



“ADAPTING WATERFRONTS POSTCARDS FROM THE FUTURE, SAN FRANCISCO 2125”

Augmented Reality Tour

Created by Gabriel Tenaya Kaprielian
Collaborator: Yuan Tian

Partner Organizations:



CAL POLY



SPUR

Augmented Reality Tour POSTCARDS FROM THE FUTURE, SAN FRANCISCO 2125

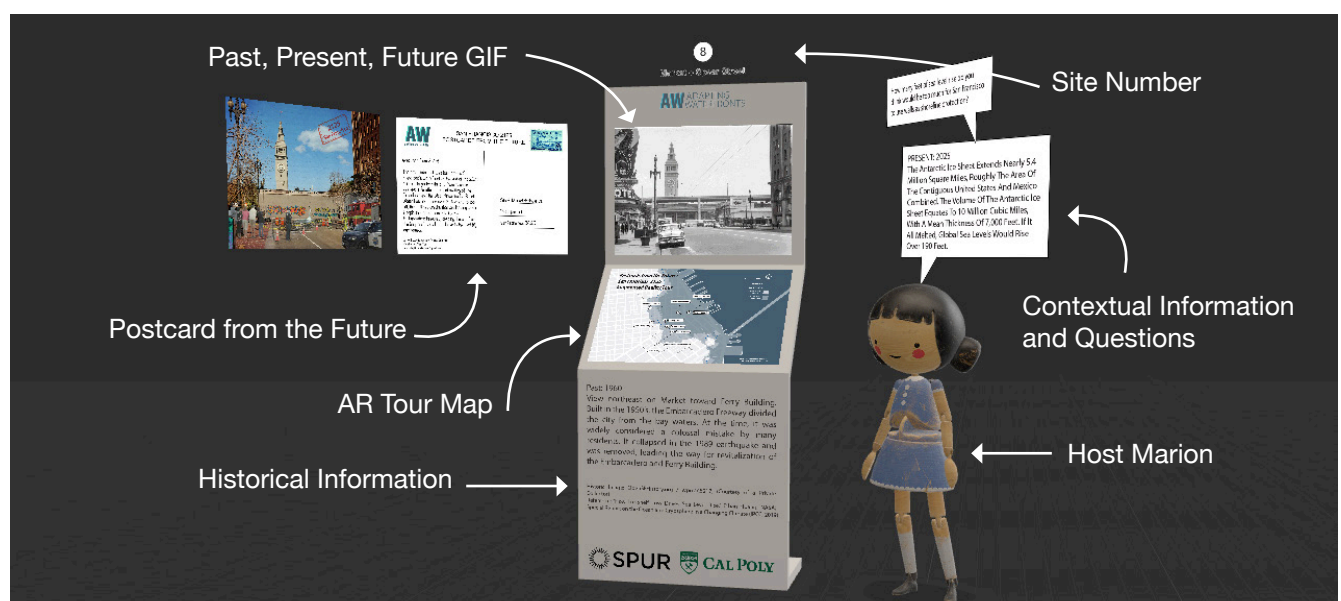
Imagine a postcard sent from San Francisco 100 years in the future. What might someone write back and what images would they send to describe how the city has responded to sea-level rise in the 22nd century?

Postcards from the Future, San Francisco 2125 is a guided augmented reality tour along the historic shoreline, beginning at SPUR and ending at the Ferry Building. The project invites the public to explore the past, present, and potential future transformations of the city's shoreline by visualizing place-based changes at 8 designated locations. While many coastal cities are planning for a projected sea-level rise of 3-7 feet by 2100, high projection models show a potential 16 feet rise by 2150. As it is unknown how fast the ice sheets will melt, combined with the additional effects of increased flooding due to more extreme weather events, tidal cities around the world will need to plan for uncertainty.

The project seeks to inspire collective optimism and empower informed action by reframing the challenges of sea-level rise as an opportunity for design innovation. By providing a platform to exchange knowledge and enable creative discourse about future sea-level rise, *Postcards from the Future* speculates on how San Francisco can develop a long-term planning framework that supports climate change resilience and biodiversity. This is a win-win strategy that increases the role of nature-based solutions that embrace tidal ecologies and biophilia in urban environments.

Disclaimer: The content contained in "Postcards from the Future" are speculative fictions created by Gabriel Tenaya Kaprielian. Their intended purpose is to inspire the imagination by considering different scenarios and strategies for sea-level rise adaptation. The images are artistic renderings and do not explicitly reflect the scientific findings or stance of any of the partner organizations. Site locations of present photographs are approximations of the location in the historic images.

AR Installation Anatomy:



Augmented Reality Instructions



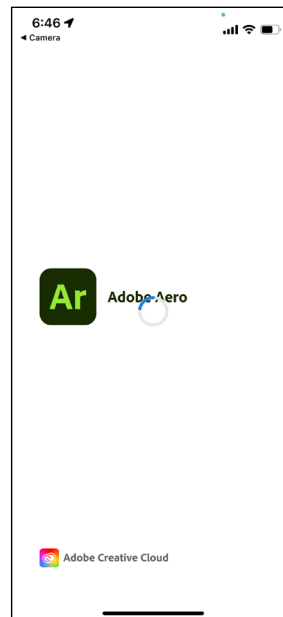
Step 1

Download
Adobe Aero



Step 1

Scan
QR Code



Step 3

Wait to Load



Step 4

Point Camera in the
Direction of Photo
for
Augmented Reality
Installation



**Take photos and
videos (tag us!)**

@gabriel.kaprielian
@spur_urbanist



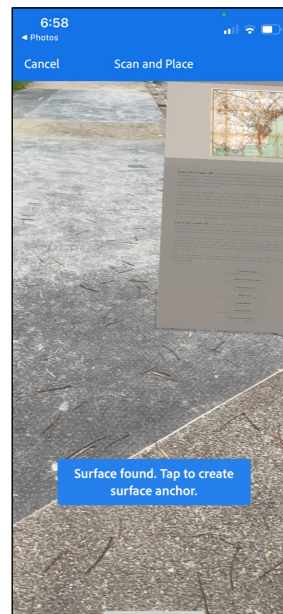
Step 5

Pan Device
(side to side)



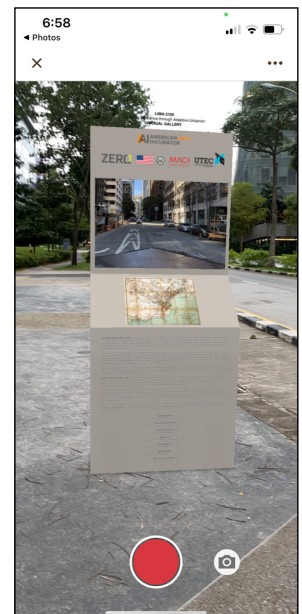
Step 6

Find Surface
(use ground)



Step 7

Tap Ground
(3-5 feet in front)



Step 8

View Installation
(walk up to it)

Augmented Reality Installations

Site 1: Mission + New Montgomery



Augmented Reality



.gif video



FUTURE: 2125

The historic photo is from over 100 years ago. If you were going to write a postcard from the present to someone in 1917, what might you say? Consider what this view could look like in the year 2125. Can you see the flying car above?

PRESENT: 2125

You're standing on top of a coastal sand dune prairie. How many native dune plants and animals can you name? Where are there an existing dune ecosystem in San Francisco?



Site 2: Mission + 1st Street



Augmented Reality



.gif video

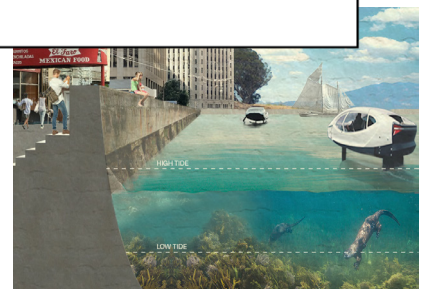
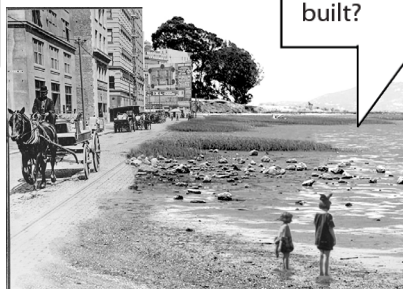


PAST: 3000 BCE

Did you know that during the ice age, the coastline was located at the Farallon Islands, 28 miles to the west! Sea levels rose 300 feet over the course of 4,000 years! Indigenous inhabitants experienced extreme changes in the shoreline. We may very well be at the start of another "sea-change" in coastal morphology.

PAST: 1850

You are standing on the historic shoreline of San Francisco! Can you imagine what it looked like at this beach before the city was built?



Site 3: Market + 1st Street Street



PRESENT: 2025

Canals can be used as part of a larger adaptation strategy for coastal cities facing sea level rise. They can intercept and store excess water during heavy rainfall, reducing the risk of flooding in coastal areas.



Augmented Reality



.gif video

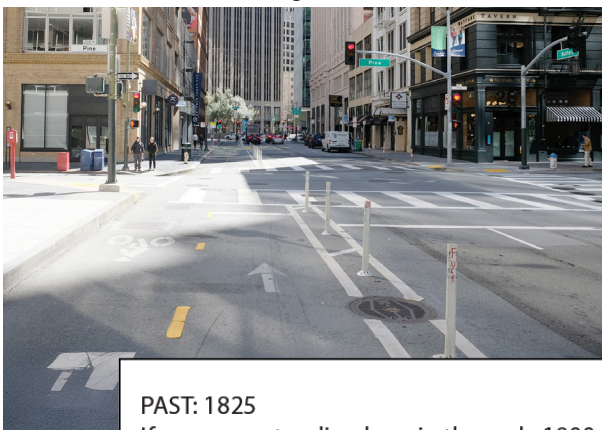


FUTURE: 2125

Can you envision canals replacing some streets in San Francisco? What do you think the benefits and drawbacks might be?



Site 4: Battery + Pine Street



PAST: 1825

If you were standing here in the early 1800s you would be knee deep in water. What tidal ecosystems have been covered by the city streets in San Francisco?



Augmented Reality



.gif video



PRESENT: 2025

How many San Francisco Bay intertidal plants and animals can you name? Where can you find them around the city's shore-line?



Site 5: Pine + Montgomery Street

Augmented Reality



.gif video



PRESENT: 2025

Oak trees not only provide shade and shelter for many species but also play a significant role in carbon sequestration by absorbing and storing carbon from the atmosphere. Planting trees and grasses cities can help lower the temperature and reduce urban heat island.

FUTURE: 2125

Imagine walking to work in downtown San Francisco through an oak woodland forest. How can that experience change your outlook on the day?



Site 6: Montgomery + Clay Street

Augmented Reality



.gif video

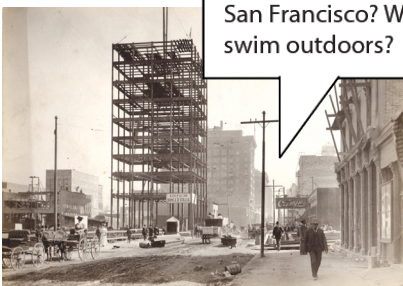


PRESENT: 2025

Would you swim in a giant saltwater pool in San Francisco? Where do people currently swim outdoors?

FUTURE: 2125

Sea-level rise will lead to compound flooding in coastal communities by raising ground water levels, which increases flooding and damages infrastructure with saltwater.



Site 7: Davis + Sacramento Street

Augmented Reality



PRESENT: 2025

How can we reconsider the concept of a static shoreline as a flexible shore area by embracing our relationship with the water?



.gif video



FUTURE: 2125

As sea levels rise, the areas that have been built on reclaimed land are some of the most vulnerable areas to flooding. What parts of San Francisco are constructed on bay fill?



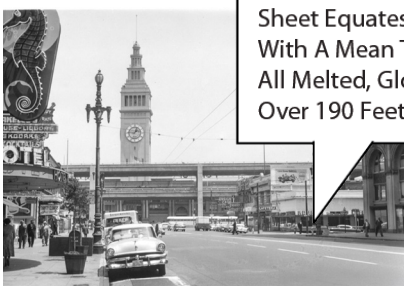
Site 8: Market + Spear Street

Augmented Reality



PRESENT: 2025

The Antarctic Ice Sheet Extends Nearly 5.4 Million Square Miles, Roughly The Area Of The Contiguous United States And Mexico Combined. The Volume Of The Antarctic Ice Sheet Equates To 10 Million Cubic Miles, With A Mean Thickness Of 7,000 Feet. If It All Melted, Global Sea Levels Would Rise Over 190 Feet.



.gif video



How many feet of sea level rise do you think would be too much for San Francisco to use walls as shoreline protection?



Please provide a short reflection of your experience to share with us on the Google Form.



Thank you!