

# Testing Catalogue

10/18/2017

## Product Tests:

- Hypothesis: People prefer image recognition compared to AR to learn about the Freedom Tower.
  - **Test:** Go to Freedom Tower with 2 options (1 AR, 1 image recognition) and ask tourists which they prefer.
  - **Data Points:**
    - Record votes of preference.
    - Record number of users that asked to download the application.
    - Record qualitative feedback.
  - **How to Attract Testers:**
    - Sign + Imagine shirt
  - **Imagine AR Design:**
    - Find floor beneath you
    - Detect plane
    - Play AR content
  - **Imagine (IR) Recognition Design:**
    - Hold iPad up to the Tower
    - Show that the Tower has been detected
    - Touch points appear to play different audio about the building
    - Play the audio
  - **Questions:**
    1. Which product do you prefer?
    2. Why did you prefer that product?
    3. What was the best part about that product? What was the worst part?
    4. How would you improve that product?
    5. What was your favorite part about the other product?
  - **To Do List:**
    - [Have website form ready for sign ups.](#)
    - [Have both products ready for testing.](#)
    - [Finish questionnaire.](#)
  - **Results (details of test below):**
    - 13/20 prefer IR to AR
    - IR:
      - People liked that it was easy to point at the building and get the information quickly.
      - Intuitive and easy to use.
      - Better than looking down at a book, easy to scan the buildings since you are looking at them any way.
      - Didn't want to hold iPad up to the sky for a long period of time.
      - Enjoyed the interactivity of pressing on the actual building.
      - Loved the simplicity.
    - AR:
      - People really liked the 3D models.
      - They loved being able to see the past of the place as well as the present (in real life and in the AR).
      - They didn't see the point in using AR models when the real building is there in front of you.
      - They loved being able to move the iPad around the buildings to see it from many angles (since you can't do that in real life).
      - Seemed to complex for people. Too much to use.
      - Consistent feedback that this would be great for if you are at home, but if you're there in person you want the real building.
      - **Wow factor** when people see the AR appear in front of them.

(Individuals Catalogue for 10/18 Test)

Person 1: IR

- 6.** Which product do you prefer? — IR
- 7.** Why did you prefer that product? — very helpful as you walk around. Normally has to keep looking at book.
- 8.** What was the best part about that product? What was the worst part? — Being able to quickly scan buildings and learn. No bad part.
- 9.** How would you improve that product? — nothing
- 10.** What was your favorite part about the other product?

Person 2: AR

- 11.** Which product do you prefer? — AR
- 12.** Why did you prefer that product? — 3D. Like moving iPad around. Seeing everything in that format.
- 13.** What was the best part about that product? What was the worst part? — Moving around from many angles. Seeing the buildings in many ways.
- 14.** How would you improve that product? — Better quality pictures
- 15.** What was your favorite part about the other product? — Like using it for buildings he doesn't know. Not the famous ones.

Person 3: IR (high school)

- 16.** Why did you prefer that product? — didn't get the AR
- 17.** What was the best part about that product? What was the worst part? — don't know a lot of history so it's useful
- 18.** How would you improve that product? — have it take a picture and then freeze it and be able to click on the touch points
- 19.** What was your favorite part about the other product? — Didn't get the AR version

Person 4: IR (high school)

- 20.** Why did you prefer that product? —
- 21.** What was the best part about that product? What was the worst part? — don't know a lot of history so it's useful to learn
- 22.** How would you improve that product? — have it take a picture and then freeze it and be able to click on the touch points
- 23.** What was your favorite part about the other product? —

Person 5: IR (30 years old)

- 24.** Why did you prefer that product? — facts of building
- 25.** What was the best part about that product? What was the worst part? — liked it
- 26.** How would you improve that product? — like how simple it is
- 27.** What was your favorite part about the other product? — didn't get the AR

Person 6: AR (high school)

- 28.** Which product do you prefer? —
- 29.** Why did you prefer that product? —
- 30.** What was the best part about that product? What was the worst part? — cool to see
- 31.** How would you improve that product? —
- 32.** What was your favorite part about the other product? —

Person 7: AR (high school)

- 33.** Which product do you prefer? —
- 34.** Why did you prefer that product? — don't want to point it at the building

- 35.** What was the best part about that product? What was the worst part? — cool because move around
- 36.** How would you improve that product? —
- 37.** What was your favorite part about the other product? —

Person 8: AR (high school)

- 38.** Which product do you prefer? —
- 39.** Why did you prefer that product? — don't want to tilt it upwards
- 40.** What was the best part about that product? What was the worst part? — cool because move around
- 41.** How would you improve that product? —
- 42.** What was your favorite part about the other product? —

Person 9: IR (30 years old)

- 43.** Why did you prefer that product? — Simplicity
- 44.** What was the worst part? — Nothing
- 45.** How would you improve that product? — nothing
- 46.** What was your favorite part about the other product? — Liked seeing all, of the angles of the building. Moving iPad around.

