global city;” this was especially true for data on population growth/density, ethnic and cultural diversity, and income inequality. Some, for instance, found it intriguing that despite its large size, New York City’s population is growing at a slower rate than in other cities, such as Mumbai. Others were interested in comparing the origins of the New York City’s immigrants with other cities’ immigrant populations. Some expressed personal connections with this idea, including one participant who is a first-generation American. Still others (particularly foreign tourists) expressed general interest in

better understanding how income inequality and development in other cities compare to New York. For example, one participant was surprised and intrigued by the high cost of living in New York compared to her small hometown in Belgium.

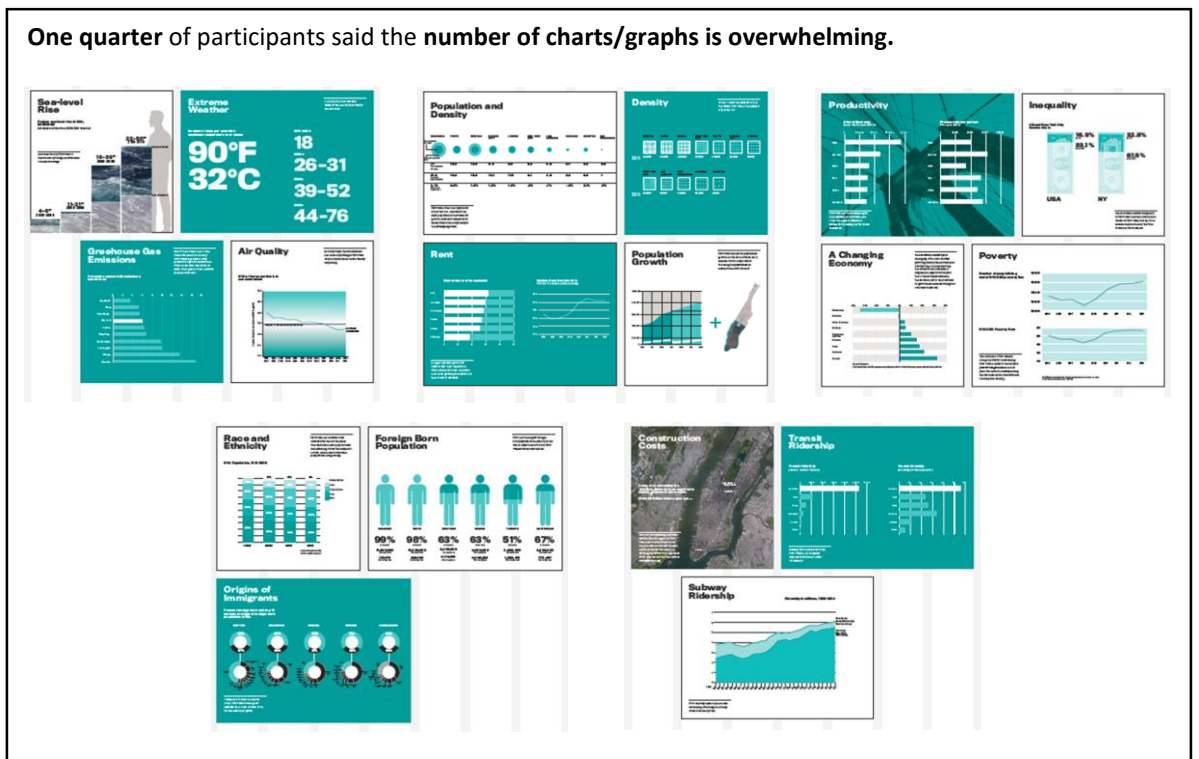
- ◆ **Personal connections:** About one-quarter shared personal connections with issues presented in the Big Challenges. Sometimes these connections related to their professional lives—a social worker explained that the Making a Home panel made her think about housing affordability for the middle class and reducing the number of homeless individuals in the city, and an architect commented that the Living With Nature panel reminded him of his desire to build more green spaces in the city. Several others (mostly New York locals) shared more intimate connections related to their everyday lives in the city, for example: the struggle to find affordable housing (Making a Living panel); what it means to be multi-racial in an ethnically diverse city (Living Together panel); or feeling “small” walking among the city’s crowds (Making a Home panel).

## LEAST INTERESTING / CONFUSING ASPECTS

Participants named a variety of confusing and/or uninteresting aspects of the Big Challenges Wall, both overall as well as for individual panels. They are reported accordingly below.

### OVERALL

- ◆ **Number of graphs/charts is overwhelming:** One-quarter said there are too many charts/graphs on the panels. In explaining this perception, some participants said they were bored by the large amount of charts/graphs and that they desire more variety in how the data is presented. Others expressed a fear of mathematics/statistics and suggested finding ways to present the challenges that are “easier to get through” for those without a background in mathematics. Along these lines, a few said it was difficult to distinguish the data on the different panels because all of the charts/graphs use the same colors.
- ◆ **Lack of solutions:** Several expressed frustration because they felt the panels lacked plans and/or proposed solutions to the challenges presented—that is, in addition to learning what the Big Challenges are, they wanted to see what “others” are doing to address them. For example, some wondered about the city’s current plans to address the rising sea levels in Manhattan or what the Mayor’s office is doing (or planning to do) to preserve housing affordability for the middle class.
- ◆ **Information is worrisome:** A few said the data presented made them feel worried or scared about the future, particularly the data regarding climate change (Living with Nature panel) and poverty (Making a Living and Making a Home panels).
- ◆ **Source(s) of data is unclear:** A few wondered about the source(s) of the data, noting that this information is absent in almost all of the graphs/charts on the panels.



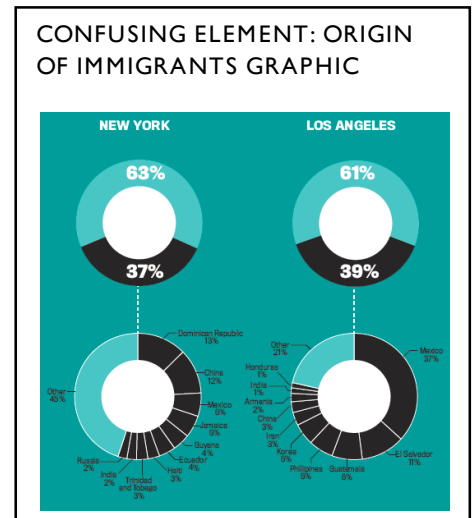


### LIVING WITH NATURE

- ◆ Several participants, many local residents, said Living with Nature is not compelling because the issue of climate change is not “specific to New York City.” Some of them said the information presented on this panel felt broader and less tangible as an everyday issue and did not fit with the “ebbs and flows of the people.” Similarly, some said the title “Living with Nature” made them wish that the panel dealt with other, more specific, environmental issues that affect life in the city—for example, preserving/creating parks and other green spaces and keeping public spaces clean/free of disease.
- ◆ Some were confused by the graphs and charts. For instance, several were unsure about the role of the gray man in relationship to the potential sea-level rise shown in the “Sea-level Rise” graphic. Two said the “Air Quality” graph was initially confusing because it shows a downward trend (i.e., the line goes down), which they assumed meant that something negative has occurred; yet, the intention is to depict a positive change (i.e., air quality in NYC has improved). Another two were confused by the juxtaposition of Fahrenheit and Celsius on the “Extreme Weather” graphic, including whether or not the numbers in the right column represent temperature or something else.

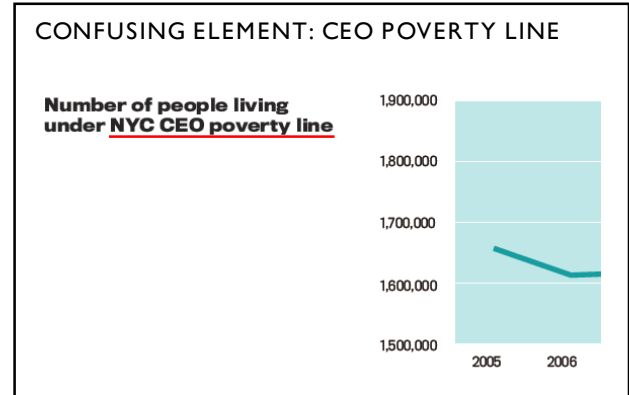
### LIVING TOGETHER

- ◆ Some participants, all New York City residents, said Living Together was less compelling than other panels. A few said the topic of diversity felt “redundant,” in the sense that everyone already knows that the city is cosmopolitan/diverse. And a few others said the issue of diversity in the city does not feel like a challenge or a “problem to be solved.”
- ◆ Several struggled to understand the data visualizations. For instance, a few, mostly foreign tourists, said the “Foreign Born Population” graphic is difficult to understand, mostly because the relationship between the different colors on the “people” and the statistics listed below is not well-explained. And, a few wondered about the distinction between the different colors on the “Origin of Immigrants” graphic (e.g., why both American-born in the New York City population circle and the term “other” in the immigrant breakdown circle are the same color). They also wondered what the term “other” means in this context.



### MAKING A LIVING

- ◆ Confusion around Making a Living focused on the graphs and data visualizations. Several were confused by the term “CEO poverty line” on the “Poverty” graphs, mostly because they associate the acronym “CEO” with the title “Chief Executive Officer.” A few also said the top “Poverty” graph would be easier to understand if it showed the number or percentage of New Yorkers living over the poverty line in addition to those living under it. A few were generally confused about what the dollar-bill on the “Inequality” graphic represents.



### MAKING A HOME

- ◆ Several were confused by some of the data visualizations in Making a Home. For instance, a few said the “Population and Density” graphic makes it seem as though New York City will not experience much population growth, while the “Population Growth” graphic suggests the opposite. Two participants suggested titling each row of the “Density” chart to clearly mark what each depicts; for example, “Density of New York City Compared to Other World Cities” and “Density of New York City Compared to Other American Cities.”

### GETTING AROUND

- ◆ A few wondered about the specific “complex reasons” for why the cost of expanding the transit system is more expensive in New York than in other cities (from the “Construction Costs” graphic).
- ◆ Two said they had trouble understanding the difference between the “Subway Ridership” and the “Transit Ridership” graphs because the topics are so closely related.

## NEIGHBORHOOD EXPLORATION

Participants were asked to view a PowerPoint slideshow of one of the Neighborhood Exploration activities (about the South Bronx neighborhoods near the Bronx River) on an iPad, and then to describe their overall takeaways, what they found most interesting, and any confusing or unclear aspects of the activity.