Person 10: IR (high school)

- 47.** Why did you prefer that product? — IR. AR had bad scale. Pointing phone towards is more interactive. Thinks it's very cool to get the information
- 48.** What was the worst part? — Text instead of audio or in addition to
- 49.** How would you improve that product? —
- 50.** What was your favorite part about the other product? — He would have used the AR version indoors.

Person 11: IR

- 51.** Why did you prefer that product? — Liked learning about the building
- 52.** What was the worst part? — Liked
- 53.** How would you improve that product? — nothing
- 54.** What was your favorite part about the other product? — How the buildings came up. Saw the digital version of the area

Person 12: IR

- 55.** Why did you prefer that product? — more interesting than the first. There are so many buildings in nyc but don't know well. If it's old or new etc. What companies are inside and what the history is
- 56.** What was the worst part? — detecting faster
- 57.** How would you improve that product? —
- 58.** What was your favorite part about the other product? — Seems too complicated. The 3D model didn't look good

Person 13: IR

- 59.** Why did you prefer that product? — More interesting. Useful for lots of places.
- 60.** What was the worst part? — too slow
- 61.** How would you improve that product? — detect faster
- 62.** What was your favorite part about the other product? — nothing

Person 14: IR

- 63.** Why did you prefer that product? — There could be too many building in 3D. He liked being able to point exactly of the building
- 64.** What was the worst part? — nothing
- 65.** How would you improve that product? — tag with name of building. Which is which. Most interested in hearing the story of 911

66. What was your favorite part about the other product? — cool to see the 3D. He wants to the models at home when the building is right there. Before coming he would use AR.

Person 15: AR

67. Why did you prefer that product? — Liked the graphic. Liked the real image in the graphic.  
68. What was the worst part? — nothing  
69. How would you improve that product? — history  
70. What was your favorite part about the other product? — like the real image of IR

Person 16: IR

71. Why did you prefer that product? — It is real building. Touch the building. Get this history.  
72. What was the worst part? —  
73. How would you improve that product? — like the different touch points! Want different audio for each one  
74. What was your favorite part about the other product? — like the graphics and move around

Person 17: AR

75. Why did you prefer that product? — Cooler  
76. What was the worst part? —  
77. How would you improve that product? —  
78. What was your favorite part about the other product? —

Person 18: AR

79. Why did you prefer that product? — cooler  
80. What was the worst part? —  
81. How would you improve that product? —  
82. What was your favorite part about the other product? —

Person 19: IR

83. Why did you prefer that product? — More clear information  
84. What was the worst part? — nothing  
85. How would you improve that product? — nothing  
86. What was your favorite part about the other product? — liked the excitement of it

Person 20: IR

87. Why did you prefer that product? — liked the area around and showed the twin towers and what it is now. The second is good because it is intuitive.  
88. What was the worst part? —  
89. How would you improve that product? — Situation before and after. Need the comparison that isn't there with just pointing the new building.  
90. What was your favorite part about the other product? —

Other notes/ Takeaways:

- **“Wow”** sound when the AR is displayed. People think it's super cool. The AR aspect makes people freak out because it is so new and cool.
- People love seeing the AR buildings and checking it out from different angles. They don't really care as much about the movie and the animation aspect.
- Young people are more wowed by the AR and old people prefer the image recognition.
- **The image recognition big problem is that people don't want to hold the iPad up. They like that the AR is right down there on the ground in front of them.**
- Need to get people when they are sitting down and have a moment. Often taking a break. Never approach from behind. Use the NYU line.
- McGregor joke with a smile was legendary

- **Everyone is taking pictures and pointing camera at the building anyway... don't need them to change that behavior... what if we just add something to it?**
- There are these Asian mobs of people. Specific culture and language. Probably have different desires for what they want to learn.
- 8 rejections (out of 28 approaches)