## OVERALL TAKEAWAYS

A few ideas emerged when participants shared their takeaways from Neighborhood Exploration:

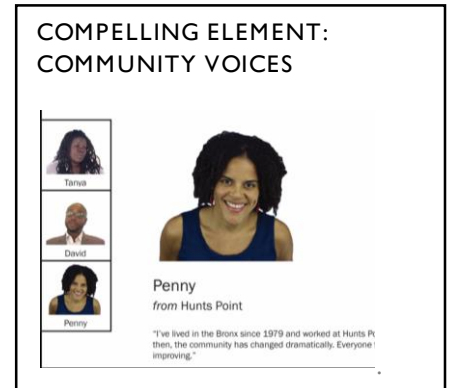
- ◆ **Life in the Bronx is improving:** Almost all participants understood that the activity depicts the various problems, issues, and challenges that the South Bronx has faced in the past and continues to face today. Some participants only vaguely described this idea, without providing examples of specific neighborhood challenges they remembered. Several others, however, spoke at length about specific issues that resonated—particularly the high instances of asthma due to rising pollution in the neighborhood, high rates of poverty and crime, and the lack of recreational/green space due to crowding. In addition, most came away with a sense that life in this neighborhood is improving. A few New York City residents (none of whom live in the Bronx) said they were excited to learn more about a “new” part of the city.
- ◆ **Brings the Big Challenges to life:** The majority of participants pointed out connections between the Neighborhood Exploration activity and the five major themes from the Big Challenges Wall. Some spoke generally about these connections, for example stating that the Neighborhood Exploration gives visitors “more insight” or “brings into focus” the Big Challenges. Others elaborated and named specific challenges that they felt are connected to the activity—namely, Living with Nature and Getting Around, because of a perceived focus on the lack of recreational/green space and the health problems caused by pollution from transportation (e.g., the Sheridan Expressway) and manufacturing. However, despite these perceived connections, it is notable that two-thirds of participants said they did not notice that the names of the tabs in the activity are the same as the names of the five Big Challenges. Along these lines, a few said the activity did not feel especially related to the Big Challenges because it felt more “historical” and less focused on the future.
- ◆ **Negative feelings about the Bronx:** A few came away with a negative impression of the Bronx after viewing the activity. One of these participants, for example, said the photographs gave him the sense that the Bronx is “unattractive” and “derelict,” while another similarly said viewing the historical photographs and thinking about the negative effects of poor planning, such as bad air quality and a lack of green space, made her feel “sad.”



## MOST COMPELLING ASPECTS

In addition to the larger takeaways mentioned in the above section, participants named two aspects of the Neighborhood Exploration they found particularly compelling:

- ◆ **Community Voices:** Many said they liked the Community Voices section because it humanized the content (from both this activity and the Big Challenges) and made it feel more “real,” “relatable,” and “personal.” And, almost three-quarters said they would prefer the Community Voices as video, mainly because they felt hearing residents’ accents and ways of speaking (tone) would make their thoughts feel more “genuine” and would better illustrate New York City’s diverse population. A few also welcomed the idea of videos as a “break” from the text-heavy parts of the activity. However, a few foreign tourists suggested the videos should have subtitles for visitors who are not native English speakers.
- ◆ **Historic Photographs:** Several also said they were drawn to the historic photographs because they liked being able to visualize how the neighborhood(s) have changed over time.



## LEAST COMPELLING ASPECTS

When asked what they found least interesting about the Neighborhood Exploration activity, participants shared a few ideas:

- ◆ **Negative feelings about the photographs:** Many complained about the photographs chosen for the activity. Some, for instance, said the photographs used for Community Voices were “bad quality,” like one participant who compared them to stock photographs. Others said there are too many historic photographs, which made the activity feel “boring;” though, a few of these participants said they would find the historic photographs more compelling if they were shown alongside modern photographs to facilitate comparison.
- ◆ **Content does not feel cohesive:** Many insinuated that the activity’s content does not feel cohesive or that it is not well organized. Some, for example, said the historic photographs felt out of place in the middle of the activity because the other sections deal with the present (i.e., they wanted the content presented in chronological order). Others had trouble making connections between the various types of information.
- ◆ **Boring/negative content:** Several said the content felt boring overall, mostly because it was so historical. Instead, they desired to know more about life in present-day South Bronx and to see “predictions” about what this area will be like in the future.



## IPAD ACTIVITY- DENSITY

Participants were asked to view two versions of an iPad activity that focuses on density and designing a building. They viewed the two versions of the activity as follows:

- ◆ 20 participants saw Version 1 (the shorter version) first, then Version 2 (the longer version).
- ◆ 17 participants saw Version 2 (the longer version) first, then Version 1 (the shorter version).

## UNDERSTANDING OF PURPOSE

Overall, all participants understood that the goal of the activity is to help visitors better understand the process of designing a building in New York City. Most said the activity provides insight into how all variables/choices/decisions that go into designing a building are interrelated—for example, by stating that the activity is about “the challenges of building in a limited space and how each choice affects everything” or “rais[ing] awareness of the different aspects of building a building and how one decision can affect all the other variables.” At the same time, some more explicitly stressed the creative freedom given to visitors in the activity (in a positive way). One participant, for example, said the activity allows visitors to “construct something [they] would be interested in,” while another said the activity allows visitors to “create [their] dream building.”