10/20/2017

### Product Tests:

- Hypothesis: 50% of the people I meet at a hostel will download the application with image recognition + audio.
  - **Test:** Record a demo of how the product works at the Freedom Tower then go to hostels and show the demo.
  - **Data Points:**
    - Record number of people that I meet so I can compare it to the number that download the application.
    - Record their thoughts and reactions to the demo.
  - **How to Attract Testers:**
    - Imagine shirt
  - **Product Design:**
    - Hold iPad up to the Tower
    - Show that the Tower has been detected
    - Audio Button + Text Button + Old Images Button + AR Mode (place the building on the ground in front of you)
    - Play the audio
  - **Questions:**
    1. What excites you most about this product?
    2. Will you download it? If not, why?
    3. If I were designing the perfect tool for you to use at these historic destinations, how would I change my product for your needs? What else do you want to be able to do?
  - **To Do List:**
    - Create demo video of the application working.
    - Make list of hostels that I want to go to.
    - [Have website form ready for sign ups.](#)
  - **Results (details of test below):**
    - 6/21 sign ups. Higher rate at hostel, lower rate in WSP.
    - Common problem — the way people describe it is that they always see interesting looking buildings, but can't get information about them. **This is more about the cool-looking building on your block rather than the Freedom Tower.**
    - They want to know which buildings they should be pointing the camera at. They want to know exactly which ones have the Image Recognition ready to go.
    - The audio should be a beautiful story. The text should be more of the quick facts.
    - People liked the old pictures a lot.
    - Want to be able to save information for later (or take a picture and be able to overlay the history at a later date).
    - Want more than just buildings, people want streets as well.

- Different languages — 100% necessary.
- People love the simplicity of the application. Their favorite part is that they don't have to look up the name of the building, then go on Google, then find a good article to learn about that place.
- Wanted to see the name of the building in the real-world after it has been detected. In other words, they want to see "Washington Square Park" above the arch.
- People sometimes find a shitty plaque, quickly gloss over the history, then forget it 10 minutes later.
- Not a huge fan of audio because they are often with friends. **"Audio is old."**
  - Why does audio suck?
    - People associate it with boring tour guides.
    - It's very isolating, removes you from the people you're with. That is fine when you're walking around a museum, but not fine when you're walking through a city.
- *Thoughts:*
  - People take so many pictures.
    - Why?
      - Capture the moment.
      - Show your friends and family.
      - Share the moment with a friend or partner.
    - What can you do with this information?
      - Timelapse with storm of everyone else's pictures, then slow down once it gets to yours, then speed up through the end of the day.
      - Access to everyone that was taking pictures near you that day, so you can pick the best ones. Or collectively choose the best photos of the day from that location and access them. You get informed on how many people chose your picture and get points when that happens (maybe people can follow you on IG if your picture is commonly chosen).
      - Build the history into the action that is already taking place. What if they have the option of taking the picture and then getting the history about it by connecting it to Imagine?
  - Lots of fools don't care about the history of WSP:
    - Some tourist destinations are more for having fun and chilling (parks) and some are more for intense historical learning (Freedom Tower, Empire State Building).
    - Maybe there just isn't a good solution that is quick and easy. At the Freedom Tower if you want to get any information, you have to do a 2 hour guided tour or carry a print book with you or stand in line to go to the museum.
  - What is the cool, social way to learn about history? How do you learn with your friends? How do I share my knowledge?
  - Personalization: might have to start general (5 most popular categories that people care about)
    - Right now everything is one-size-fits-all. No one cares about **you**. What if Ranjit wants to learn about how WSP relates to his home country of India, but I want to hear the story of when Anthony Kiedis walked through WSP to buy drugs?
      - Is there a way for people that know about the area to share their own stories? For example, if I know that Anthony Kiedis used to buy heroin in the park after his shows or that Bob Dylan wrote a song 2 minutes away from here, can I share that with the world? How does that content stay high quality?
      - Is there a way for me to take advantage of the person next to me that happens to be an expert on this area? Can I tap into his knowledge?
      - Can I figure out the people that are similar to me? Once I know who they are, can I tap into what they found interesting about this place? Or what facts they know about it? Can they make my experience better?
  - Cool version of the "why" game — keep swiping to find out more or find out the backstory. Huge cause and effect for each location until you get to the beginning of time.