## DECISION-MAKING

Participants’ responses fell into three major categories when asked to describe how they would make choices/decisions in the activity:

- ◆ **Aesthetics:** Almost one-third said they would primarily base their design choices on what they find aesthetically pleasing, particularly regarding materials and the height and shape of the building. Some said this is because they are impulsive and like to do “fun,” “crazy,” and “silly” things. On the other hand, others said they would base decisions primarily on aesthetics because the activity does not feel “real” and therefore is hard to take seriously—one participant, for instance, said it felt like “making something in a vacuum.”
- ◆ **Mixture of aesthetics/end-goals:** Another almost one-third said they would initially think about aesthetics and “mess around” with the different options; but, after seeing the final screen that displays the effects of their choices on factors like the building’s eco-score, relative affordability, and construction/development costs, they would go back and more thoughtfully revise their choices.
- ◆ **End-goals:** Slightly more than one-third said they would primarily base decisions on factors like affordability, environmental-friendliness, and construction/development costs, as well as how the building fits in with the neighborhood as a whole (both in terms of amenities offered and architectural style). A few of these participants said they like the “challenge” of trying to “get good ratings [scores].”

Participants did not name many confusing aspects of making choices in the activity, likely because they were unable to actually experiment and make choices in the prototype. However, several (across all of the groups noted in the above list) indicated that they wished the various factors that are highlighted on the final screens (affordability, environmental friendliness, people housed, etc.) were more explicitly highlighted from the start, and that they were reminded about them as they moved through the activity.

### MOST INTERESTING ASPECTS (OVERALL)

Overall, participants were extremely enthusiastic about the iPad activity, and they shared two main ideas when asked what was most interesting:

- ◆ **Insight into urban planning:** More than one-half said learning what architects, urban planners, and/or developers must consider when designing a building was most interesting. More specifically, several said they liked seeing the “impact” or “ramifications” of their choices because it gave them a better understanding of the complexities of urban planning, which a few said is something they “don’t normally think about” in their daily lives.
- ◆ **Freedom to create:** Almost one-half said the most interesting aspect of the activity is simply having the opportunity to build and create freely, which they thought seemed “fun.” Participants were particularly interested in seeing their creations mapped onto the city. As one participant put it, the most interesting part was “being able to plug what’s in my brain into an actual city landscape.”

Participants were enthusiastic about the activity. They loved the **opportunity to build freely and see their creations mapped onto the city landscape.**

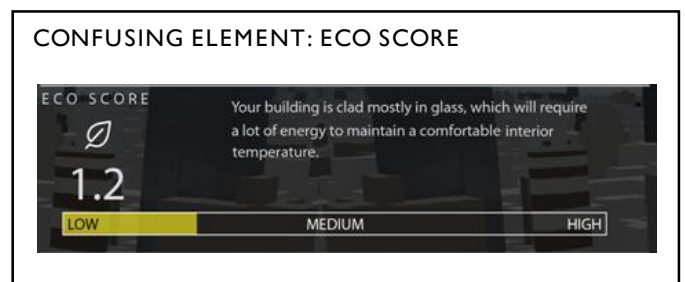




## LEAST INTERESTING/CONFUSING ASPECTS

Participants named a several elements of the activity they found confusing and/or uninteresting about the activity (however, note that participants were unable to make their own choices in the prototype):

- ◆ **Need a more thorough explanations of changes:** Many said they wished the activity better explained the reasons why changing certain factors in their building’s design affects measures like affordability and the eco-score—that is, they understood that their design choices, for example changing the building materials or the building’s height, affect these factors, but they felt that it was not always clear why. Several, for example, were curious to know more about how the cost of rent is determined, as well as what the term “government subsidies” means. One participant even suggested including real-life examples of how these factors have influenced New York City buildings to help visitors understand these ideas.
- ◆ **Eco score unclear:** One-quarter said they had trouble understanding the significance of the “eco score” because they had no sense of the possible range/scale (i.e., is an eco score of 1.2 good or bad, is there an upper limit to how high an eco score can be? etc.).
- ◆ **Introduction boring:** A few said the introduction to the activity (in this case, the “Downtown Manhattan” slide) was “boring” and “forgettable.” Two of these participants said they wished the introduction to the activity provided them with a deeper understanding about the neighborhood in question and also a more obvious “goal” or “mission” to help contextualize the activity. Also regarding the introduction, one participant said it was unclear what visitors can do if they choose the “Design a Landscape” option (e.g., create a park, something else?)
- ◆ **Need to ground the activity in reality:** Two participants said they were not particularly interested in the activity because it did not feel tangibly related to the future of New York City—mostly because they knew that participants’ designs would not come to fruition. One of these participants said he would rather learn about architects’ and developers’ real-life plans for this reason.



## VERSION PREFERENCE

After discussing the activity holistically, participants also shared which version of the activity they preferred.

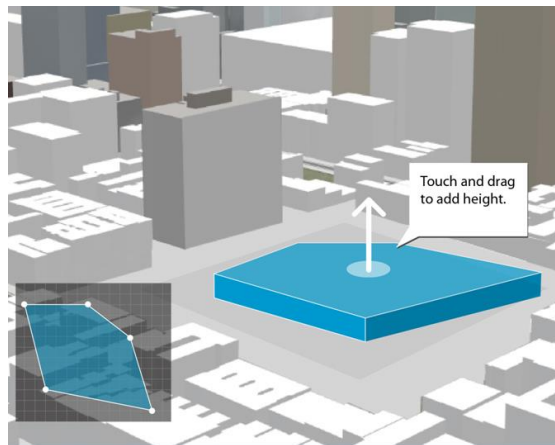
### VERSION 1

Some said they preferred Version 1, mainly because they feel it is “simpler” than Version 2. In particular, Version 1 offers fewer design options and (presumably) takes less time to complete. A few also liked this version because it allows visitors to draw more “freely” than Version 2, a perception they tied primarily to the “trace a vertical line here” screen, the opportunity to add curves to the building (by drawing a curvy line), and the chance to add “abstract” features such as a ski ramp. However, some also said this version’s “cartoony” and “animated” appearance made it seem less serious and unrealistic, and therefore less like they were truly a “part of the [design] process.”

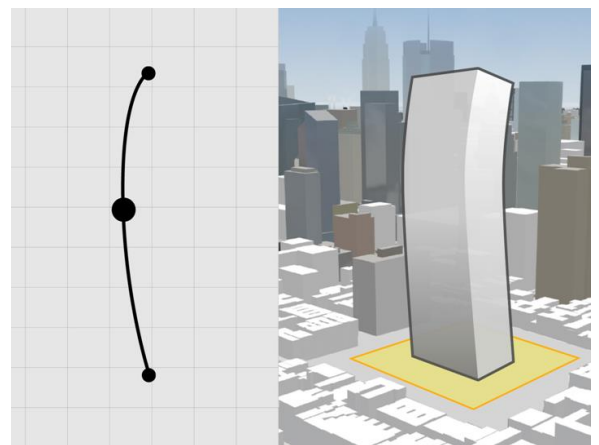
### VERSION 2

The majority of participants preferred Version 2. Overall, they said the “step-by-step” design process and more “detailed” options better simulate architects’ and developers’ actual design process. These aspects made participants feel more “in control” and gave them a “deeper and richer” understanding of what goes into designing a building. For example, they appreciated certain design features like being able to build floor-by-floor and manipulate the floor shape (as opposed to building by “tracing a vertical line” in Version 1, which they thought made it feel like the design was being “done for you”). Similarly, they also liked seeing a clear, consistent menu across the screen in this version as well as the fact that the results screen prompted them to go back and modify their designs. They also liked that this version allows visitors to explore some more complex factors that affect building development, such as government subsidies.

**Most participants preferred Version 2;** they liked the more “detailed” design options, like building floor-by-floor, because it made them feel more “in control.”



Version 2: building floor-by-floor.



Version 1: tracing a vertical line to create a building.



## CONNECTIONS TO OTHER ACTIVITIES

Almost all participants said the activity felt connected to the Big Challenges. Many named specific challenges they felt were most closely related—namely, Making a Home and Making a Living, because of the activity’s focus on density and affordability. Overall, they thought the activity made them more aware of the complexities of urban development and design, and helped them understand the relationship between the built environment and many of the problems/challenges the city must confront.

A few others, however, recognized some of these connections but were nonetheless hesitant to state that the activity was clearly related to the Big Challenges. For some, this was because they felt the activity is not “realistic,” since everyday people lack control over many of the issues presented in the activity. A few others had trouble envisioning how their designs apply to the city as a whole—as one participant put it, “I feel that I’m building a building but I don’t feel that this gives me ideas of what I want the city of New York to look like.”

## SHARING DESIGNS

Participants were asked whether they were interested in writing about and sharing their designs and photographs with others (both in the exhibition and on social media), as well as viewing others’ visitors’ designs.

- ◆ **Would share designs, without photographs:** The majority said they would be interested in sharing their designs with others in the museum only if taking their photograph is optional. Several of these participants also specified that even if the photograph is optional, they would still only be interested in sharing their designs in the gallery and not to social media.
- ◆ **Not interested in sharing designs or photographs:** Several said they were not interested in sharing their designs or photographs with others, mostly because they generally prefer a more passive, non-participatory museum experience. One also said she would not want to share because she does not think of herself as particularly creative.
- ◆ **Comfortable sharing both:** A few said they would feel comfortable sharing their designs and photographs with others, both in the gallery and on social media; they thought this was a “fun” and “cute” way to capture and share their museum experience.
- ◆ **Would share designs, without writing:** Two said they would be interested in sharing their designs and photographs with others, but only if they did not have to take the time to explain their designs in writing.

Despite their mixed feelings on sharing their own designs, almost all participants said they were interested in viewing others’ designs in the gallery. Overall, they felt that seeing different “visions” of the city and learning about others’ unique perspectives would be “inspiring.” A few of these participants, however, said they would be more interested in viewing visitor designs that have been selected by museum staff, rather than all visitors’ designs—for instance, designs that received the highest eco-scores or that make the most creative use of a certain material. Along these lines, two expressed particular interest in seeing the “local perspective” (i.e., local New Yorkers’ designs) because it would help establish the “connection between the museum and the city.”

## SELFIE STATION

Participants<sup>3</sup> were asked to view three sets of statements that visitors might be invited to respond to at the “Voices and Visions” section of the exhibition. Their preferences are as follows:

**Option C:** *My greatest hope for the future of New York City is \_\_\_\_\_.*  
*My greatest fear for the future of New York City is \_\_\_\_\_.*

Many said they preferred this set of statements, mostly because the words “hope” and “fear” feel more “emotional” (in a positive way); one participant, for instance, said they are “action words that [will] strike a chord” in visitors.

**Option B:** *In the future, I want New York to be \_\_\_\_\_.*

Several preferred this statement, primarily because they like its focus on the positive—that is, unlike the other statements, it does not invite visitors to envision negative things like their fears or what they “don’t want” for the future.

**Option A:** *In the future, I’d like New York City to change \_\_\_\_\_.*  
*In the future, I don’t want \_\_\_\_\_ to change.*

Several others said they prefer this set of statements because it feels more “concrete” and “realistic” than the other statements, which by comparison feel “big” and “grandiose.” That is, they felt these statements would be easier to answer because they seem to give visitors the option to describe both “small” (everyday) and “big” (long-term) desires.

Overall, many said they are likely to respond to the statements and that they are interested in viewing others’ responses. Some, however, said they would not respond themselves because they prefer to be “consumers” of information, but that they would be interested to see others’ responses to gain a sense of the diversity of other visitors’ ideas. Those that said they would respond liked the idea of adding their voice to dialogue on the future of the city as a culminating experience to the exhibition—as one participant put it, doing so is “your little moment of impact” where visitors can “memorialize” their thoughts. However, despite their general enthusiasm about sharing and viewing others responses, the majority of participants said they were not interested in taking a selfie to accompany their response; a few were more open to the idea, but still said it would depend on their mood during their visit.

---

<sup>3</sup> Only 23 out of 37 millennials and walk-in visitors were shown the statements (includes all scheduled millennials but only a few walk-in visitors). This was because several walk-in visitors indicated that they had limited time to participate in an interview.

## INTERVIEW FINDINGS: TEACHERS

RK&A conducted in-depth interviews with 7 New York City schoolteachers about exhibit prototypes for the Future of the City Lab (Gallery 3), part of the upcoming exhibition *New York at Its Core*.

Teachers, who were repeat visitors, were all female except for one. They ranged in age from 37 to 66 years, with a median age of 50. Three were elementary school teachers, three middle school teachers, and one principal of an elementary school. The middle school teachers all reported that they teach social studies.

## INTRODUCTION TEXT

Teachers were first asked to read the Introduction Text and to describe their overall takeaways, as well as any confusing or unclear aspects of the text.

## OVERALL TAKEWAYS

Two main ideas emerged as teachers discussed their understanding of the Introduction Text:

- ♦ **Confronting challenges:** All said they understood that the Future of the City Lab (Gallery 3) is about the issues that New York City currently faces and how they will be addressed in the future. While one-half of their responses focused solely on New York City, the other one-half also said they understood that Gallery 3 will place these challenges in context with the rest of the world because, as “one of the most iconic global cities,” the “world looks to New York” for solutions. They said the phrase “New York is exceptional but also informative about the 21<sup>st</sup>-century urban condition” communicated this idea.
- ♦ **Hands-on/interactive:** One-half said they also understood that Gallery 3 will be an interactive space where visitors are invited to address the challenges that the city faces. One, for example, said words/phrases such as “explore,” “choose,” and “pick up an iPad” communicated a sense of activity and individualization.

## CONFUSING/UNCLEAR ASPECTS

Teachers shared a few ideas when asked what about the Introduction Text was confusing or unclear:

- ♦ **Text is difficult for younger students:** Most teachers (mostly elementary-school teachers but also one middle school teacher) said the text “requires an educator” to help explain the main ideas because it is too long and because the language is too advanced for younger students. They suggested adding visuals to help students quickly see the main ideas, simplifying lengthy phrases and explanations (like the explanation of interactivity), and/or adding a “futuristic” voice-over to the introduction so students can quickly hear the main ideas and will be encouraged to stay for the entire introduction.
- ♦ **Wonder about interactivity:** Two were confused by the explanation of interactivity, especially what it means to “pick up an iPad” to “see other dimensions of the city.” Essentially, they wondered what kind of “experimentation” and “exploration” students/visitors would be invited to do in the gallery, but they acknowledged that their students would likely “figure it out” during their visit.

## BIG CHALLENGES

Teachers were asked to read the Big Challenges Wall (five individual panels that were hung on the wall) and to describe their overall takeaways, as well as any confusing or unclear aspects of the text.

## OVERALL TAKEAWAYS

Two themes emerged when teachers described their takeaways from the Big Challenges:

- ♦ **Challenges would inspire classroom discussion:** Most teachers named challenges they would discuss with their students in the classroom; particularly, diversity (Living Together), the environment (Living with Nature), transportation (Getting Around), and inequality (Making a Living). A few, for instance, said they would discuss diversity as raised in the Living Together panel so students could gain a deeper sense of the diversity of their own communities. For example, a second-grade teacher imagined asking his students to think about the number of languages they hear when they walk through their neighborhoods. A few also said they would use the Living with Nature panel to talk to students about environmental sustainability on a deeper level; for instance, asking students to think about emergency preparedness for extreme weather events. One also said she liked the Big Challenges because they will help students understand that while New York is unique in many ways, other large cities face similar, and in some cases more extreme, challenges (e.g., New York is very dense but there are other cities with an even higher population density).
- ♦ **Personal connections:** A few teachers also named personal connections with issues raised in the Big Challenges; namely, they identified with the “working-class struggle” and the issues surrounding inequality mentioned on the Making a Living panel. As one put it, your “dollar doesn’t go as far [here] as in other places and that seems to be getting worse and creating a gap between the two classes.” They also tied the issue of inequality to diversity, stating that a high level of cultural diversity is what keeps them in (and brings others to) the city, despite the fact that it is unaffordable. At the same time, they discussed how New York struggles to preserve this diversity as the income-gap widens.

## CONFUSING/UNCLEAR ASPECTS

Teachers named a few aspects of the Big Challenges Wall they found confusing or unclear:

- ◆ **Charts/graphs overwhelming for students:** One-half of teachers thought the amount of charts/graphs on the panels would be overwhelming for their students. More specifically, elementary school teachers said students are not developmentally able to process and understand such “big” numbers, and that they are generally unfamiliar with reading complex charts/graphs. Middle school teachers, on the other hand, did not express this concern, but rather feared that their students would not bother to look at the charts unless there was a way they could manipulate the data (e.g., if the charts were interactive). And, one suggested providing a “focused question” alongside the data to help students look at the charts/graphs more intentionally.
- ◆ **Confronting inequality with students is difficult:** Two second-grade teachers said it would be difficult to talk to their students about issues raised in the Making a Living panel. One said this is because she works in an “intentionally diverse” school (with students from all socio-economic backgrounds), and thus fears calling attention to the income gap in her classroom. The other said the topic is “irrelevant” to second graders, in the sense that their parents do not talk to them about how “privileged” or “unprivileged” they are (i.e., their socio-economic status).
- ◆ **“CEO poverty line” confusing:** Like millennials and walk-in visitors, a few teachers said they were confused by the term “CEO poverty line” because they associate the acronym “CEO” with “Chief Executive Officer.”
- ◆ **Information is worrisome:** Two worried that the challenges, as they are currently presented, would make students feel “afraid”; in particular, the Living with Nature and Making a Living panels.
- ◆ **Titles will not resonate with students:** Two said the titles on the panels are not “intriguing” and will not resonate with students; but, they also said students would find the questions below the titles intriguing.

## NEIGHBORHOOD EXPLORATION

Teachers were asked to view a PowerPoint slideshow of one of the Neighborhood Exploration activities (about the South Bronx neighborhoods near the Bronx River) on an iPad, and then to describe their overall takeaways, what they found most interesting, and any confusing or unclear aspects of the activity.

### OVERALL TAKEAWAYS/MOST INTERESTING ASPECTS

A few ideas emerged when teachers discussed their takeaways from Neighborhood Exploration:

- ♦ **Brings the Big Challenges to life (but focuses on the negatives):** Most talked about the relationship between the Neighborhood Exploration activity and the five major themes from the Big Challenges Wall. For the most part, they spoke about this relationship generally, for example by stating that Neighborhood Exploration is about the “challenges in the Bronx neighborhood.” However, they sometimes also came away with a negative impression of the Bronx, calling it a “depressed” area that “could have been developed differently.” One said the term “open sewer” particularly communicated this idea and stuck with her. And, one spoke at length about parts of the activity that prompted an “emotional” and “visceral” reaction because it reminded her of some of the “upsetting” but “real” issues many of her students face—for example, the health and environmental issues caused by pollution, such as high rates of asthma, and the relative poverty of the South Bronx compared to other parts of the city.
- ♦ **Life in the Bronx is improving:** Two understood that despite facing challenges, life in the South Bronx neighborhoods is improving. One talked about this idea generally, stating that he liked the community voices section for providing a “hopeful” ending to the activity, while the other named specific examples she gleaned of how the life in the South Bronx has improved, such as efforts to clean up the Bronx River and remove the Sheridan Expressway to reduce air pollution and congestion.
- ♦ **Like historic photographs:** A few also said they were drawn to the historic photographs because they liked being able to visualize how the neighborhood(s) have changed over time, but that they would like to see them alongside the modern photographs to facilitate comparison.
- ♦ **Community Voices:** When prompted to discuss Community Voices, all said would prefer to see them as video because it seeing people’s movements and hearing their tones of voices would make the experience more “powerful” and “authentic.” They also suggested having the videos take place in the neighborhood, to provide context for what is discussed.

### **CONFUSING/UNCLEAR ASPECTS**

Teachers named few confusing aspects of the Neighborhood Exploration; however, a few (all elementary school teachers) said the activity would require a lot of preparation in the classroom in order for their students to comprehend the significance of the content. One fifth grade teacher, for example, said she would have to explain the importance of having access to a freshwater river and how air pollution causes negative health effects to students before their visit in order for them to more fully understand the significance of the challenges facing the South Bronx, while a second-grade teacher said the content would generally be difficult for his students to understand because they are only just learning to locate the five boroughs on a map.

Along these lines, two wondered if the activity could include a more prominent map throughout the activity to help students (and other visitors) visualize the neighborhood's location as well as some of the data mentioned; for example, a map that shows the green space in the South Bronx compared to another neighborhood. And, a few wondered if the activity could place more emphasis on efforts to improve life in the South Bronx, for example by including videos of the "local activists" and their efforts to improve the area (perhaps, in the Community Voices section).



## IPAD ACTIVITY- DENSITY

Teachers were asked to view two versions of an iPad activity that focuses on designing a building. They viewed the two versions of the activity as follows:

- ◆ Three teachers saw Version 1 (the shorter version) first, then Version 2 (the longer version).
- ◆ Four teachers saw Version 2 (the longer version) first, then Version 1 (the shorter version).

## UNDERSTANDING OF PURPOSE

Overall, teachers understood that the goal of the activity is to provide insight into the process of designing a building in New York City, and, more specifically, the many variables that go into designing a building and how they are interrelated. One, for example, said that “it makes you think about designing a building [and] all the factors that go into it—not just build[ing] it because it’s cool. It shows you what architects go through.”

## DECISION-MAKING

When asked to talk about making choices in the activity, some teachers talked about how they anticipated their students would make choices, while others talked about what they would do personally:

- ◆ **Students:** A few said they would ask their students to focus on creatively designing buildings that met certain end-goals, like being affordable and environmentally friendly, largely because they felt the activity is an extension of issues they already discuss in the classroom. One second grade teacher, for example, said his students learn how communities must have a variety of buildings to thrive (such as hospitals and schools) and that he would ask them to design a building with this in mind. One, however, thought her students would more likely focus on aesthetics, and suggested adding reminders of goals to keep in mind throughout the activity for this reason.
- ◆ **Personal:** A few others said they would primarily make decisions based on their own “vision for the city,” keeping in mind similar metrics like affordability, but also that would want to explore and add more outrageous features to learn why they are or are not feasible/ideal.

### **MOST INTERESTING ASPECTS (OVERALL)**

Overall, teachers were extremely enthusiastic about the iPad activity; they said it is a fantastic way to “expose to students to architecture and city planning” and that it “has all the components for helping them think as if they were the mayor or a housing commissioner.” Primarily, they liked that it allows students (and others) the freedom to experiment with their own designs, but also that shows the results of your choices (both along the way and in more detail at the end of the activity). One middle school teacher, for example, imagined approaching it from an economic perspective to help students understand the role of money in decision-making. Another imagined asking to students to play the role of “local leaders,” gather feedback from their community, and design a building that meets their community’s needs.

### **LEAST INTERESTING/CONFUSING ASPECTS**

Teachers’ confusions about the activity primarily centered on the term/concept of an eco-score. Like millennials and walk-in visitors, they had trouble making meaning from the score because the possible range/scale is unclear (i.e., is an eco-score of 1.2 good or bad, is there an upper limit to how an eco-score?). They also wondered if the eco-score is an “outside measure” or if it is something created by the Museum. And, almost all said the definition/significance of the eco-score, as well as of other terms/concepts such as government subsidies and permeable surfaces, would need to be taught to students ahead of time because they are too complex for younger students to grasp at a glance. Along these lines, a few wondered if the activity could include these definitions at the beginning of the activity and/or reminders to consider these factors as students/visitors progress in their designs.

### **VERSION PREFERENCE**

After discussing the activity holistically, teachers shared which version of the activity they preferred.

#### ***VERSION 2***

All but one said they preferred Version 2, and they named a few reason for this. Most said that it presents more “complex” and “realistic” factors for students to consider, such as government subsidies. They also this version allows for more precise control over the design process; for example, the opportunity to design a building floor-by-floor. And, a few said the top menu in this version makes it easier to understand the ramifications of your choices along the way, which they said is important for students. They also liked that the results page explicitly prompts users to modify their designs.

#### ***VERSION 1***

Only one teacher preferred this design; he said it is more “whimsical” and “accessible” to younger students. And, though the others still preferred Version 2 because it presents more “realistic” choices, they agreed that young children might find Version 1 more appealing.

## SHARING DESIGNS

Teachers expressed mixed feelings on allowing their students to share their designs and photographs with others (both in the exhibition and on social media). On the one hand, they spoke very positively and said this would be a great way for students “to express themselves” and that students would find it “fun.” But, on the other hand, they were hesitant about whether they could allow students to share their photographs in the exhibition; many said they would need to have parent and/or school permission. That said, they were enthusiastic about the potential to see others’ designs because they felt it would allow students (and other visitors) to better understand and compare others’ unique perspectives/experiences to their own.

## SELFIE STATION

Teachers were asked to view three sets of statements that students might be invited to respond to at the “Voices and Visions” section of the exhibition (see statement options on p. 26). Their preferences are as follows:

- ◆ **Option C:** One-half preferred statement C because it is more “emotional” and “personal” (in a positive way). One, however, worried that word “fear” would leave students/visitors feeling negatively at the end of their visit.
- ◆ **Option A:** Two thought statement A would be easier and less intimidating to complete because the wording allows for more “concrete” and less “grandiose” responses.
- ◆ **Option B:** One preferred statement B because it is simple, in that it has just one part, and also because he believed it focuses on the positive (compared to the other statements which invite both a positive and negative response).

All enthusiastically said they would encourage their students to respond to the statements because it important for students to “use their imaginations” and understand that “they have a voice” and that they can “affect the future when they grow up.” One special education teacher, for example, was especially excited by this opportunity because she feels that her students do not receive much “public praise” and that this is a chance them to gain a “sense of pride and success.”

In terms of taking selfies, teachers again said they would need parent and/or school permission to allow students to post photographs in the exhibition; but, they also said they had no qualms about allowing students to do this as long as they gained permission.

## APPENDICES

Removed for proprietary purposes.