Person 1:

- They are always seeing buildings everywhere but can't find out more.
- Yes
- XXX

Person 2:

- Thought it was really cool when the text came up
- Yes
- XXX

Person 3:

- Point at anything. Hard to know which buildings you can get information about. If you live in a building you can add information about it. Cool story to it you can add. Maybe not a building just a street in general. Wants more unusual buildings — not the classic tourist destinations.
- Yes
- XXX

Person 4:

- Wouldn't do it on the most famous buildings. Would use it on less famous ones. Audio needs to be more than hardcore information. Most interested in the story. Written information should be hardcore. Save the story for later if you don't have time to view it then. Take a picture and then get that info at a different time.
- Yes
- XXX

Person 5:

- Old pictures is the coolest part. Text box — very ugly. Textbox should have logo for Freedom Tower.
- Yes
- XXX

Person 6:

- Yesterday she wished there was an app like this. Needs it in different languages.
- Yes!!!!
- XXX

Person 7:

- She likes the history aspect. Wants different languages.
- Yes
- XXX

Person 8:

- Very hard to find out about buildings as they go around. This is very helpful.
- Yes
- XXX

Person 9:

- XXX
- Yes
- XXX

Person 10:

- XXX
- Yes
- XXX

Person 11:

- So easy to work with it. Avoid google search.
- YES

Person 12:

- Lots of information, good for tourists.
- Yes
- XXX

Person 13:

- Access to all of the history in an instant. Don't even need to find a plaque.
- Yes
- People can add their own pictures.

Person 14:

- Really easy to learn about a place. Add more languages. Very excited about it.
- Yes
- Nothing to change

Person 15:

- Gives information of buildings. Like the older pictures. Like the audio.
- Probably not
- XXX

Person 16:

- Everyone wants to know what it looks like before.
- Probably not but thought it was super cool
- XXX

Person 17:

- Read history but didn't even remember it. Found some random ass plaque to read to learn about it. Liked image recognition. Thinks text and pictures are coolest. Write up with old pictures. Suggestion of augmented reality.
- XXX
- XXX

Person 18:

- Name on the arch itself. Big label.
- No because she's with friends.
- XXX

Person 19:

- Integrate with maps
- Yes — be able to detect the more low key buildings.
- XXX

Person 20:

- Short text. Not a fan of audio. Liked pointing it.
- XXX
- XXX

Person 21:



- Short text. Not a fan of audio.
- Yes — got her email
- XXX

## MVP Tests

### - A/B Tests

- *Hypothesis*: Push notifications lead to a 50% increase in time spent on app.
    - Data Points: (1) what percentage of people turn on notifications?
    - Firebase: **(1) Create user properties (audiences) for those that turn on and turn off notifications**
    - Results:
  - *Hypothesis*: If the “Sign up with email” button is hidden, 95% of people that visit the page will still sign up using FB. When it is not hidden, 50% of people will sign up using FB.
    - Why it’s important: If this is true, we should consider removing the “sign up with email button”.
    - Firebase: **(1) Create A/B test — sign\_up\_complete**
    - Results:
  - *Hypothesis*: 100 locations are needed in each city for best experience.
    - Why it’s important: Determines expansion strategy.
    - Firebase: **Create A/B test (1) 30 tourists can see 50 spots (2) 30 tourists can see 75 spots (3) 30 tourists can see 100 spots (4) entry\_headline\_view; entry\_building\_details\_vc**
    - Results:
  - *Hypothesis*: 70% of tourists will not massively prefer high quality writing to Wikipedia content.
    - Why it’s important: If this is true, then we can reduce time/cost by pulling existing information from the web.
    - Data: (1) For 20% of the users, we give them Wikipedia content on most buildings and then see if they are less satisfied than the other users (2)
    - Results:
  - *Hypothesis*: If there are only stories, then there will be (1) 40% more stories read (2) 20% more headlines clicked on (3) 20% time spent using the app per day [avg. time spent per session \* number of opens per day].
    - Firebase: (1) Create A/B test where 50% of users get facts and 50% of users don’t get facts
    - Results:
  - *Hypothesis*: If we use Wikipedia content for our 20 most visited locations, then there will be 20% less time spent on app and 20% fewer stories read.
    - Data Points: (1) What are the most important locations?
    - Firebase: (1) Create A/B test
    - Results:
  - *Hypothesis*: 20% more people will sign up for push notifications with onboarding A vs. onboarding B.
    - Data Points: (1) what percentage of people turn on notifications?
    - Firebase: (1) Create A/B test with some groups getting push notifications and some groups not getting them (will have to create 2 on-boarding processes) —> has to be based on how many people turn on notifications
    - Results:
  - *Hypothesis*: Users with “Swipe to learn more” version will report higher satisfaction, have higher NPSs, and will use the application more than the other group.
    - Firebase: (1) Create A/B test with different UI
    - Results:
- ### - Engagement
- *Hypothesis*: Average user opens the application 6 times per day (1 STD, 5 low-key spots).
    - Other data points: Firebase — % of time user spends on phone vs. on our app
    - Firebase: **(1) Sessions per user from Firebase dashboard.**
    - Results:
  - *Hypothesis*: Average usage time per session is 3 minutes.
    - Firebase: **(1) Engagement per user from Firebase dashboard.**
    - Results:

- *Hypothesis*: 10% of users will request information about a place that isn't currently listed.
  - Why it's important: If this is true, then people are engaged and like that feature.
  - Firebase: **(1) entry\_user\_request\_vc (2) user\_request**
- *Hypothesis*: 1% of users will contribute information.
  - Why it's important: If this is true, we are onto something insane...
    - Wikipedia: 0.03% = (132,530 contributors/400m visitors).
  - Firebase: **(1) entry\_user\_contribution\_vc (2) user\_contribution**
  - Results:
- Referral
  - *Hypothesis*: The number of tourists that have used the application will be 105 (5% tourist growth) by 11/28.
    - App: Referral code for each user (input at beginning).
    - Firebase: **(1) Audiences —> user growth**
    - Results:
  - *Hypothesis*: Net Promoter Score of +50.
    - Data: Send survey to users. NPS = % of Promoters (9-10) - % of Detractors (0-6)
    - Results:
- Retention
  - *Hypothesis*: 95% of users will keep the app until they leave NYC.
    - If this is true, the churn rate is great and we are providing tons of value.
    - Data Points: Email/Survey to see when they leave NYC.
    - Firebase: **(1) user cohort analysis (2) user retention each day**
    - Results:
- Product
  - *Hypothesis*: The average number of headlines a user will get to during 1 session is 3 headlines.
    - Why it's important: If this is true, we gain a good sense of how they use the product.
    - Firebase: **(1) entry\_headline\_view on BuildingDetailView**
    - Results:
  - *Hypothesis*: The average time spent on headline will be 10 seconds, facts will be 1 minute, story will be 1 minute.
    - Firebase: **(1) screenClass: headline\_view (2) AboutMeVC (3) MyStoryVC**
    - Results:
  - *Hypothesis*: The average number of headlines a user will get to during 1 session is 3 headlines.
    - Why it's important: If this is true, we gain a good sense of how they use the product.
    - Firebase: **(1) avg. count per user / avg. number of sessions per user**
    - Results:
  - *Hypothesis*: 90% of people will create an account once they download the application.
    - Why it's important: If this is true, we are doing a good job during the onboarding process.
    - Firebase: **(1) Number of downloads vs. Number of users**
  - *Hypothesis*: Average user will add 3 buildings to their map (6 buildings per day \* 5 days \* 10%).
    - Why it's important: If this is true, they find this feature valuable.
    - Firebase: **(1) building\_saved\_to\_map (BuildingDetailsVC)**
    - Results:
  - *Hypothesis*: Type of buildings that people are most interested in.
    - Why it's important: If this is true, they find this feature valuable.
    - Firebase: **(1) view\_building\_theme**
    - Results:
  - *Hypothesis*: Average user will click on filter in 25% of sessions.
    - Why it's important: If this is true, they find this feature valuable.
    - Firebase: **(1) filter\_btn\_pressed event**
    - Results:
  - *Hypothesis*: Most popular filters will be American Pride + architecture.
    - Why it's important: This will tell us which filters (and locations) they are most interested in.
    - Firebase: **name\_of\_filter**
    - Results:

- Content
  - *Important Feedback Questions:* (1) Which locations do people like the most? (2) What do they like about those places? (3) What was their favorite part of the content? Least favorite?
  - *Hypothesis:* 80% of the most visited buildings will be near a major STD.
    - Why it's important: If this is true, then people go to the STDs and then use Imagine to navigate around near them.
    - Firebase: **(1) view\_building\_name (BuildingDetailsVC)**
    - Results:
  - *Hypothesis:* 90% of tourists will go to the main page of every STD.
    - Why it's important: If this is true, then people really care about those locations
    - Firebase: **(1) view\_building\_name (BuildingDetailsVC)**
    - Results:
  - *Hypothesis:* 70% of tourists spend at least 1 minute on the facts page.
    - Why it's important: If this is true, then tourists really enjoy the facts page.
    - Firebase: **(1) Avg. time spent on facts page**
    - Results:
  - *Hypothesis:* Each tourist will get to the main page of 5 low-key spots per day.
    - Firebase: **(1) entry\_low\_key\_spot**
    - Results:
  - *Hypothesis:* 70% of the users that see a headline will go to the main page.
    - If this is true, then the headlines are effective.
    - Firebase: **(1) entry\_headline\_view compared to entry\_building\_details\_vc**
    - Results:
  - *Hypothesis:* Most popular theme will be American Pride.
    - Firebase: **(1) entry\_building\_details\_vc sorted by audiences (use different theme names)**
    - Results: