

Architecture
Interior Design
Landscape Architecture
Planning
Urban Design

Australia
China
Hong Kong
Singapore
United Kingdom
United States of America

RESTORATION, RESILIENCE, ACCESS & ACTIVATION

SF EMBARCADERO + PUBLIC PIERS PLAN
(A P3 VISION)



HASSELL

PAGE & TURNBULL

WT PARTNERSHIP

BKF
100+ YEARS
ENGINEERS
SURVEYORS
PLANNERS

R+C
RUTHERFORD + CHEKENE
Structural | Geotechnical

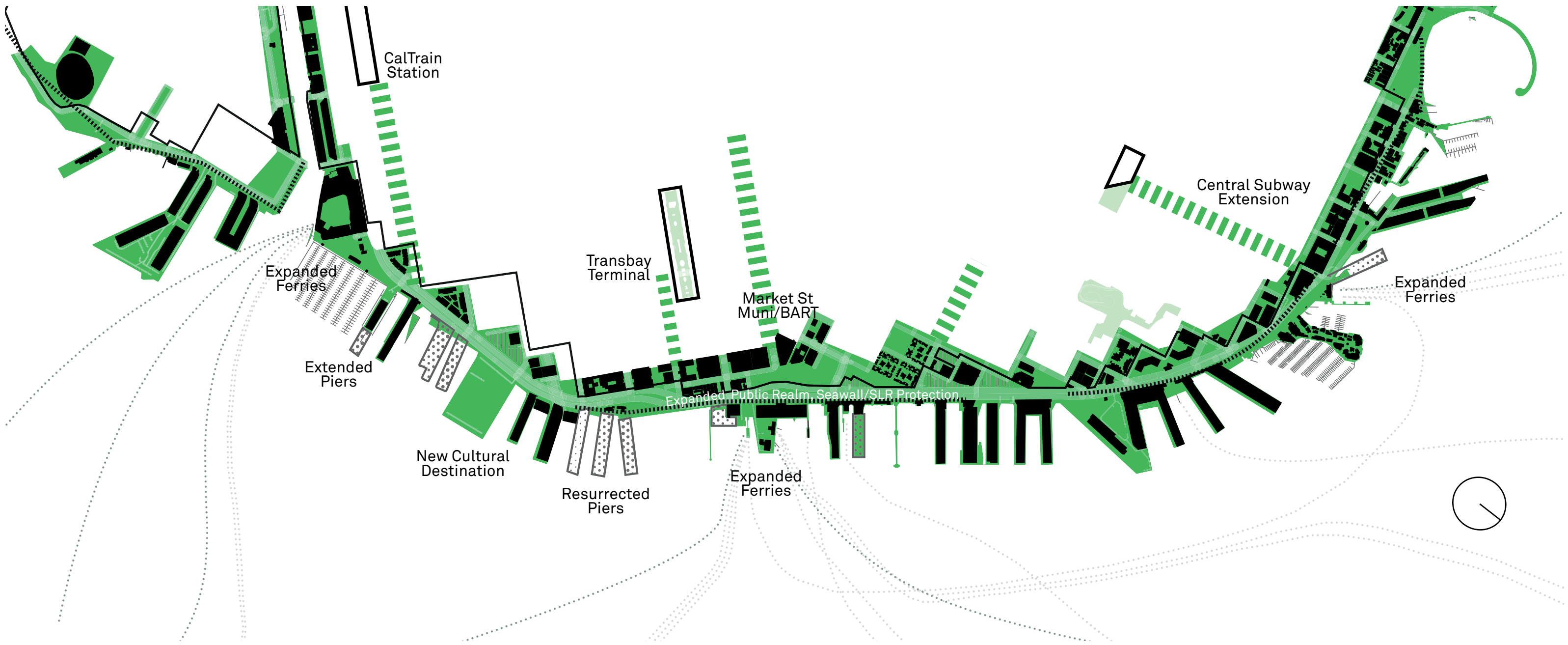
Rehabilitate and preserve important sites within the Embarcadero historic district.

Give the public a diverse array of activities and attractions for people of all ages, backgrounds, and economic levels on port piers and in facilities.

Provide the port with market-based, real world input on interest in the Embarcadero historic district piers and facilities.

Facilitate collaboration and partnership between potential pier tenants.

This is a proposed plan for an integrated approach to the piers, sea-wall lots and the Embarcadero. This proposal brings together global and local expertise to start a public discussion about a bolder vision.



HASSELL

HASSELL is a leading international design practice with studios in Australia, China, South East Asia, the United Kingdom and the United States of America.

We judge the success of the buildings and places we design by the way people use and enjoy them - the clients who commission them, the people who inhabit them. Good design is about helping clients meet their needs and objectives. It's also about the way people feel when they experience it - a sense of meaning, connection and belonging.

Our design values are shared globally across all the HASSELL studios, by the talented people who work in them: architects, interior designers, landscape architects, urban designers, planners and specialist consultants.

We work together in integrated design teams because they produce the best outcomes for our clients. The increasingly complex projects that clients bring to us demand a culture built on collaboration, creativity and innovation in design thinking and delivery.

Openness and empathy with our clients ensure their interests are at the heart of everything we design.



PAGE & TURNBULL

Page & Turnbull is a full-service architecture, design, planning and preservation firm that specializes in transforming and revitalizing the built environment. Founded in 1973, the firm has offices in San Francisco, Los Angeles, and Sacramento. We bring together architects, planners, architectural historians, and conservators with an expertise in working with existing structures and working within historic contexts.

WT PARTNERSHIP

WT Partnership (WT) is one of the fastest growing advisory firms in North America.

WT was founded in Australia back in 1949, WT is known as the oldest start-up in the industry and has been a force in North America since 2015. Ranked in the Top Two Global P3/PPP Technical Advisory Firms by Infraction in 2017/18 and WT currently manages \$6.5 billion dollars of active mega projects across North America.

WT brings globally insightful advice to major projects across North America. We are experts in every stage of asset development. We bring energy, ambition and motivation to our clients to deliver outstanding results.

BkF

For 100+ years **BKF Engineers** has been delivering inspired infrastructure for our clients. With our large network of offices in California we have developed extensive local knowledge that provides us with an understanding of issues relating to feasibility, permitting, and entitlement approvals. We work hard to help you achieve your goals, and get your projects to the finish line.

R+C RUTHERFORD + CHEKENE

Structural | Geotechnical

People at **Rutherford + Chekene** help make projects succeed. We are a diverse group of thinkers, doers, and leaders. We are a listening partner and we look at projects holistically for the best solution to the project, not just the structural or geotechnical components. Our generations of engineers and their expertise bring value to our clients and their projects

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PHOTOGRAPH OF
SAN FRANCISCO IN RUINS
FROM LAWRENCE CAPTIVE AIRSHIP
800 FEET ABOVE SAN FRANCISCO BAY

“An all-hands-on-deck approach will be necessary to ensure that the historic Embarcadero continues to serve as the historic gateway and cultural, recreational, and economic hub for the City by the Bay into the next century.”

Stephanie Meeks
National Trust President and CEO

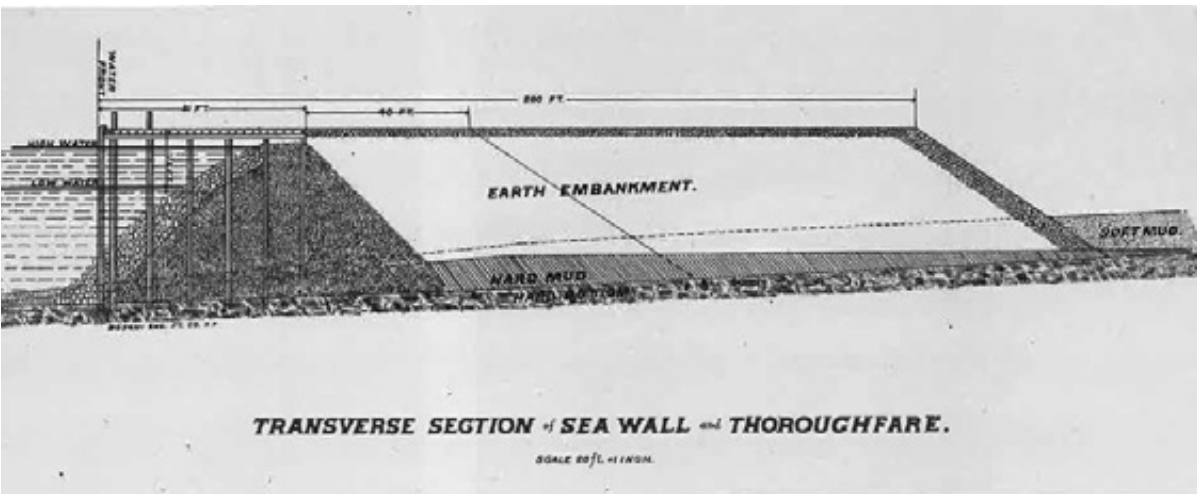


As is written in the 2006 National Register Nomination sheet, the Port of San Francisco Embarcadero Historic District consists of over twenty piers and remnants of piers, a bulkhead wharf in twenty-one sections, a seawall, the Ferry and Agriculture Buildings, and a collection of smaller buildings. These features are located along a three-mile stretch of San Francisco’s waterfront in a discontinuous band broken into two parts separated by a water channel. The District is significant under several criteria and time periods; the most inclusive time-period is from 1878 when seawall construction began, to 1946 when shipping declined at the end of WWII. “San Francisco boasts the most intact early-twentieth-century finger-pier waterfront in the country. This high degree of authenticity has proven to be both an asset and a liability.”¹

¹Michael Corbett, “Port City”, page 18

While we tend to think of our built environments as permanent and unchanging, the reality is that our environment is constantly changing, both by deliberate and unintended means. The present edge of the bay along the SF Embarcadero was formed by the stroke of the pen when in 1877 a redrawn boundary was approved by the State of California; the current configuration is a result of the man-made seawall and other improvements were constructed in the decades that followed. The vibrant Embarcadero district we know today only came to full form in the early 1990’s after the removal of the elevated Embarcadero Freeway and the rehabilitation of the Ferry Building. The district is now understood to be threatened by climate change related sea level rise and a seawall that is vulnerable to earthquakes. Unfortunately, solutions to remedy the vulnerabilities

will be expensive and may result in impacts to the district. This “ideas” proposal offers an opportunity to look forward to the continued vibrancy of the district by providing potential funding sources for improvements through the addition new leasable square footage at “lost piers” and more intensive uses at existing piers and seawall lots and by balancing the preservation of the resources with altering the structures and/or setting that of the district.

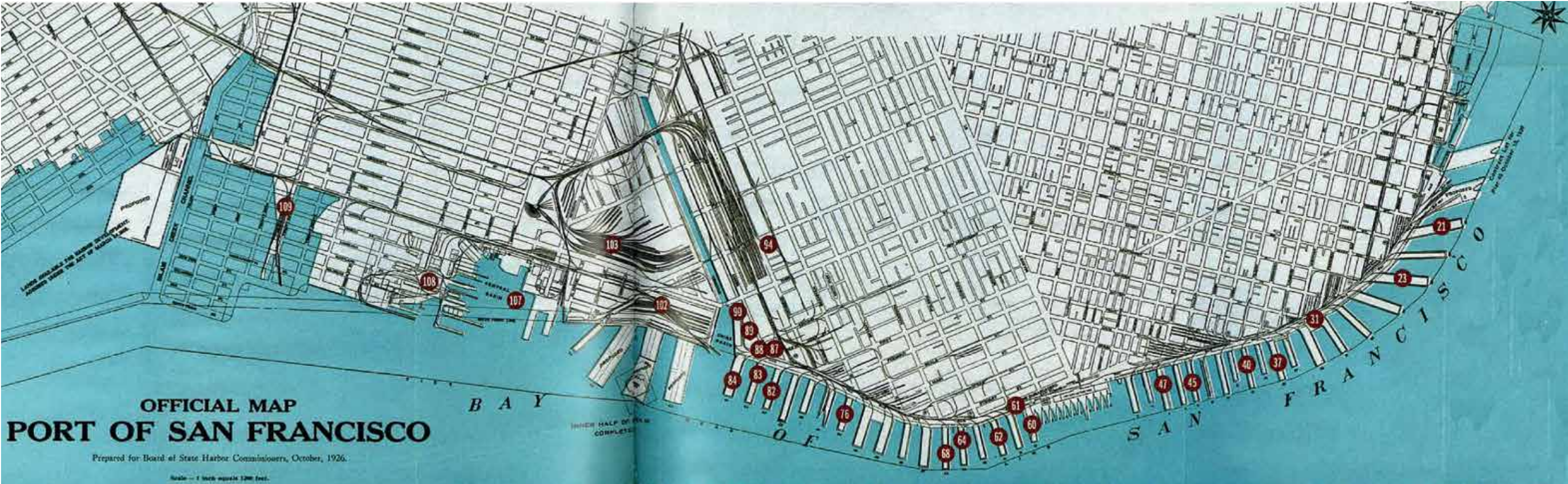


01 Waterfront History



01 The Ferry Building
02 Late 1920s view north on the
Embarcadero showing
Bulkhead buildings
03 1851 map by William M. Eddy

01 Waterfront History



21-Pier 41 and Meigg's Wharf (Old Fisherman's Wharf)

23-Pier 37; First Neoclassical Style Structure

40-Pier 21; early-twentieth-century wooden pier and transit shed. It was demolished in 1931 to make way for the new, enlarged Pier 23.

45-Pier 11; built in the early 1890s, entire structure was demolished about 1935 to make way for the new, larger Pier 9.

47-Pier 7; the San Francisco Bar Pilots was located here until the pier caught fire. Pier 7 was rebuilt and relocated further south for fishing and public access.

60-Pier 14- Wells Fargo & Company Express Building; First pier south of the Ferry Building. Two of its three ground-floor bay accommodated deliveries by horse-drawn wagons and motor vehicles

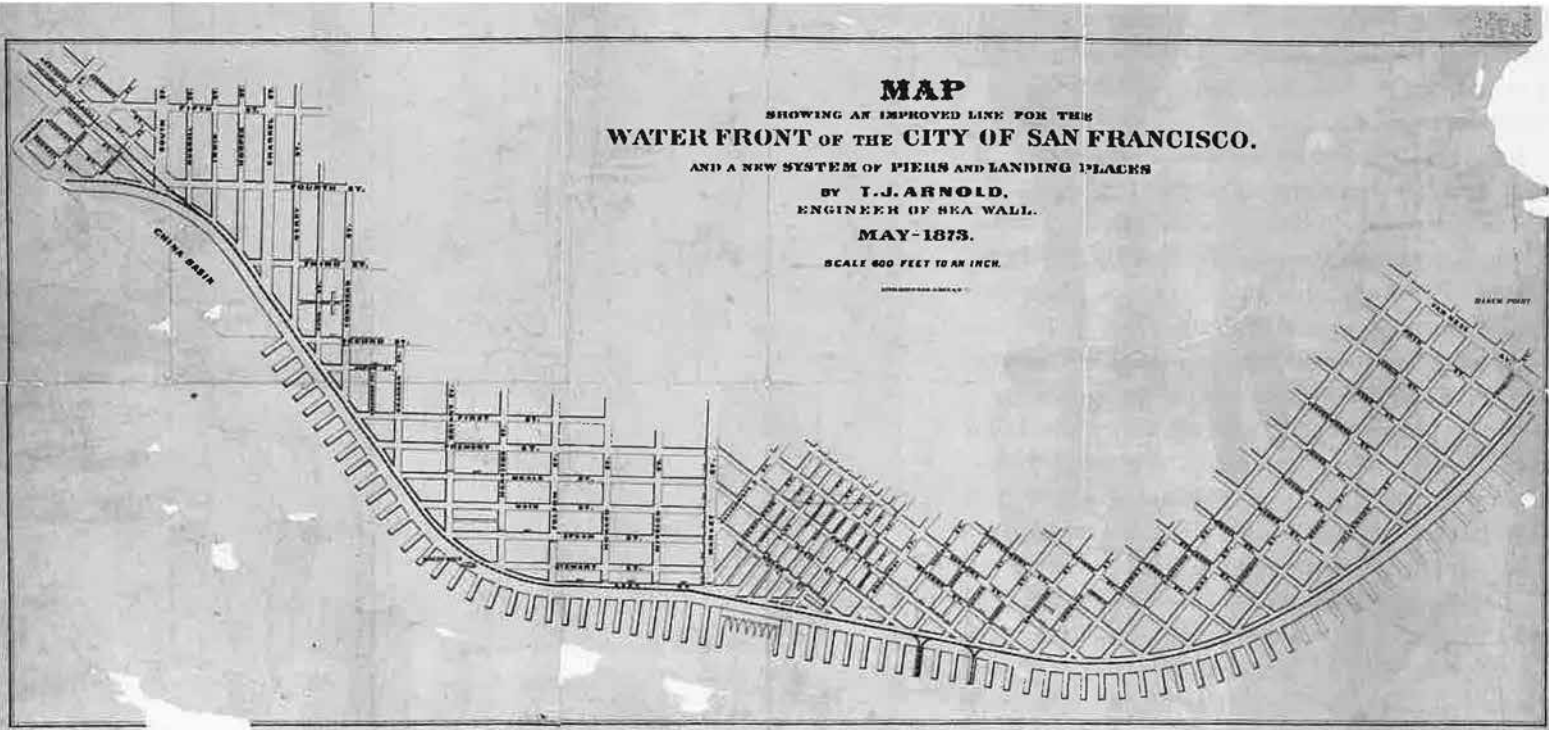
61-Launch Offices; For companies providing small working boats for hire to pilots, ships' agents, customs officials, repairmen, and crew members. Built in 1916 and demolished in the 1960s.

62-Piers 16-18-20; This continuous bulkhead building was used by the port to illustrate its intention to use the "modified" a Mission Revival style buildings south of the Ferry Building.

82-Pier 42, 44, 46A; All built at different times but were unified in 1916-1918 by a similar Mediterranean style treatment of their bulkheads buildings. All were demolished by the 2980s and the area later became the South Beach Marina.

102-Santa Fe Railway Yards and Terminal

108-Potrero Point: The Private Waterfront; The densest concentration of heavy industry in San Francisco-or in any place west of Chicago and St. Louis-developed at Potrero Point beginning after the Civil War, in anticipation of the trans-continental railroad. Tubbs Corgage Works, Pacific Rolling Mills, the San Francisco Gas and Electric Company, the California Sugar Refinery Company, the Union Iron Works and Arctic Oil Works were all established in this area between 1856 and 1884





02 Our Experience

HASSELL has master planned, designed and delivered major public realm and publicly-oriented uses around Sydney’s waterfront, bringing life back to historic structures and bringing residents to the waterfront for a variety of experiences

Richard Mullane
Principal, HASSELL

Sydney Harbor Foreshore
Sydney, Australia

Client
Sydney Harbor Foreshore Authority/ Government Architects Office / City of Sydney

Scale
7 miles

Date
Current

Disciplines
Architecture, Landscape Architecture, Urban Design

Imagery
HASSELL

Sydney’s waterfront has been a focus for life for millennia. It is world-renowned; the home of the city’s iconic Opera House and Harbor Bridge. And it is a place of many distinct spaces, characters and activities.

HASSELL is working with state and local government agencies to design and deliver a rejuvenated Sydney Harbor Foreshore, to:

- _Connect and bring Sydney’s waterfront to life, revolutionising the way people experience Sydney,
- _Create an uninterrupted, accessible and vibrant waterfront walkway,
- _Become an iconic destination and world class experience, and
- _Be a timeless and lasting presence befitting Sydney’s most recognisable foreshore.

Our work aims to celebrate one of Sydney’s greatest natural assets — creating many opportunities for people to discover, appreciate and engage with the Harbor. Already, there are many different Harbor edge experiences — from boardwalks and promenades to rocky edges and steps into the water. We have created new and memorable ways for people to engage with the Harbor.

Around the harbor foreshore, HASSELL has designed and deliver a number of masterplans, public domain, and building projects, including:

- _A vision for circular Quay, the original landing place of European settlers and the ‘front door’ to the city.
- _Public domain masterplan and public spaces in the Historic Rock District.
- _The Ovolo Hotel in the heritage listed Woolloomooloo Wharf and the new W Hotel at Darling Harbor
- _The rejuvenation of Darling Harbor, Sydney’s premier tourism and entertainment precinct.
- _The new Sydney Theater within the Walsh Bay Creative Precinct.
- _Our own Sydney Studio within a repurposed wool wharf.



Sydney’s historic Finger Wharf was the perfect spot for Ovolo’s next Australian hotel. Given the iconic location, the energetic lifestyle brand needed to completely transform the site’s existing facilities to appeal to a new generation of guests while reinvigorating the wharf and bringing the brand to life.

Ovolo Hotel Woolloomooloo
Sydney, Australia

Client
Ovolo Hotels

Size
10,500 sqm, 100 rooms
Completion date
2015
Disciplines
Interior Design
Photography
Nicole England

After the success of Ovolo Laneways hotel in Melbourne, the Hong Kong-based operators again partnered with HASSELL to realise a bold vision.

With the Ovolo guest at the heart of the design process, the hotel embodies everything the brand stands for – young, energetic, cheeky, accessible and effortless – and is evident at every touch point from the employees’ uniforms through to the most pervasive design decisions.

Ovolo represents a collection of hotels that connect people with their locations, and combine their personality with the character of the immediate environment.

In this case, it’s the 100-year old Finger Wharf at Woolloomooloo, close to Sydney’s city center. The brand new hotel capitalises on the brilliant light, Harbor, and cosmopolitan setting, transforming the historic wharf into a place that people can inhabit and truly appreciate.

To inject vitality into the hotel, we first needed to transform an uninviting wind tunnel along the vast central spine of the existing hotel.

We broke the space into smaller zones and inserted pavilions, creating an environment that’s more intimate – more Ovolo – and celebrates the building’s heritage. Pockets of sunlight and tree-filled spaces within the pavilions encourage a variety of uses, which entices people to visit and linger.

Ovolo Woolloomooloo creates a missing link within its broader precinct giving people reasons to visit – and return.

Buzzing bars, restaurants and emerging retail options are great for local residents and hotel guests alike, and anchor the hotel within its surrounds.

Inside, the welcoming public spaces and fresh color scheme contrast with the deliberately atmospheric guest rooms, building drama and interest.

The rooms are truly unique, boasting generous in-room inclusions, custom lighting and locally commissioned artworks.

Today’s hotel guests expect to seamlessly switch between work, rest and play – and Ovolo responds with the right mix of technology and amenities.

We’ve drawn on our expertise in workplace and hospitality design to make Ovolo the Australian benchmark in meeting the needs of a new generation of guests who want to work flexibly across a wide range of settings within the hotel.

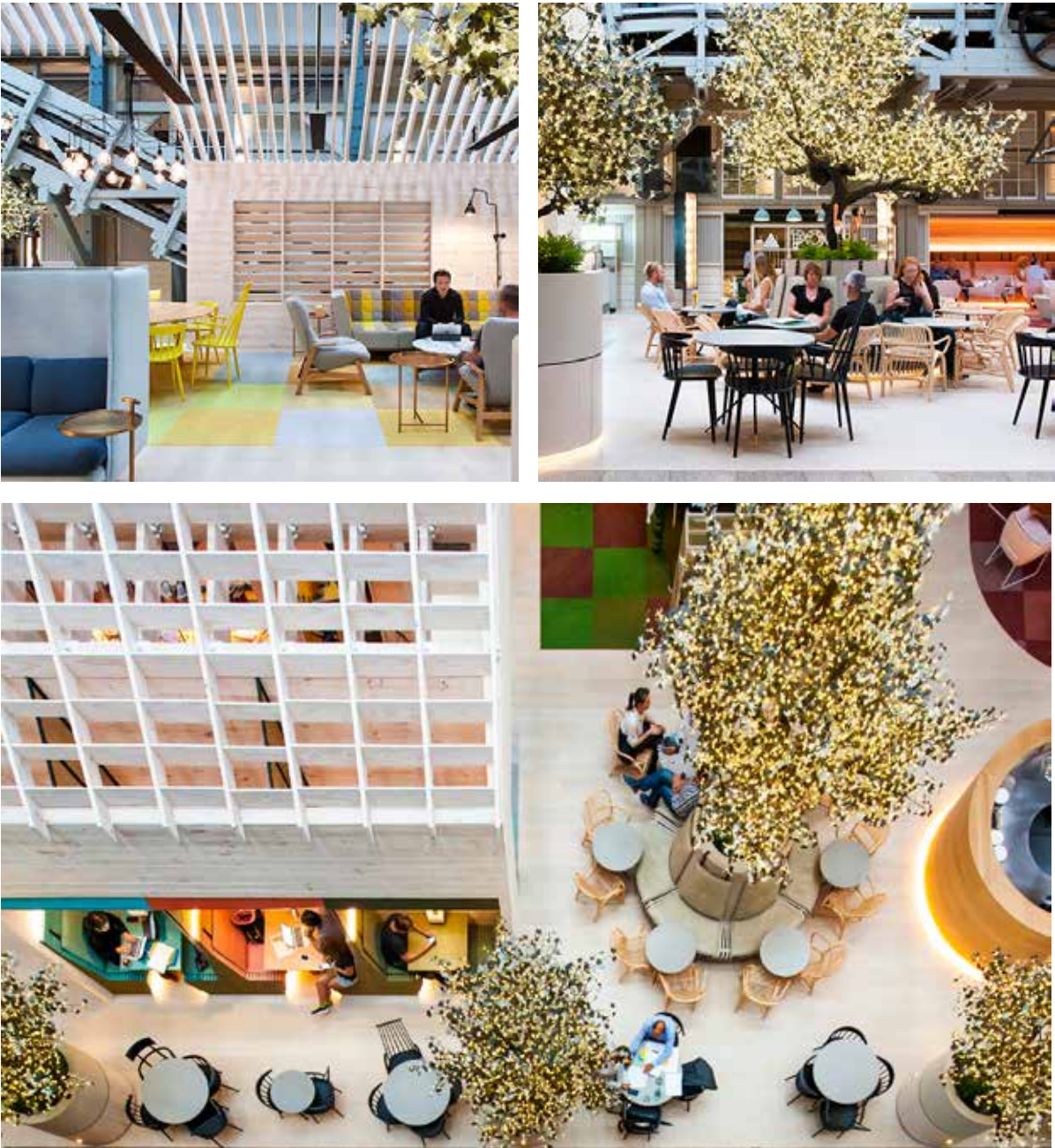
To give people the opportunity to switch off when they need, we’ve provided ample settings for them to gather and connect with each other. The revived space is very Sydney, and very Ovolo, and a welcome new international destination for travellers.

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Ovolo Proper Reception and Public Gallery Space

HASSELL understands that the Sydney Theater Company lives and breathes Theater. At the core of the organization lies creative and artistic excellence, and bringing people together to share experiences that cannot be recreated elsewhere.

Sydney Theater Company Master Plan
Sydney, Australia

Client
Sydney Theater Company (STC)

Scale
6175 sqm NLA
Completion Date
2015

Disciplines
Architecture, Interior Design
Imagery
HASSELL

The Sydney Theater Company has created “grand, vulgar, intelligent, challenging and fun” Theater according to Founding Director, Richard Wherrett. STCs striking Harbor front home of pier 4/5 in Walsh Bay of Sydney has provided the infrastructure for the success of one of the world’s most visionary artistic Theater organizations during this time.

An important piece of maritime heritage, pier 4/5 has become an important link in the cultural chain of Sydney, and the central to the Walsh Bay cultural precinct that over the three decades, has become home to arts companies, loved by artists, audiences, staff and visitors, as well as a thriving residential and business community.

The NSW Government plans to further capitalise on this with its vision for a world class cultural hub – the “Walsh Bay Arts Precinct” - well positioned next to Barangaroo and encompassing Wharf 4/5, Pier 2/3 and the Roslyn Packer Theater.

The HASSELL master plan for the STC heritage wharf was developed to extend the life and significance of this remarkable organization and their home, at a pivotal time for the overall precinct.

It is the STC vision for a place to continue creation of excellent experiences for audiences, artists, visitors and staff into the future. To help STC achieve this goal, the master plan addresses the need for growth of audiences, increased operational efficiency and changing artist needs over the next thirty years.

We consulted with leadership and key stakeholders of STC to develop three key over arching principles to guide the design of the master plan:

- _Improve access to heritage volumes and articulation of spaces, creating distinctive settings
- _Maintain “all-under-one-roof” philosophy of the STC with increased spatial efficiency in terms of greening, equity and livability
- _Provide material distinctiveness between the old and new

A vision for the future, paying respect to the past

The master plan provides flexible spaces that offer a wide range of new and improved experiences that provide opportunities for public engagement and the community.

Re-thinking entrance strategies and spatial experiences offer improved circulation and access as well as additional outdoor spaces that enhance the site and engage with the city, the precinct and the water.

Allowances for an increase in natural ventilation and utilisation of natural light will provide better views and support the STC ambitious sustainability program called “Greening The Wharf”.

We’re all in it together.

The STC is one of few Theater companies internationally that houses all functions, including production facilities, rehearsal rooms and venues, administrative functions and public bar, all in one location.

The long thin form of the heritage pier lends itself to linear storytelling, and we have used this logical progression sequence for the master plan spaces accommodating the loading of raw material to making, finishing, rehearsing, performing Theater, celebrating and engaging.

Drivers of the design were the STC’s social, cultural and sustainable philosophies.



HASSELL Studio
Sydney, Australia

Client
HASSELL

Scale
2,300 sqm
Date
2013
Disciplines
Architecture, Interior Design
Photography
Nicole England

Breathing new life into disused, inner-city industrial sites is something of a passion at HASSELL, and our Sydney studio at Millers Point is no exception.

The heritage listed, former wool store on pier 8/9 was once at the heart of a vibrant trading port. The precinct has since been transformed into a residential, entertainment and creative hub, incorporating a diverse mix of established and up-and-coming firms and industries. The 2,000 sqm HASSELL workplace occupies three floors of the pier. It's an open and collaborative space that both showcases and enhances the creativity of the integrated design team it houses.

Interiors that are in tune with their industrial setting.

The interior fit out works with the character of the original building, with a careful material selection that complements – rather than competes with – the robust, industrial nature of the site.

Original wood panels from the wool store remain in place to create subtle subdivisions throughout the space. The modern, structural steel work, which supports the inserted mezzanine space, was painted white to put the fabric of the original building on show.

The interior palette is deliberately restrained, with a focus on elements that have soft, natural finishes that don't compete with the building's features. Neutral colors also create a 'blank-canvas' that puts our design processes and the way we work on show.

A space for creativity and collaboration.

Within the studio there are a range of spaces that encourage formal and informal teamwork – exemplified by the large 'grandstand' that greets people on arrival.

Flexible workstations allow for close collaboration between colleagues and can be easily reconfigured to accommodate changing project requirements. Suspended pin-boards throughout the workplace create common areas for discussion and group work.

A number of smart building sensors have been incorporated into the design to enable us to monitor our energy and water usage and control lighting in specific parts of the workplace. This project has been awarded a 4 Star - Green Star - Interiors PILOT rating, which represents 'Best Practice' in environmentally sustainable building practices.

But the hero of this project is the heritage pier. HASSELL is proud to be part of its long history – and its future as a vibrant, valuable contributor to the city. Flexible workstations allow for close collaboration between colleagues and can be easily reconfigured to accommodate changing project requirements. Suspended pin-boards throughout the workplace create common areas for discussion and group work.

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HASSELL Sydney Studio Event Space, Pier 8/9

The Darling Harbor transformation project is the city’s most significant urban renewal initiative in 20 years - a once in a generation opportunity.

Darling Harbor
Public Realm
Sydney, Australia

Client
Infrastructure NSW / Lendlease

Scale
20 hectares
Disciplines
Landscape Architecture,
Architecture
Completion
2016
Photography
Simon Wood

The Darling Harbor transformation project is the city’s most significant urban renewal initiative in 20 years – a once in a generation opportunity.

People were firmly at the heart of our design process for transforming the iconic Darling Harbor precinct. We wanted to both ‘wow’ first-time visitors and delight those who use the space the most – the local community of workers and residents.

The remaking of Darling Harbor, one of Australia’s most visited public places and a critical location of central Sydney, has changed the heart of the city. It better connects the city and offers new places for people to gather, to relax and to play.

By reinvigorating parklands, integrating landscapes and open space and incorporating water features, public artworks, plazas and event spaces we have created opportunities for events and activities as varied as open-air concerts, circus events, market stalls and busking – and simple pleasures like splashing in shallow pools.

Our response to the original brief delivers high quality, open and flexible spaces that allow for the greatest variety of both casual uses and organised events.

Amid the open spaces and landscape are detailed areas of interest and smaller-scale zones where people can go and relax away from the crowds.

Improved pedestrian, cycle and public transport connections make it easier for people to access the precinct’s previously disconnected immediate neighborhoods, the Harbor and the Sydney city center.

Public art makes a vital and engaging place

Visitors to Darling Harbor are engaged and inspired by an audio-visual installation, soundscape, pollen sculptures and imagery of native flora pressed into the concrete façade of the folded landscape. These large ‘big bang’ and smaller ‘fine grain’ public artworks were integrated from the beginning of the design process.

- They include:
- _Data.Scape by Ryoji Ikeda
 - _Sandstone Pollen by Maria Fernanda Cardoso
 - _Entelekheia by Danie Mellor
 - _Sound Habitat by Janet Laurence

HASSELL delivered the urban design and public realm for Darling Harbor, working in close partnership with Lendlease and the New South Wales Government. These large ‘big bang’ and smaller ‘fine grain’ public artworks were integrated from the beginning of the design process.

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Darling Harbor



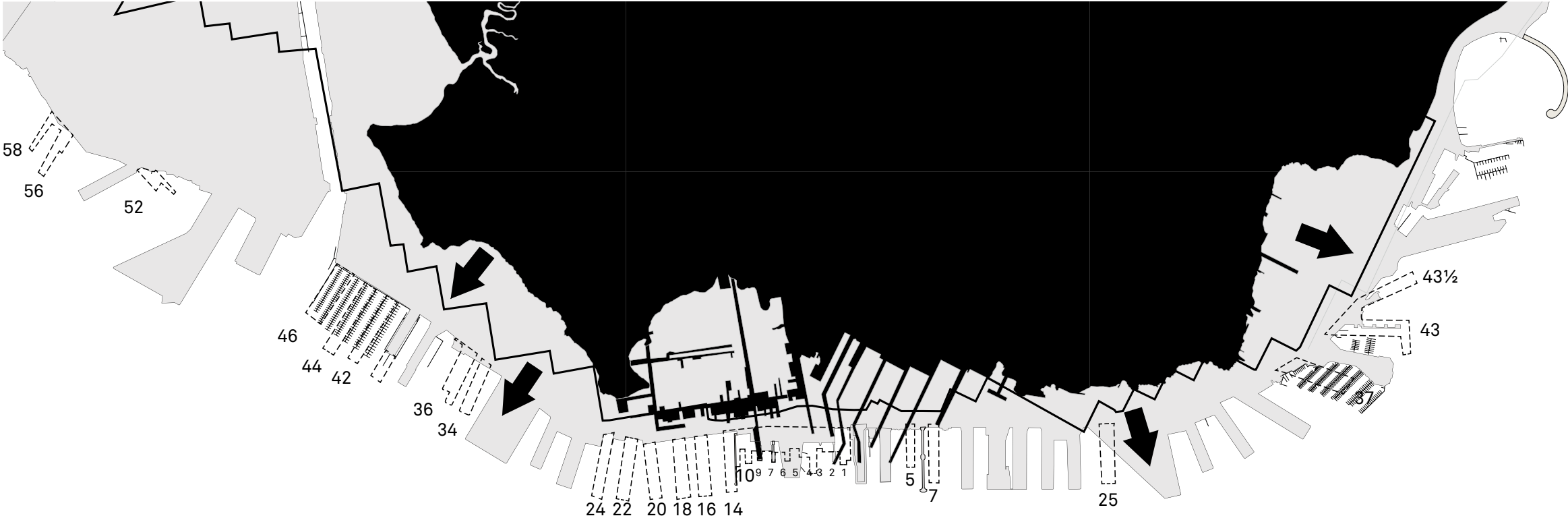
03 Urban Analysis & Strategies

Development & Urban Context

SHORELINE & MISSING PIERS

San Francisco's shoreline has changed dramatically since the Gold Rush. Additionally more than 20 piers have already been lost from this important historic waterfront district over the last 50 years

- Original Shoreline
- Original Port Boundary
- Missing Piers



STREET GRIDS

The two grids meeting San Francisco's waterfront indicate two different characters of the Embarcadero.

The northern waterfront has been largely restored, a vibrant mix of tourism functions and neighborhood amenities. The southern waterfront is a transforming precinct and has lost many of its historic resources.



03 Urban Analysis & Strategies

Resilience

SEA-LEVEL RISE

The City's most valuable commercial land and highest density employment precinct is under significant threat from sea-level rise. The Sea Wall project is an opportunity to also adapt the waterfront in response to this threat

Impact=
5ft > 321 acres
10ft > 762 acres

- 5ft Sea Level Rise
- 10ft Sea Level Rise
- Proposed Sea Wall Barrier

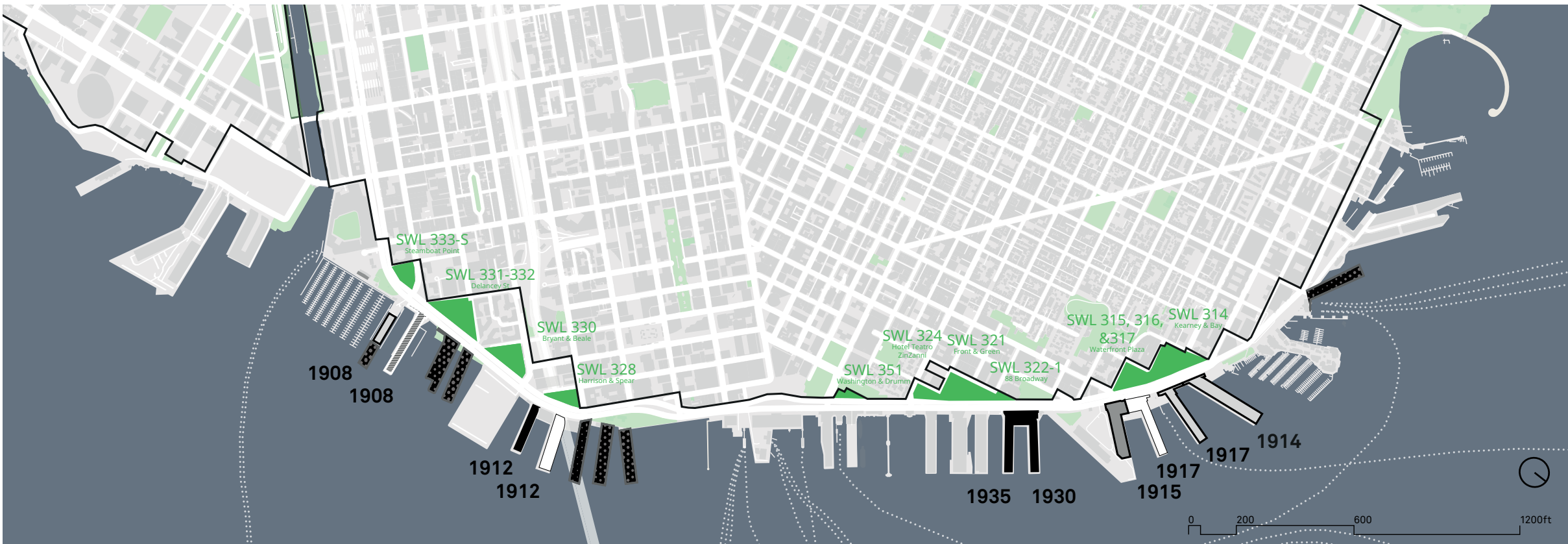


SEA WALL LOTS & PIERS
STRUCTURAL CONDITION

Source: Port of San Francisco

The costs of structural repair and seismic upgrades are significant. The Port owns several sea-wall lots along the Embarcadero which, along with strategies around rebuilding some of the former piers, in the southern precinct, could make a more feasible equation for the Port to consider.

- Good structural condition; no live load reductions or restrictions
- Typically indicates localized damage rather than overall deterioration.
- Fair/poor structural condition, some areas of the pier may be in poor condition and require restricted use or load live restrictions
- Unsafe structural condition; restricted and/or unsafe access
- Lost/Missing Piers
- Sea Wall Lots



03 Urban Analysis & Strategies

Conditions

UNDERUTILIZED SEA WALL LOTS

The community has already shown their opposition to the Port developing their sea wall lots, but there is surely a use that can deliver greater public benefits than parking. Additional development as part of restoration of the historic piers, could fund public realm on these lots, and this could be done in a way to preserve public parking also.



SEA WALL LOT 328



SEA WALL LOT 322



SEA WALL LOT 315



SEA WALL LOT 314

MISSING PIERS

The restoration of lost structures could increase the diversity of waterfront program and also fund public waterfront infrastructure and financially underpin the restoration of piers for cultural uses that would find structural upgrade costs prohibitive



MISSING PIER 36
HASSELL



MISSING PIERS 16 + 18



MISSING PIERS 20-24



MISSING PIER 25

03 Urban Analysis & Strategies

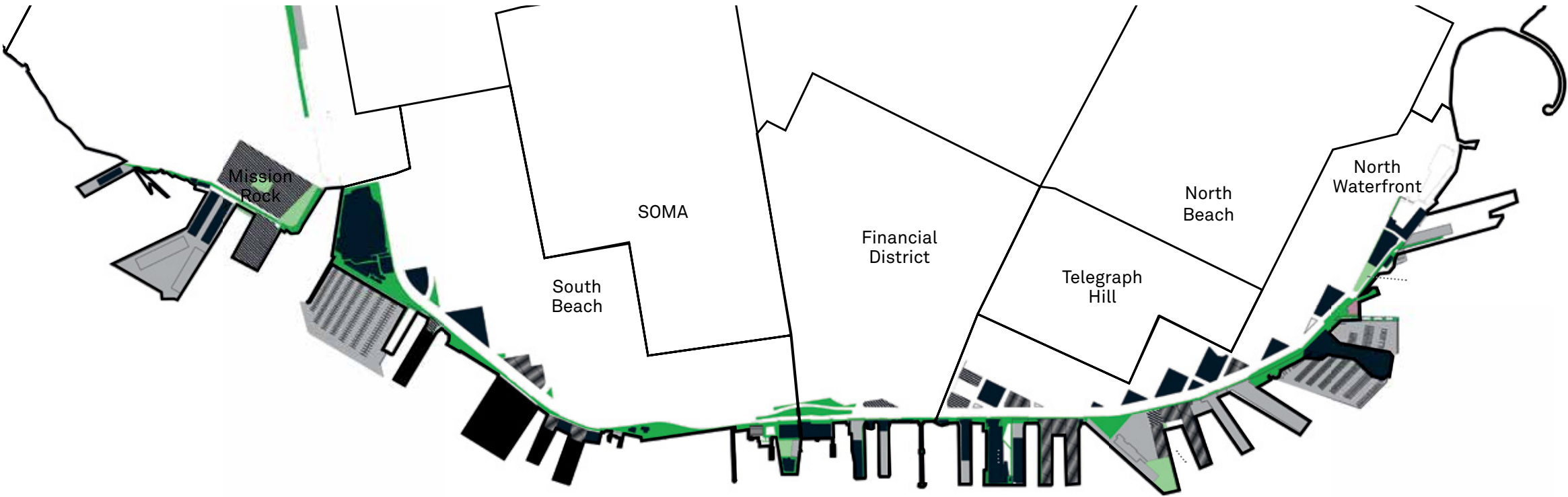
Concept

LAND USE & PRECINCTS

Source: Waterfront Land Use Plan

A community discussion around defining precincts (as an extension of the Port's Waterfront Land Use Plan) should be an important part of a master plan guiding the programming of specific Piers. The current narrow view of 'public-oriented uses' and repair+lease delivery model does not allow an opportunity for commercial development in the southern waterfront to financially support cultural development in the northern waterfront

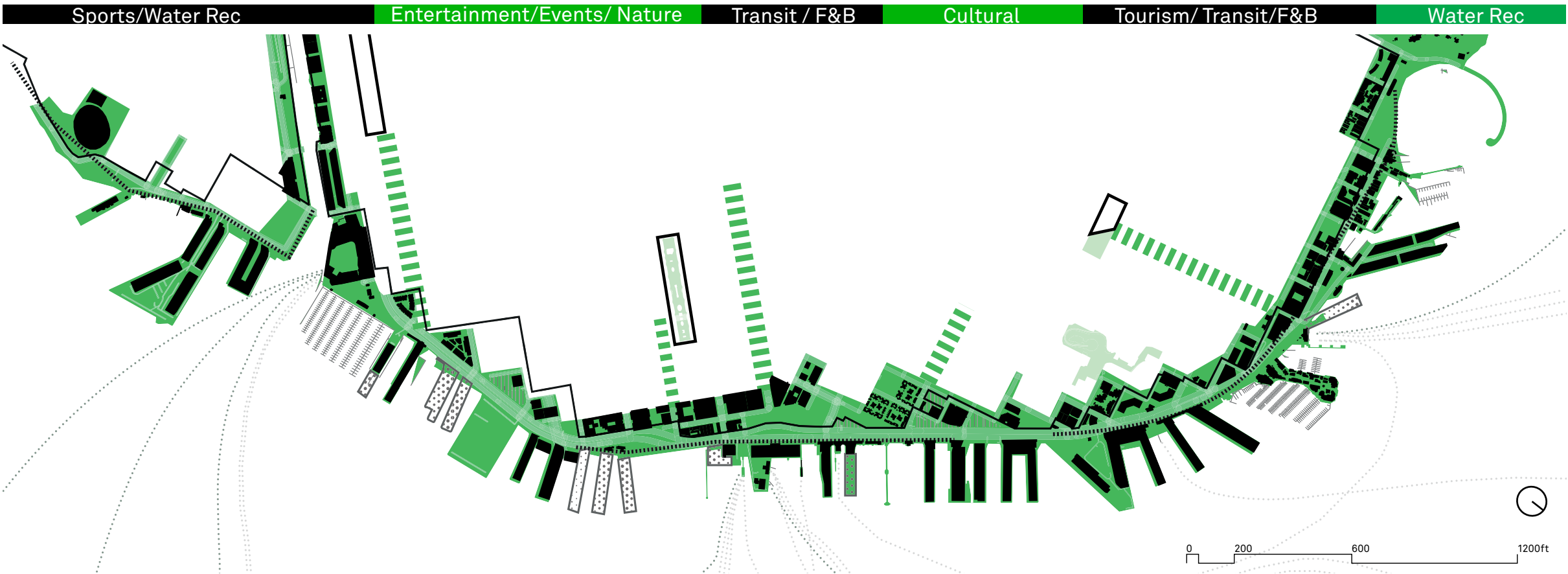
- Potential Development Sites_33 acres
- Planned Open Space_44 acres
- Current Projects in Negotiations_74 acres
- Maritime Opportunities_46 acres
- Engineering, Economic and Regularatory Challenges_21 acres
- Open Space_81 acres
- Real Estate Leases_120 acres
- Maritime Lease (water)_64 acres
- Martitime Lease_188 acres



CONCEPT DIAGRAM

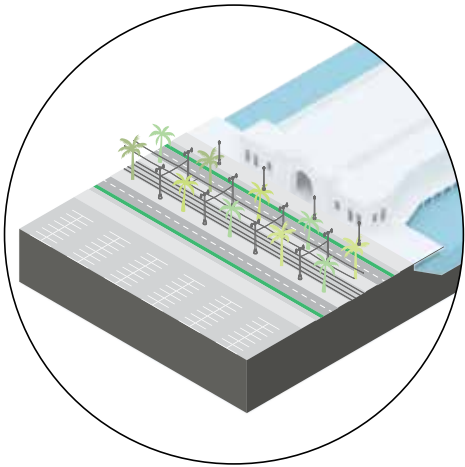
We are advocating for a waterfront master plan that integrates the proposed restoration of piers with public realm upgrades and resilience infrastructure, funded through more holistic measures than the current 'repair + long-term' lease arrangement.

The Port is uniquely positioned to provide continuous public space and sea-level rise protection, increase access to the waterfront through multiple transit hubs, restore lost historic piers and upgrade/protect existing piers.



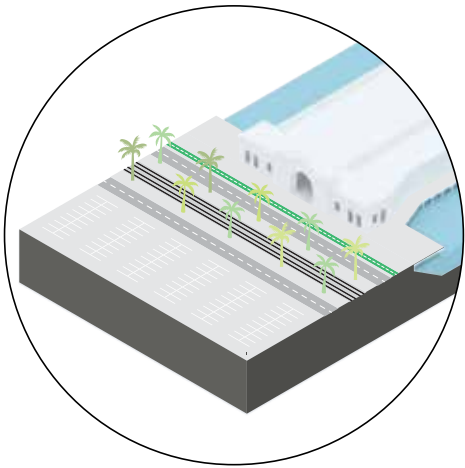
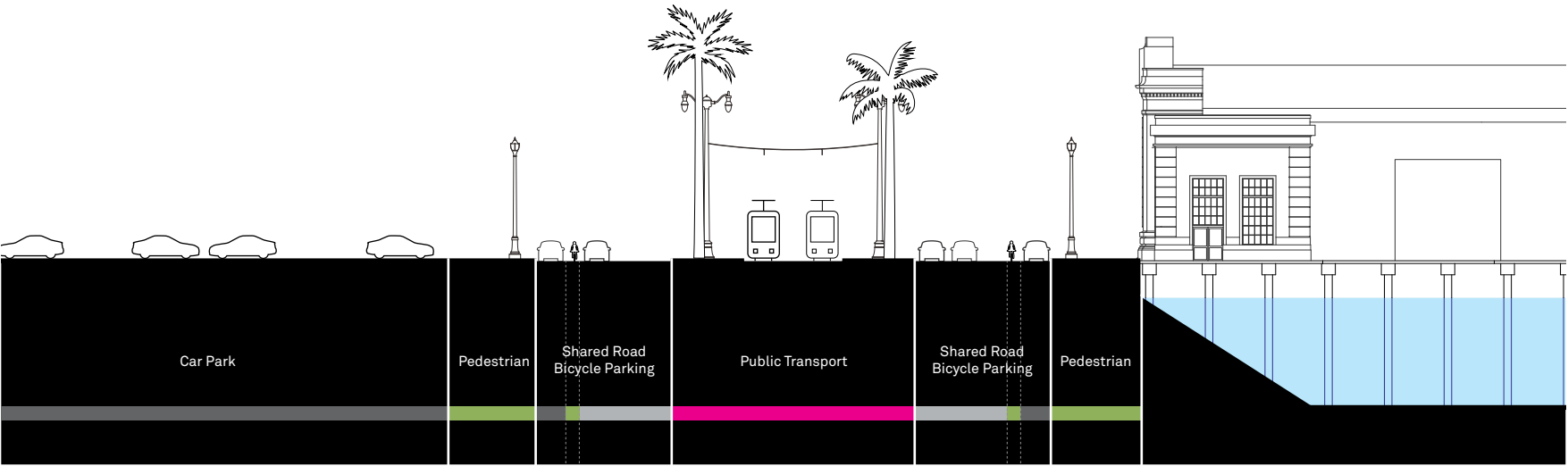
03 Urban Analysis & Strategies

The Embarcadero



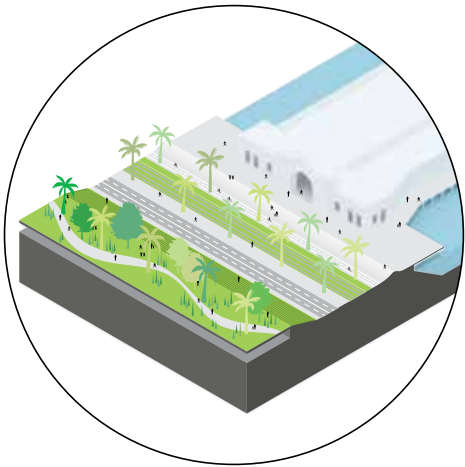
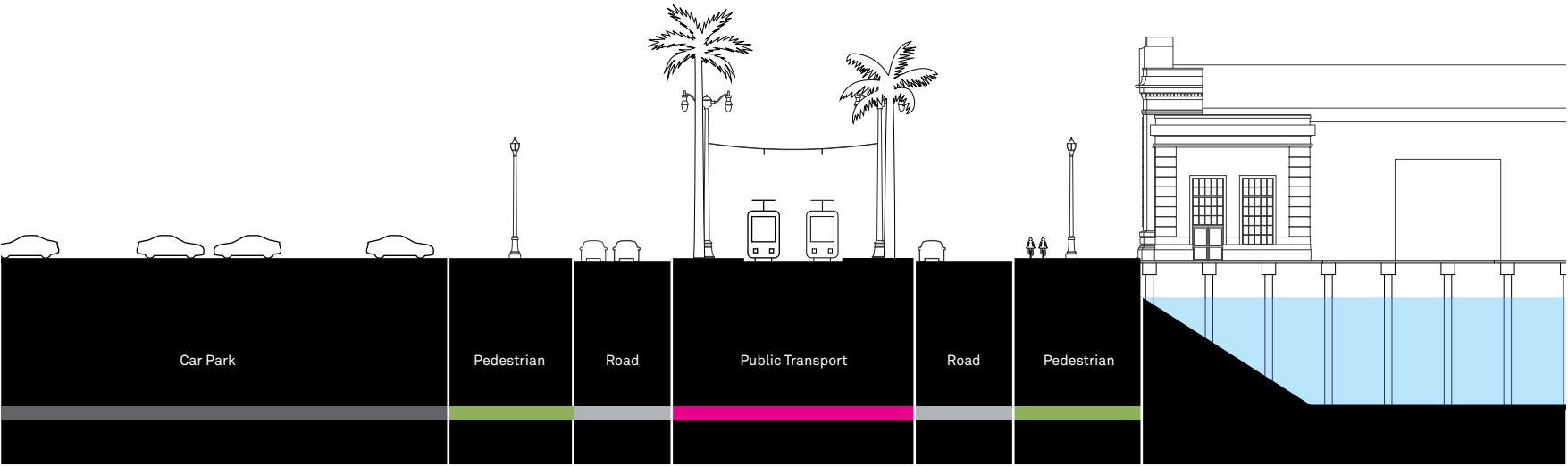
CURRENT CONDITIONS

The current public realm feels segregated and is vastly car-dominated, breaking opportunities to interact with the piers and the waterfront.



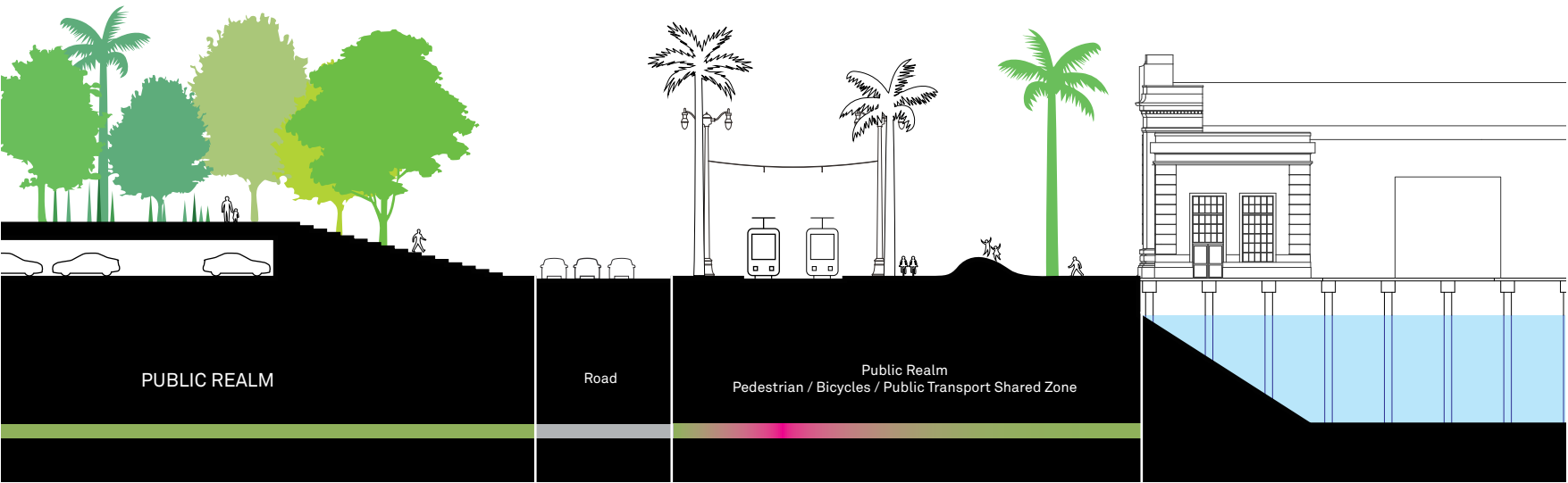
“IMPROVEMENT PLAN”

The current improvement plan tends to combine all the bicycle lanes to improve soft transportations and user’s safety, but remain car-dominated



PROPOSED STREETSCAPE

Sea-wall lots on the City side of the waterfront could form part of continuous public realm & SLR protections. The more immediate opportunity is incremental protection on the water-side of the road as part of the sea-wall project. Providing a continuous pedestrian/bike/transit zone and storm-surge protection



HASSELL



NEW PUBLIC
REALM ALONG
SEAWALL LOTS

MUNI
TRACKS

EXPANDED
PUBLIC RLEAM

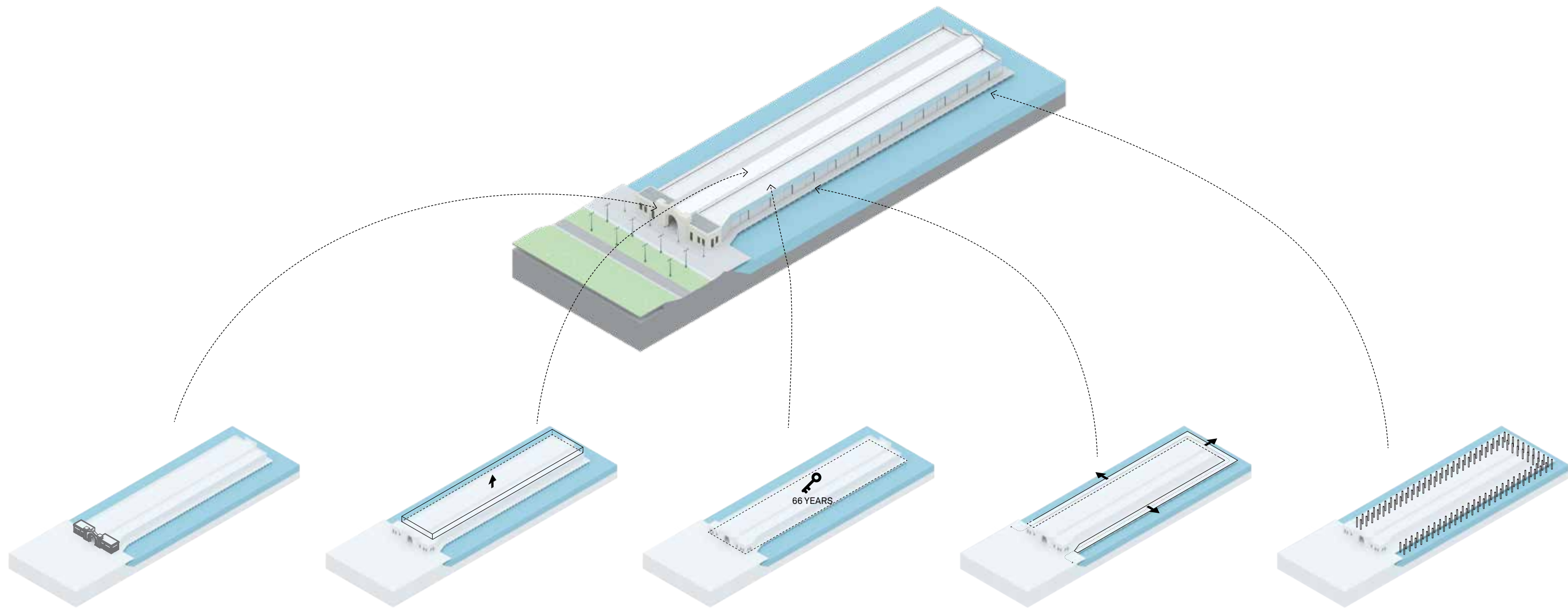
ELEVATED
CONNECTION

INTERIM
SEA LEVEL RISE
PROTECTION

04 Opportunities

Key Regulatory Barriers on Existing Piers

There are significant unintended regulatory barriers to renovating existing piers, or resurrecting some of the more than 20 that have been lost due to neglect



Historic Value

- _The Bulkhead could be said to have more architectural historic value than the sheds
- _The shed’s could be assessed as having functional historic value.
- _If flexibility in the adaptation/rebuilding of the sheds could be allowed, more floor space to be added (without going higher than the bulkhead) in order to make seismic and SLR upgrades feasible.

Height Increases

- _Any height increase on Port land is required to go through a City-wide ballot measure
- _Even 1-2 stories added height on parts of a pier could provide the revenue needed to fund seismic upgrades, whilst still maintaining the ground level in public ownership (ie. without long 66-year leases, required under the current renovation model)

66 years of uncertainty

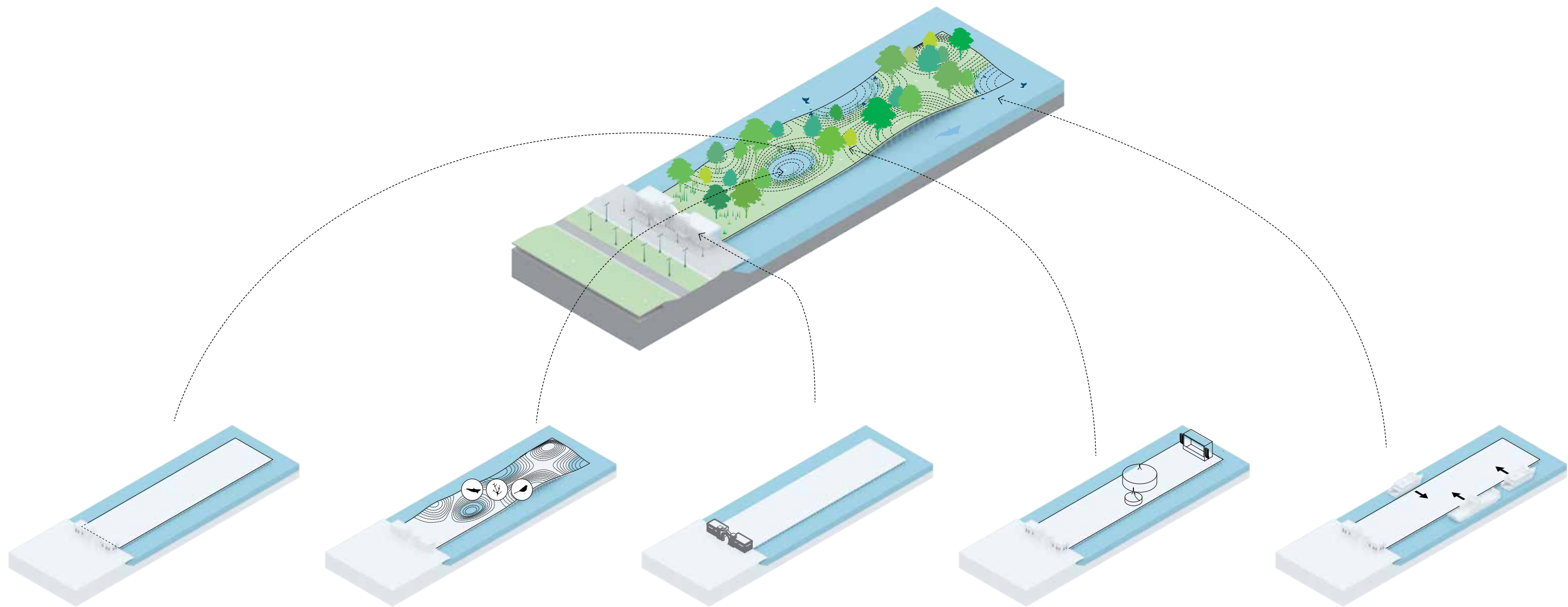
- _The current arrangement of 66 year leases to tenants who pay for renovations, seems outdated in a time of uncertainty related to Sea-level rise and changing land-uses
- _Some piers are less than 90 years old
- _Other P3 models would allow the port to retain more flexibility related to functions in the piers.

Widening Aprons

- _Widening aprons is commonly not permissible as BCDC can determine this to be ‘bay fill’
- _If permissible, this additional area can have seismic structural benefits for the pier
- _This additional area could also be valuable public space needed around many of the piers

Seismic Upgrades
('Super Pylons')

- _New large-scale pylons are needed to stabilize piers for seismic safety.
- _The addition of these pylons needs to happen outside the existing apron, widening the pier footprint, otherwise the pylons need to be inserted in the interior of the existing shed which is complex and costly



Resilience Revenues

_Rebuilding some structures, potentially floating and/or more easily adaptable to climate change, will likely prove to be cheaper than adapting existing structures
_Contributions could be required towards restoring historic piers or also towards the sea wall renovation and shoreline sea-level rise protections
_Public benefit needs to be assessed with a much broader lense

Habitat Creation

_The biodiversity of the Bay could be put on display for visitors and tourists through lost piers being restored as linear nature reserves.
_A combination of public space, education and research functions which would make a positive contribution to the ecology of the Bay (although this currently may not be permissible by BCDC regulations)

Honouring The Missing Bulkheads

_The Bulkheads are the most significant architectural historic elements within the precinct.
_Missing piers could be memorialized by rebuilding a mass similar in form and function to the original bulkhead.

Public Space for Public Events

_San Francisco has very few significant public spaces for public gathering on the waterfront. The restoration of lost piers provides an opportunity to create flexible programmable public space to host public celebrations on the water

Accessibility (Water Transit)

_Water transit has been rapidly increasing in San Francisco and is planned to expand rapidly
_Preserving the opportunity for more boats to dock at piers is critical over the next 66 years (especially as technology transforms transport at such a rapid pace)

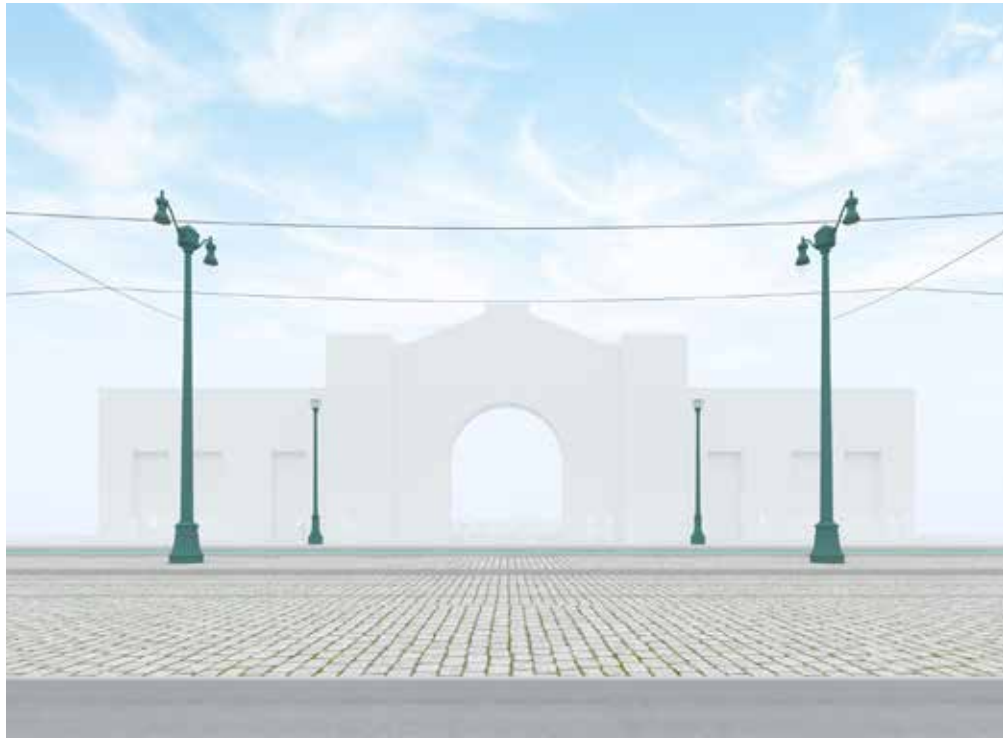
04 Opportunities
Key Moves On Missing Bulkheads



MONOLITHIC



REMINISCENT

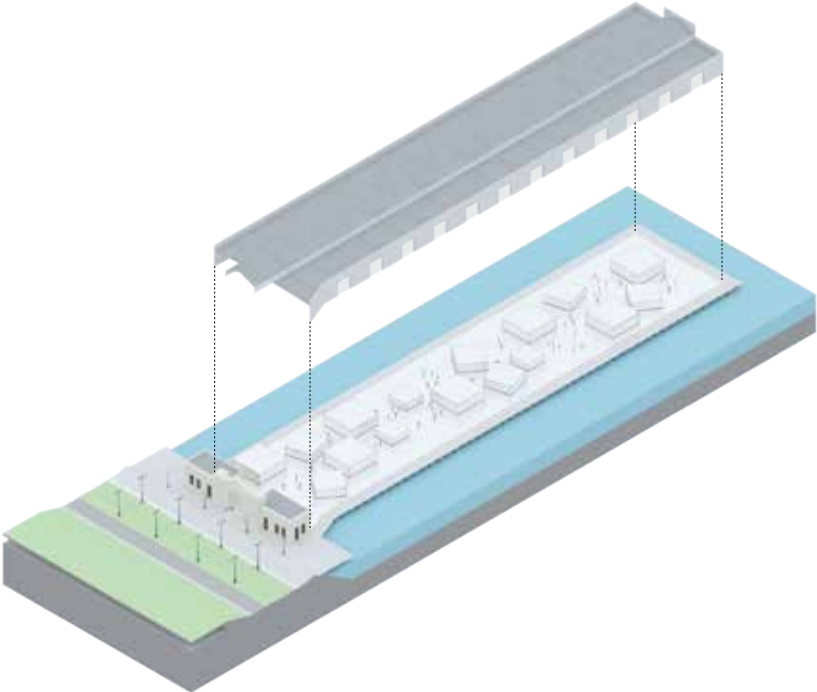


MINIMALIST

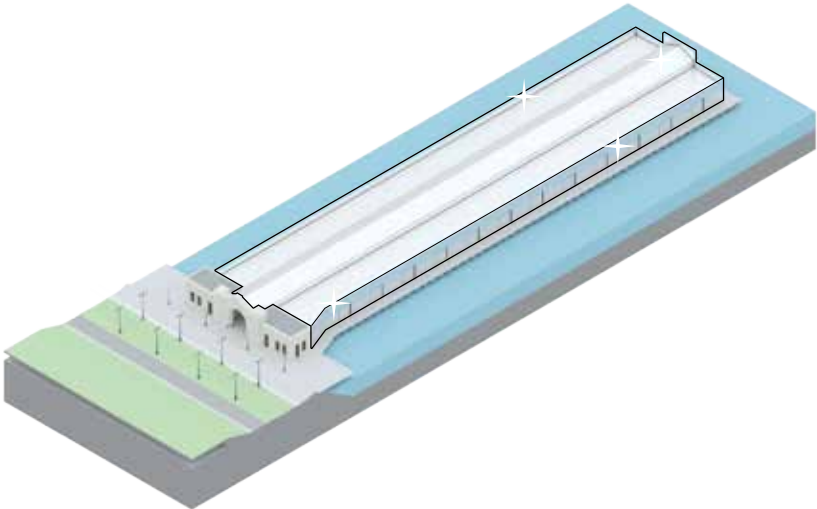


04 Opportunities

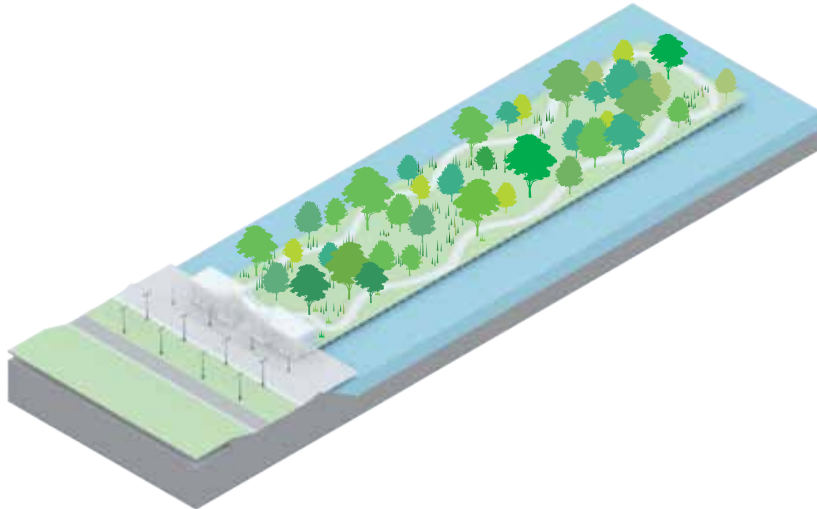
Revisiting the Piers
6 Approaches



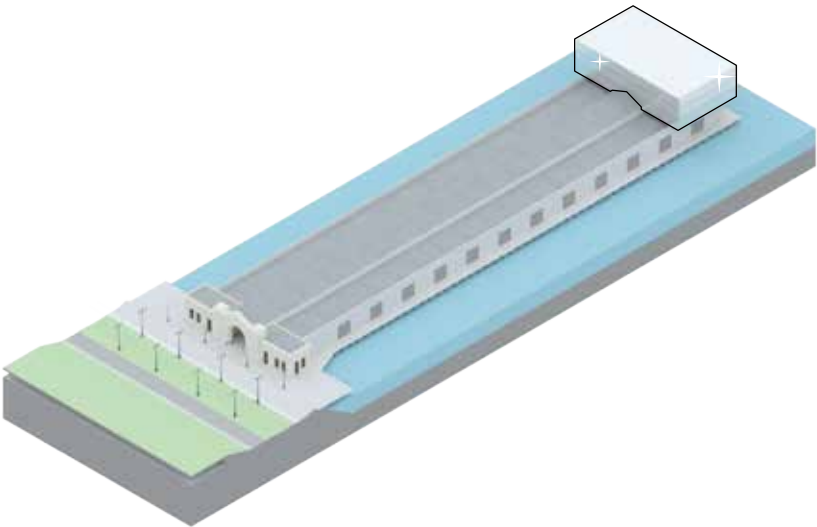
01_RENOVATE



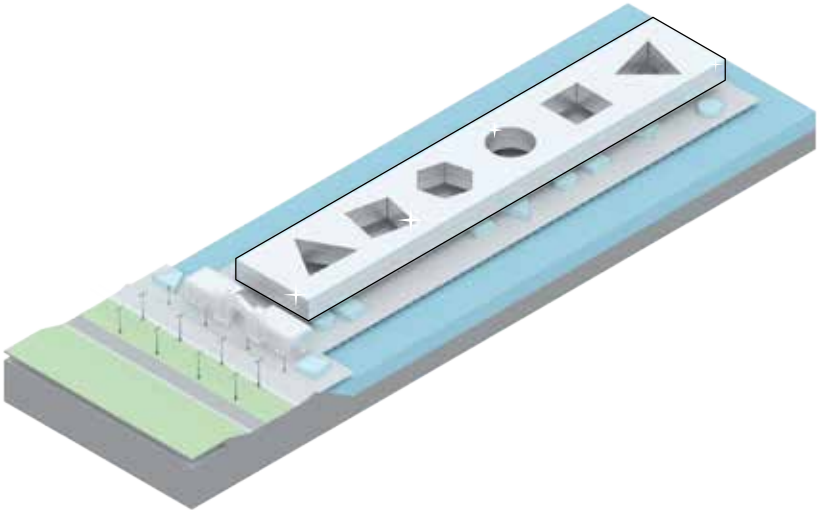
02_REBUILD



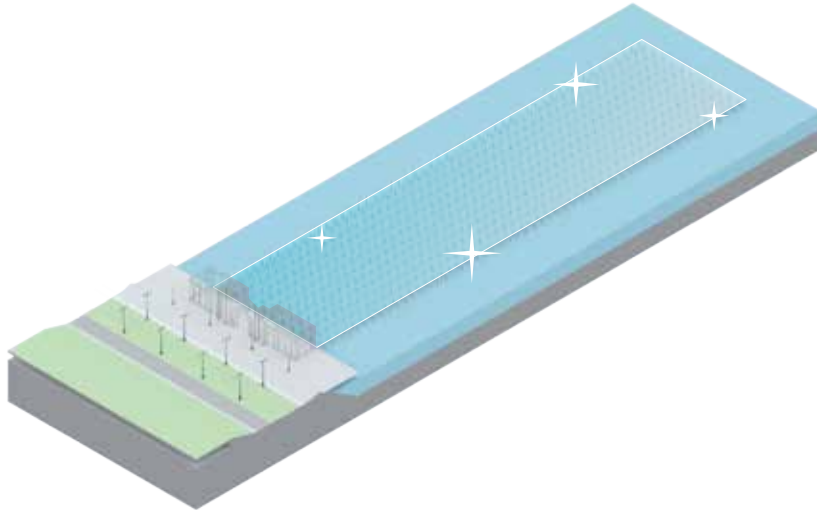
03_RESURRECT



04_EXTEND

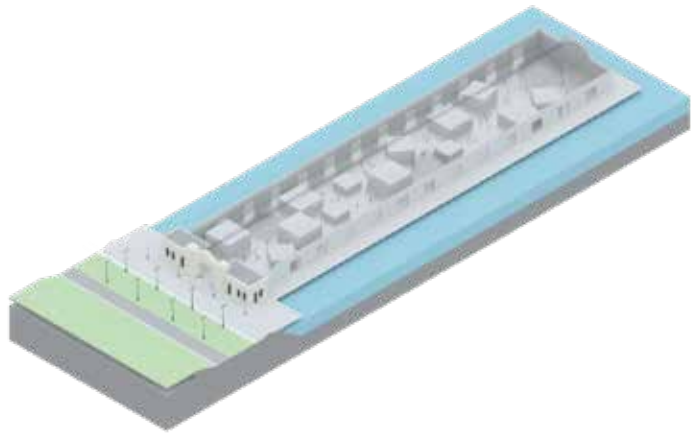


05_NEW BUILD

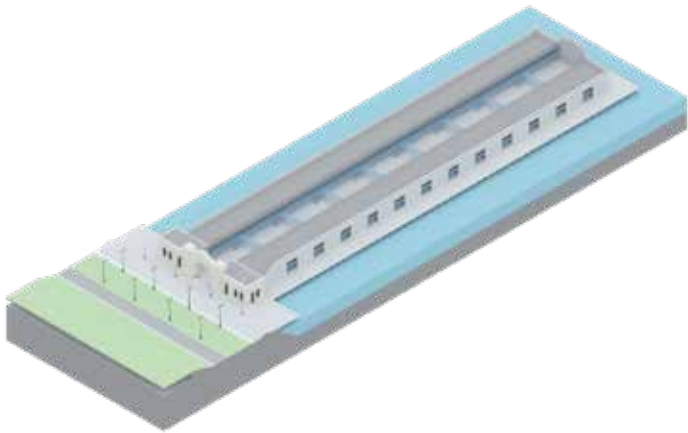


06_COMMEMORATE

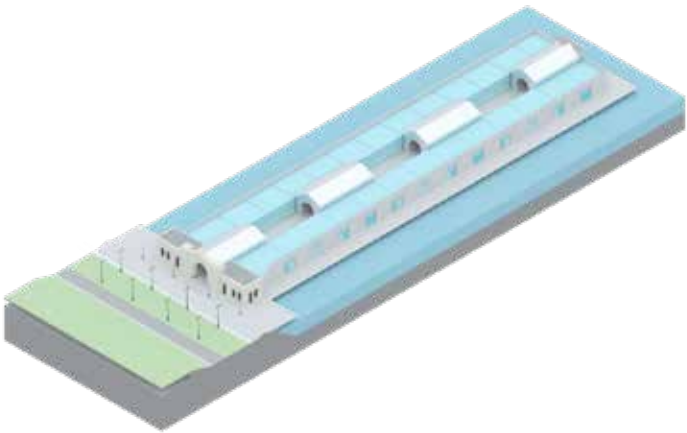
01_RENOVATE



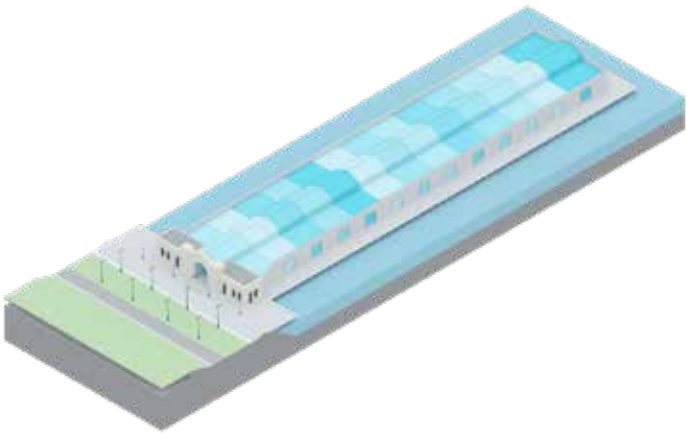
A MUSEUM



A COWORKING HUB

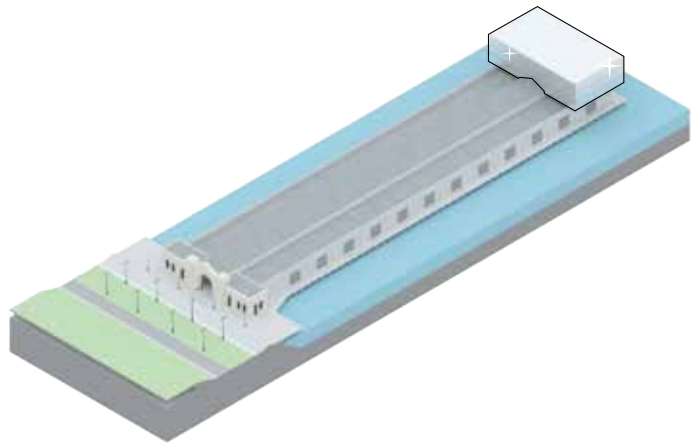


A HOTEL

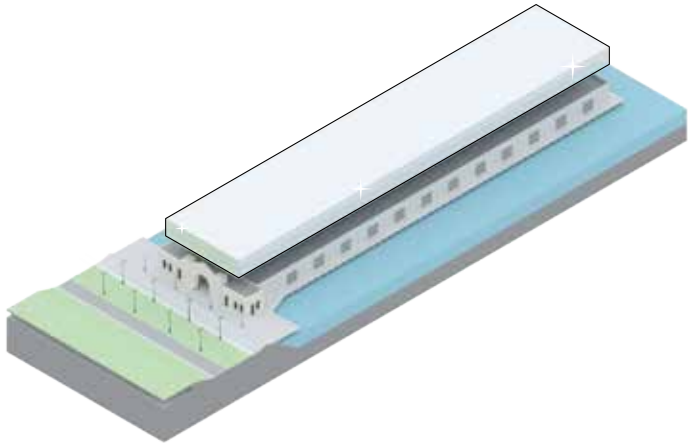


A MIXED USED DEVELOPMENT

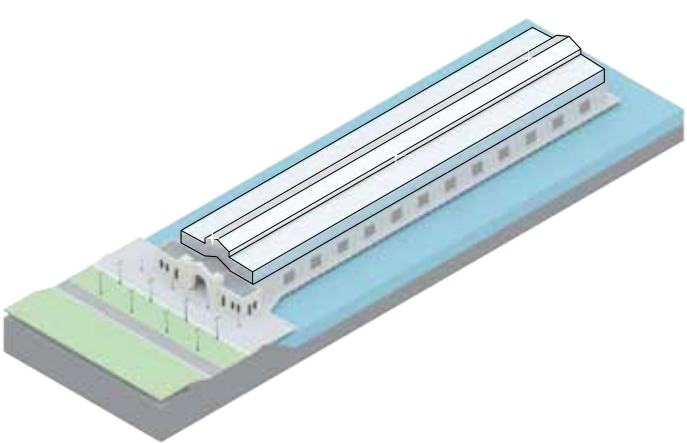
02_EXTEND



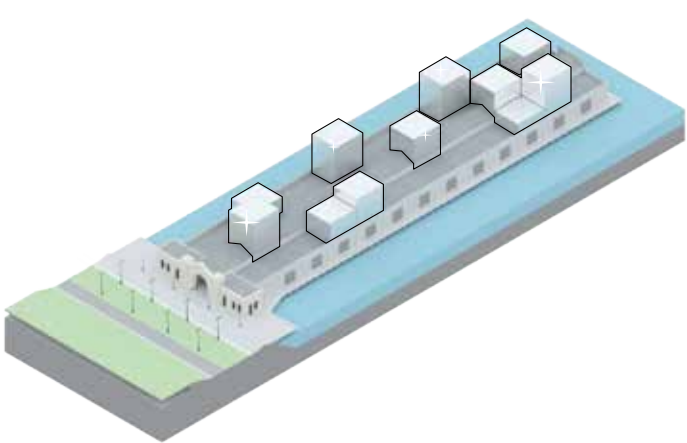
THE LANTERN
HASSELL



THE FLOATING DECK



THE EXTRUSION

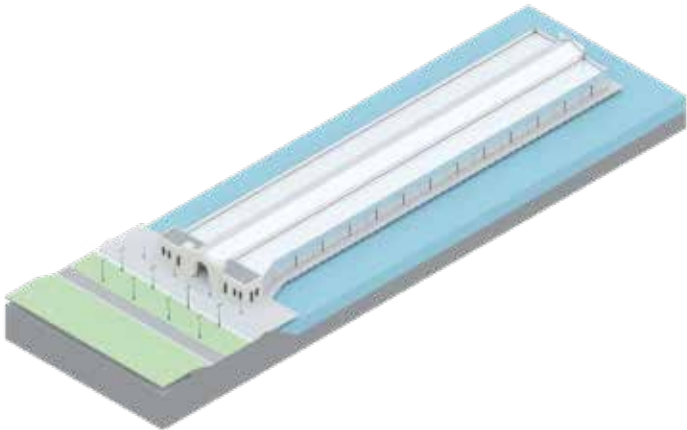


THE POCKET TOWERS

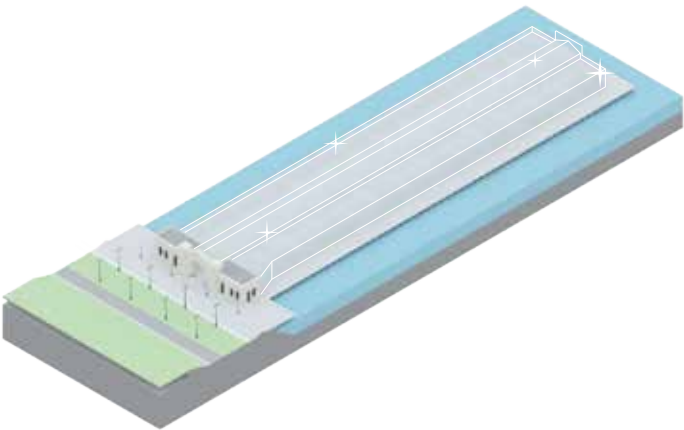
04 Opportunities

Revisiting the Piers
A Variety of Possibilities

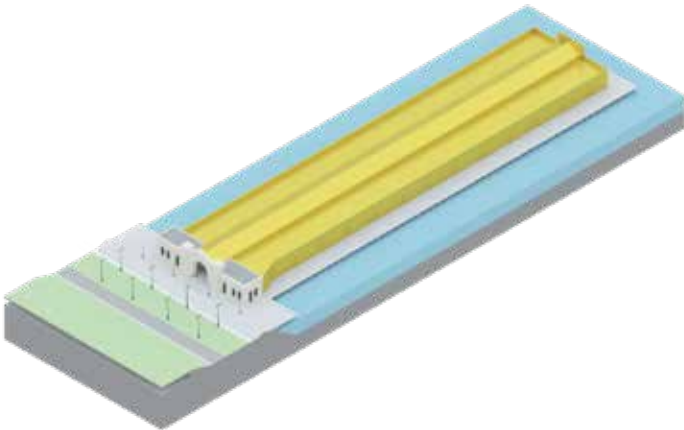
03_REBUILD



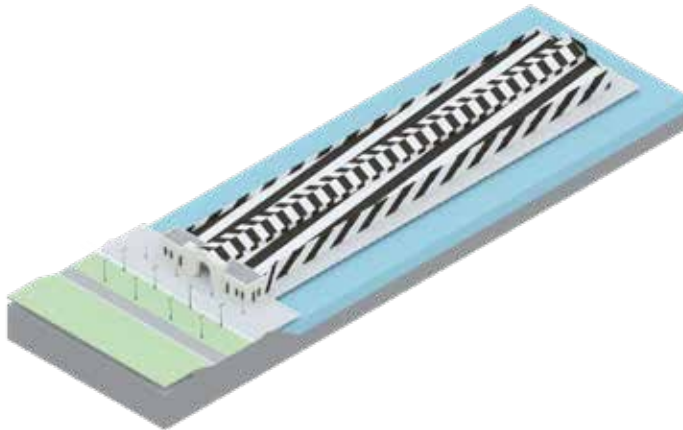
IDENTICAL



CRYSTAL

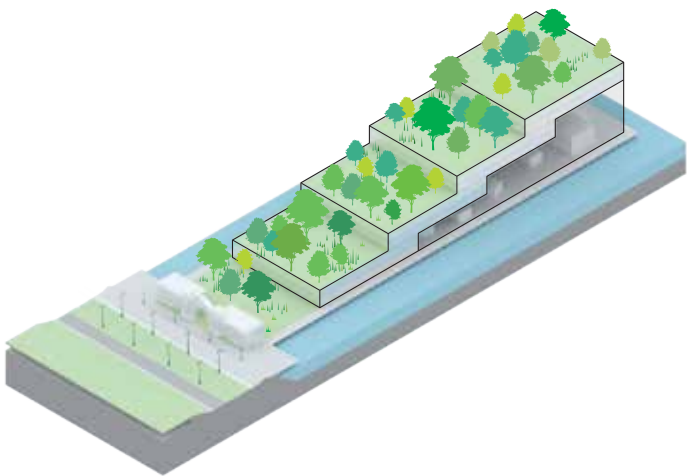


MONOLITIC

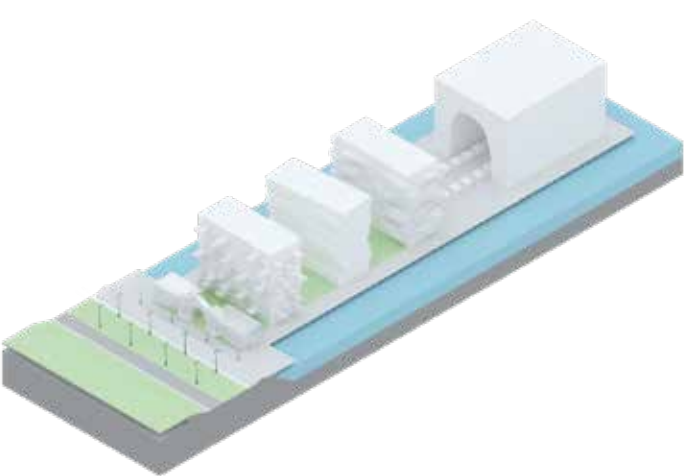


DAZZLE PAINTING

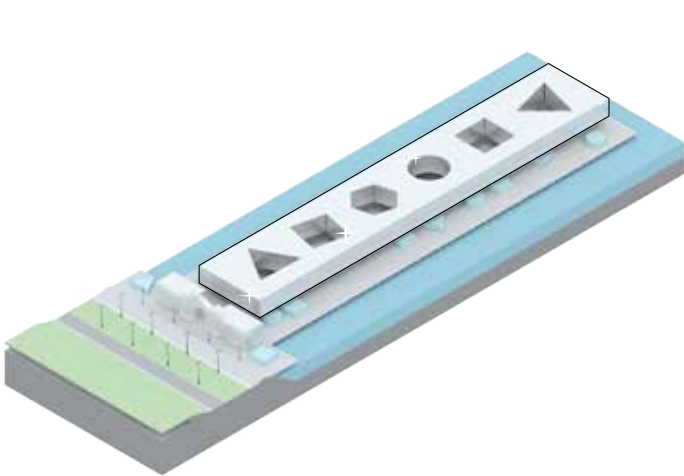
04_NEW BUILD



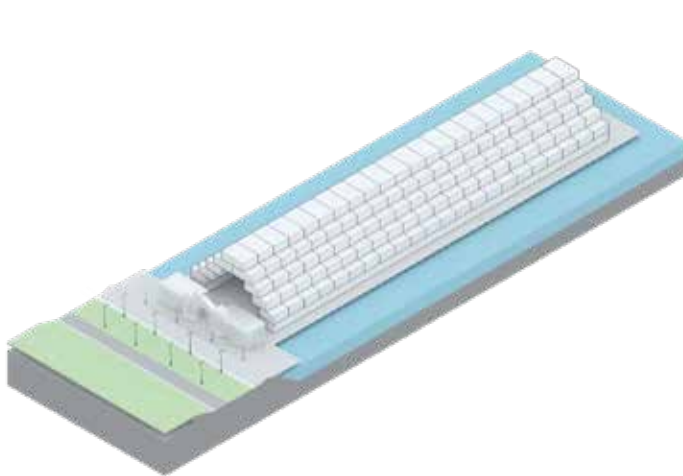
A MUSEUM / PARK
HASSELL



MIXED USE



RETAIL

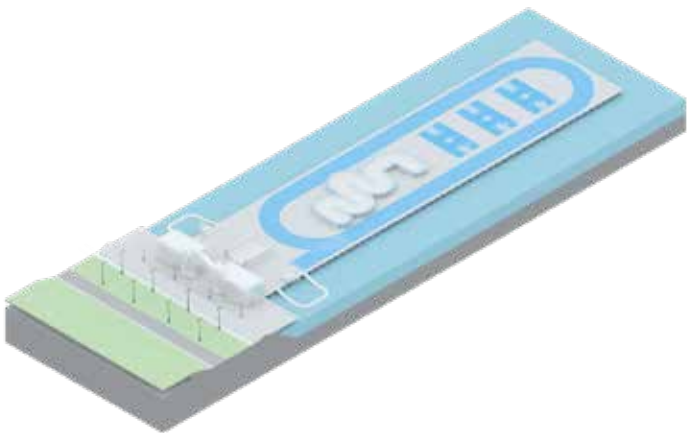


A HOTEL COMPLEX

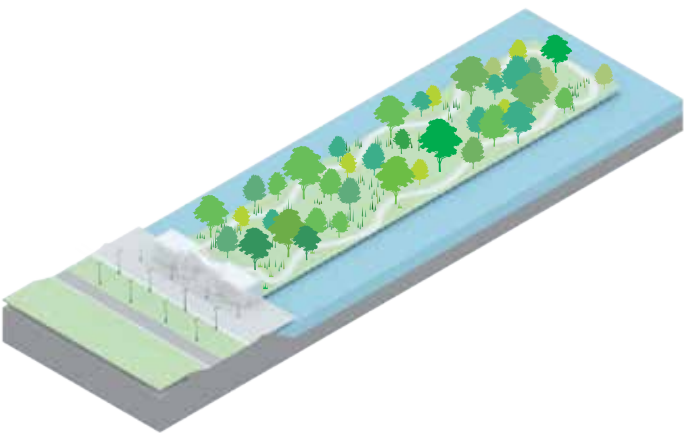
04 Opportunities

Revisiting the Piers
A Variety of Possibilities

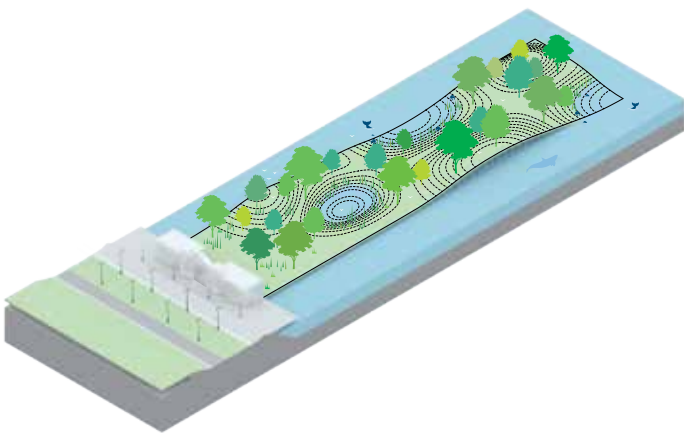
05_RESURRECT



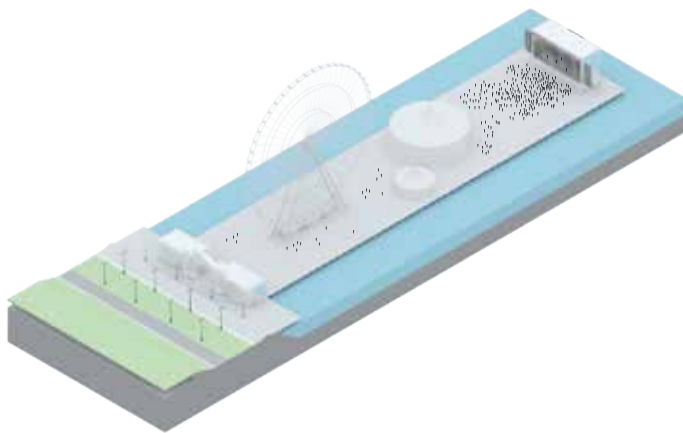
A SPORTS HUB



A PARK

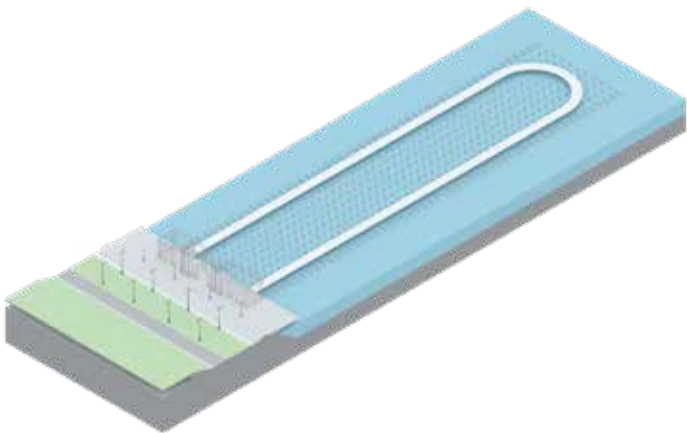


A WILD LIFE SANCTUARY

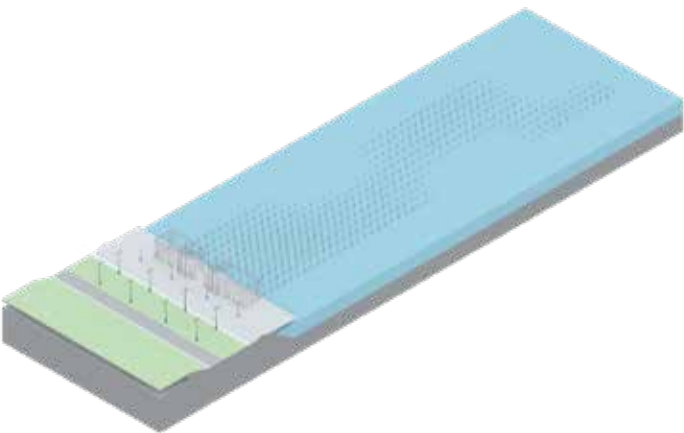


AN EVENT SPACE

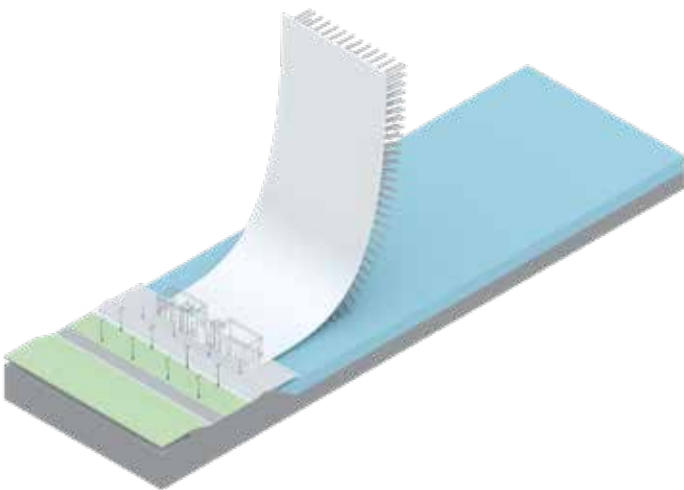
06_COMMEMORATE



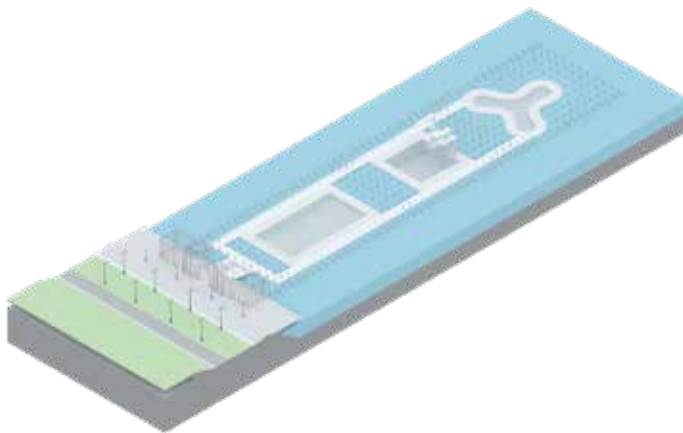
A JETTY
HASSELL



LAND ART



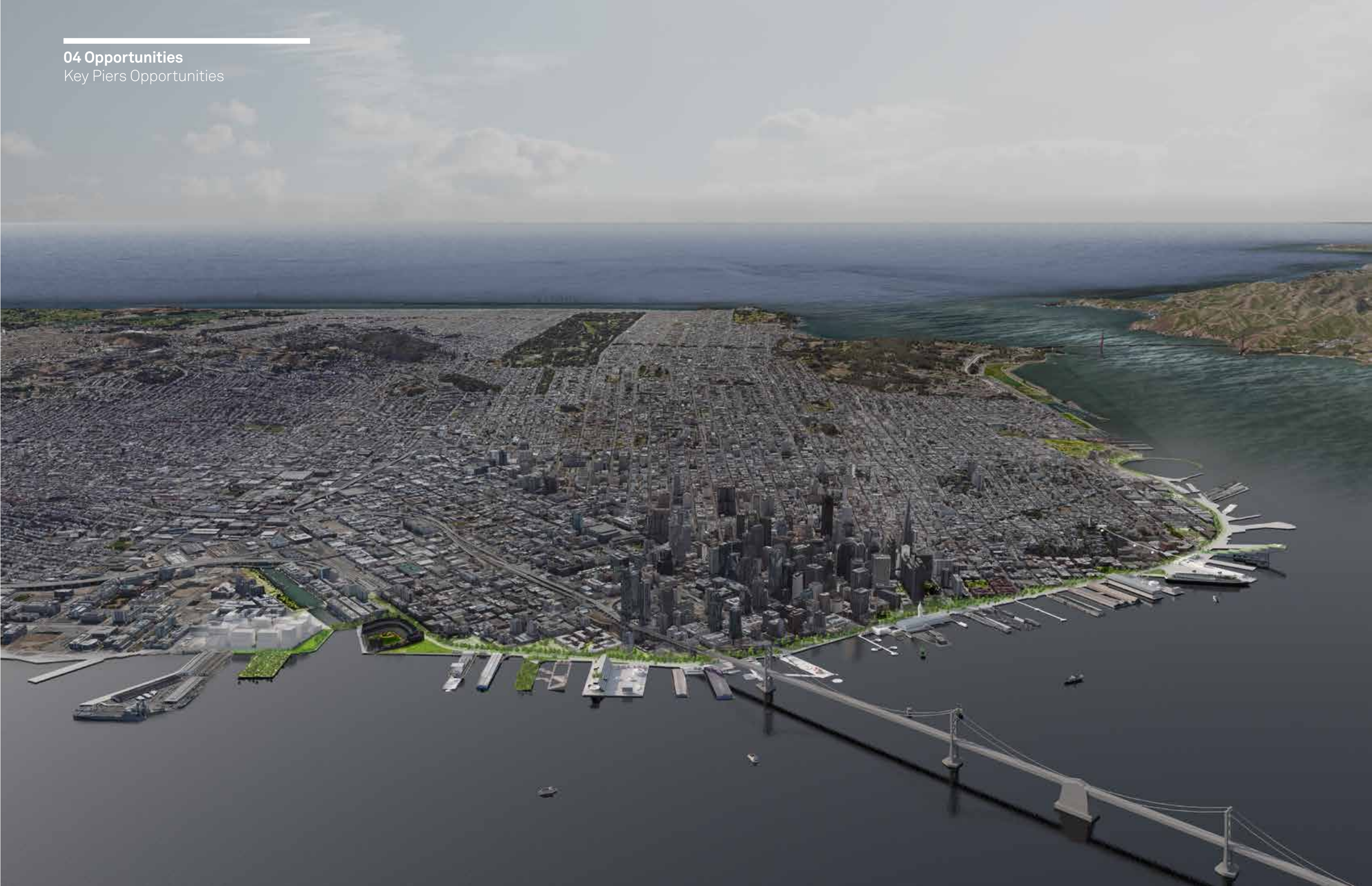
A MEMORIAL



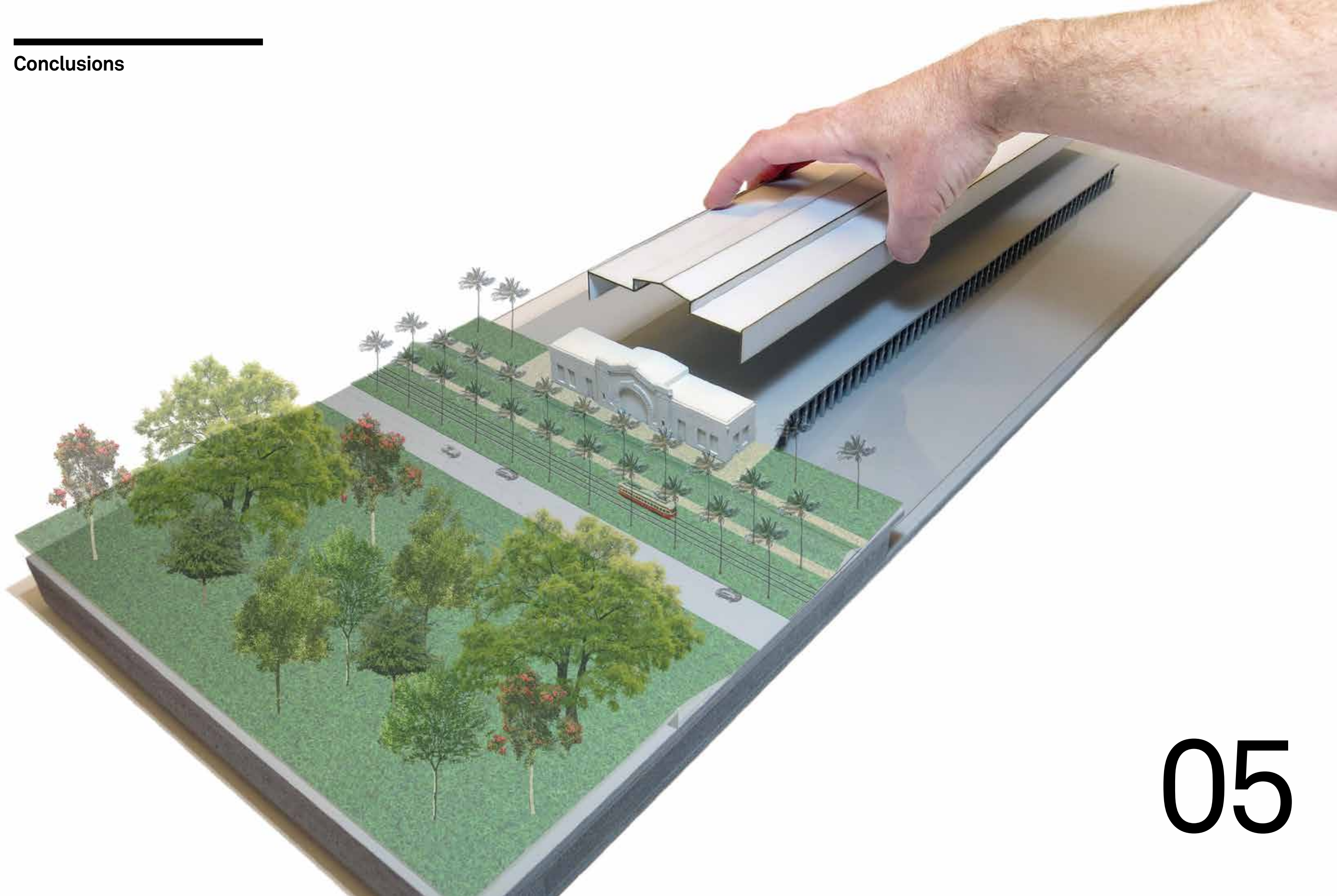
POOLS

04 Opportunities

Key Piers Opportunities



Conclusions



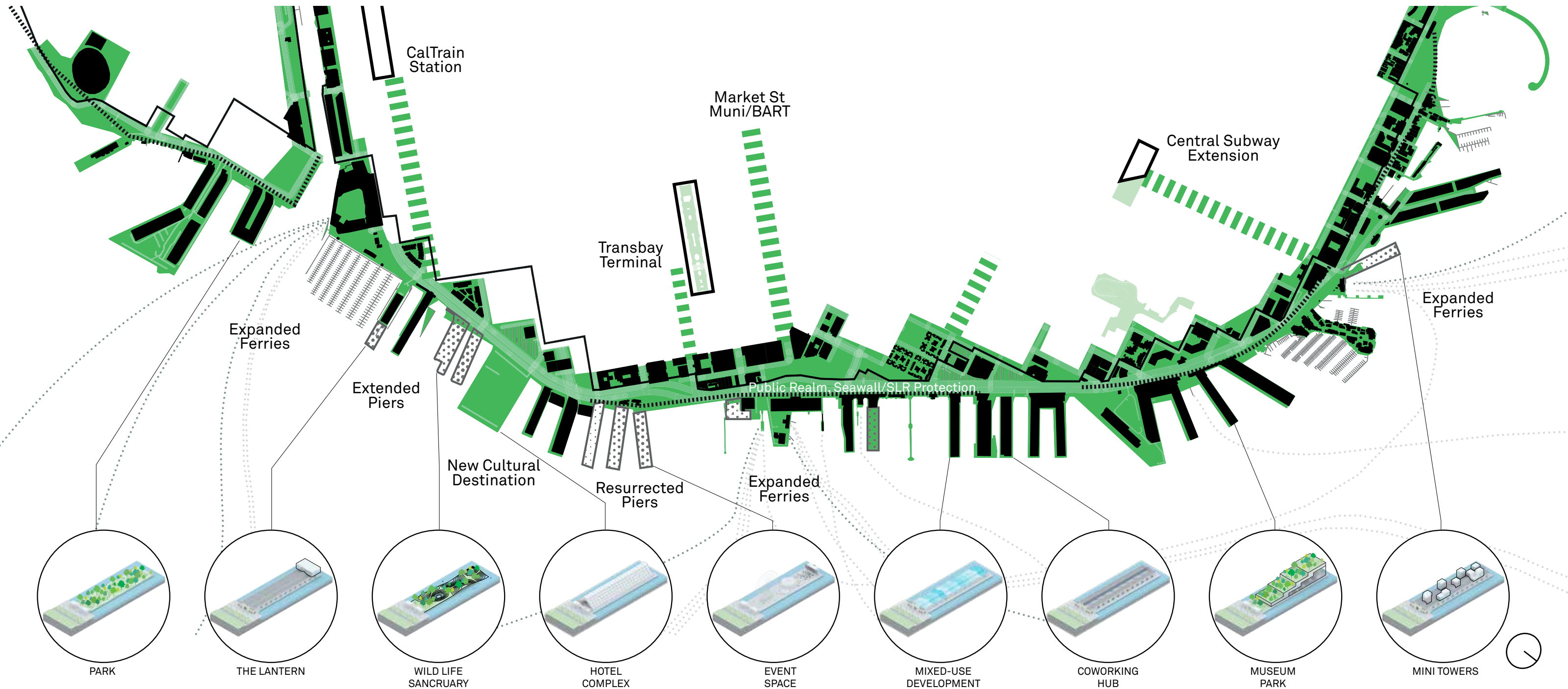
05

13 renovated piers
3 extended piers
5 restored piers

16 miles
continuous waterfront access
(public promenade & pier aprons)
+9 miles
newly accessible

65 acres
new waterfront parks

5 miles
upgraded Embarcadero



05 Conclusions

Financing the waterfront

San Francisco Piers Activation (SFPA) is a unique opportunity to consider a major Public Private Partnership (“P3”) to address the need for increasing public amenity at the waterfront, protecting historic assets, repositioning waterfront real estate opportunities and increasing public transit opportunity for the greater San Francisco Bay region.

Context:

_In reviewing the existing pier assets, we understand there to be some primary constraints with construction in the bay. Moreover, any construction which requires dredging, temporary shoring or underwater grouting can be a significant capital cost.

_Our approach seeks to not only address the immediate capital needs of safeguarding the existing piers but also create a financial structure which can continue to channel operations and maintenance dollars to the waterfront with a rolling investment and capital improvement plan.

_Offsetting the costs of one project with commercial development isn't a new concept, but when dealing with vital natural, heritage and public amenity assets such as the San Francisco bay waterfront, the criteria upon which you assess the development plan needs to address the impact of dollars spent and the value capture of the proposed future state versus status quo.

_It would not be an overstatement to say that the SF Waterfront is the key to unlocking one of the highest value real estate corridors in the USA, but a P3 is a way to ensure that public value and amenity is generated from such an economic impact.

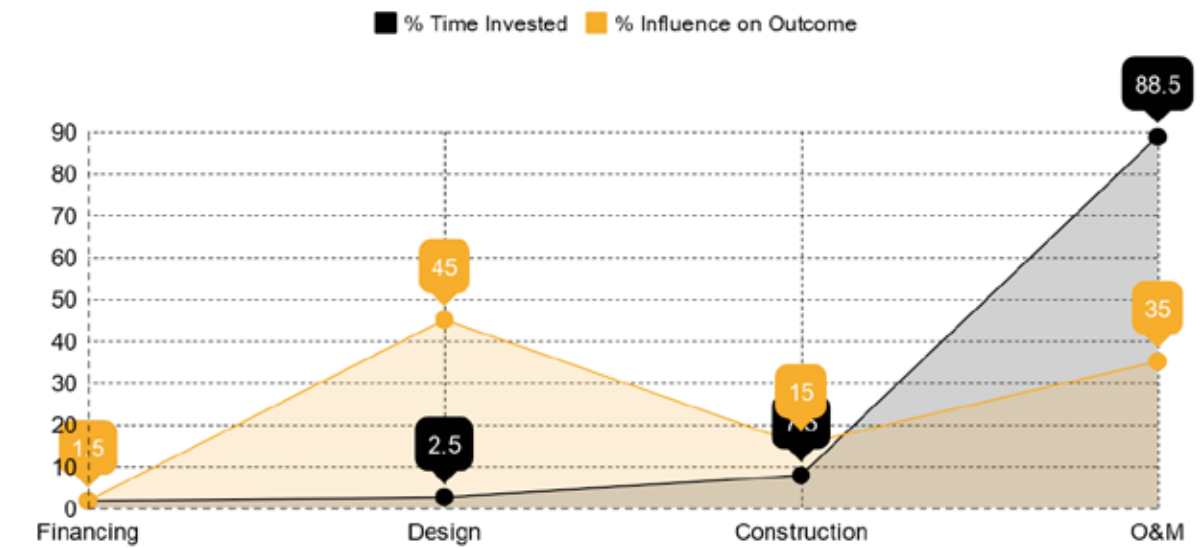
_There is no silver bullet to solve this complex problem, but with a development corridor this large, there is critical mass which enables the create of various complimentary direct and in-direct revenue streams to service long-term investment. The sum of the parts under our proposal will be exponentially stronger than the individual investment proposals for a singular pier, open space release, resiliency project, water transit or heritage protection measures.

_By expanding the vision, we can achieve a lot more.

“This is a once in a generation opportunity to transform and reposition the foreshore for the citizens of San Francisco, the East Bay and beyond -but we cannot start with financing.

It is about setting a bold vision of an enduring outcome that the market is excited about which in turn financing can support.”

Adam Shaw
Executive Vice President, WT Partnership


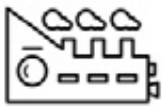




In an environment of constrained capital, financing can seem like it is everything.

Yet, we know from delivering some \$50 billion dollars of Public Private Partnerships that the financing - whilst being a prerequisite of project

feasibility - adds no value to the long-term outcome. On this basis, we must focus on establishing key project objectives which can be continually referred to as value-based investment and funding criteria. This will ultimately become the strongest tool to verify a range of complex decisions throughout the life of the development.

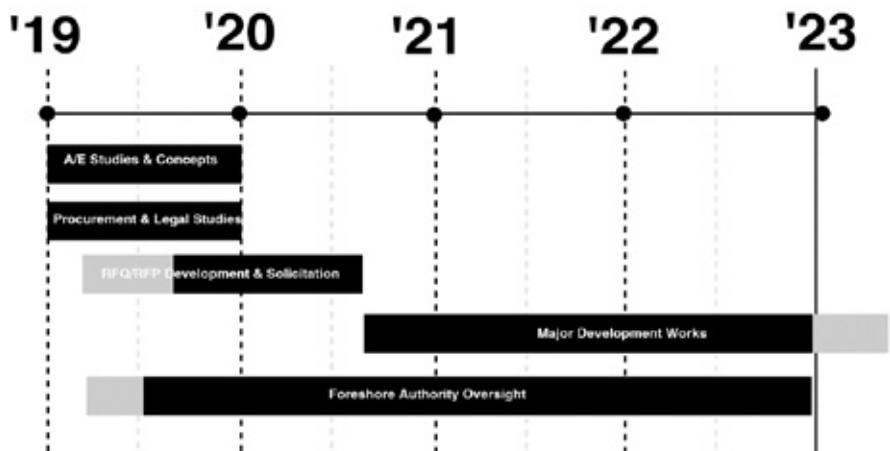
Considering Contemporary Typologies:

Monetization	Privatization	Social Enterprise	Public Private Partnership
			
CONCEPT: _City based property levy charged for waterfront development, sea-wall and resiliency measures and congestion charging.	CONCEPT: _Asset sale of public land _Ground lease with license to develop.	CONCEPT: _Establish waterfront authority, responsible for the CIP delivery, delegated planning and zoning on behalf of the City, events and commercial zone management; financed through revenue collection (zone levy) or City department funding.	CONCEPT: _Revenue-based P3 – tolling, concession agreement, district taxation _Availability-Based P3 transaction – long term design-build, finance, operate and maintain for key assets, with cost paid on annuitized basis subject to performance deductions.
X	X	X	✓
_Inequitable for city users of the infrastructure. _Not appropriate revenue base to support the development costs.	_Short term financial gain, not in the public's interest _Would not address resiliency concerns _May not deliver social benefits	_Would require direct funding from City _Financing would constrain the development phasing _Low revenue base	_Long term outcome based masterplan approach with amortized debt repayment fits revenue generating profile.

05 Conclusions

Financing the waterfront

We get it, our vision seems almost too complex to consider. But this team has a pulled off the ‘impossible’, time and time again. We have the structures, methodology and commitment to help the City deliver on this ambitious plan by 2023. It starts here.



Objectives:

Ultimately, our proposal reflects a combined approach to delivering upon the following objectives:

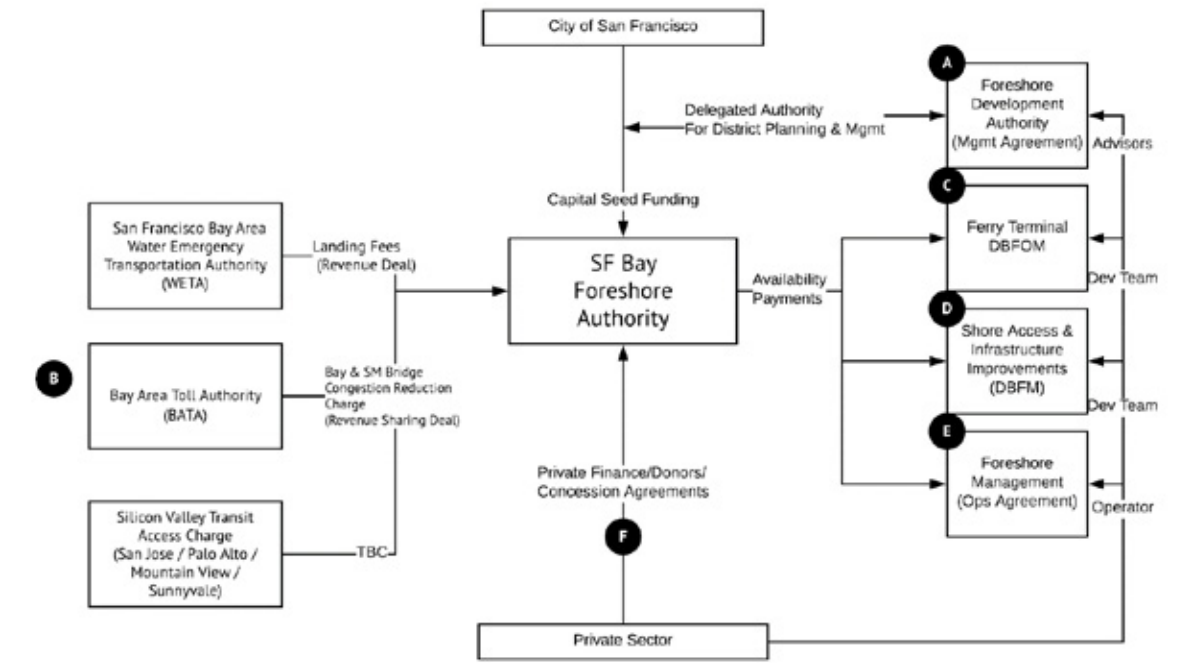
- _Increase public access to the historic pier and foreshore district through increased open-spaces (infrastructure, roads, cycleways etc.)
- _Increase land-side access to ferry operations through the development of modern ferry terminal and multi-landing points along the foreshore
- _Reduce vehicle congestion on the Bay Bridge and San Mateo bridge
- _Develop a considered and time-constrained plan to protect vulnerable habitat within the foreshore district from sea-level rise
- _Manage the long-term viability of the foreshore district through a special purpose vehicle for planning, development monitoring and operations of the district
- _Provide world-class daily operational standards throughout the foreshore district including cleaning, waste collection, events coordination, deliveries and manage ‘user experience’ throughout the foreshore corridor
- _Open up new locations for complimentary and integrated commercial developments on within the foreshore corridor
- _Leverage a mix of financing and funding methodologies to minimize financial impost on the City, ultimately return measurable net economic and social benefit to the region.

Structuring:

Many projects run scared of inter-agency cooperation, but a Public Private Partnership can be a very effective catalyst for change as we seek to balance portfolio risk for the City with a combination of measures to address the outset project objectives.

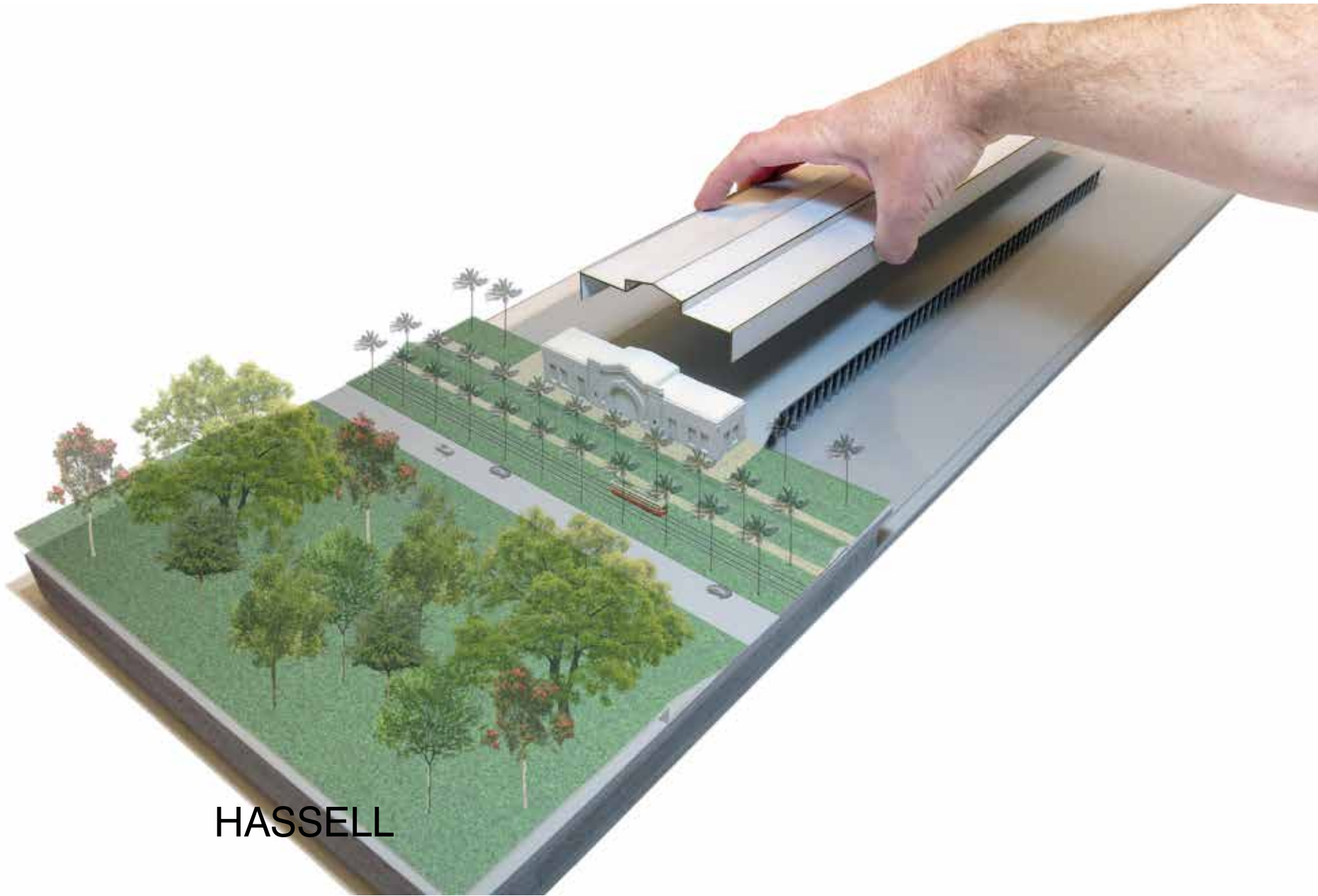
Our proposal consists of the following key steps forward:

- A_The establishment of a Foreshore Authority to oversee the development corridor, a special purpose organization with delegated authority from the City of SF to deliver the vision set out
- B_Development of a Foreshore Authority funding and financing plan including inter-agency review of WETA, BATA and other associated groups.
- C_Launch of an RFQ/RFP for Developers to create a new Passenger Ferry Terminal network throughout the Bay.
- D_Launch of an RFQ/RFP for Developers to undertake Shore Access and Infrastructure Improvements for open-space and foreshort apron works.
- E_Launch of an RFQ/RFP for a Master Operating Agreement for Pier/Foreshore operational services.
- F_Launch a funding, donor and revenue collection analysis in conjunction with the City.



Potential Sources & Uses of Funding/Financing

Sources	Premise	Uses	Drawback
Development Levies	_City development in the zone is charged an additional fee to establish a fund or offset for City Improvements.	_Funding of sea-wall improvements or sea level rise resiliency measures. _Public amenity improvements Funding of district administration group.	_Level of revenue generated from this approach is typically limited to new construction or major development.
Taxation	_Impose a use-tax or district related charge, may include tourism tax, congestion charging, landing tax (ferry operations), resiliency tax, sales tax adjustment	_Fund public amenity projects _Fund events and commerce activity in the area Reduce vehicular density	_Can create disproportionate burden on users _Could create shift in demand for real estate in the sector or district
Revenue Sharing Arrangements	_Collect a % of revenues generated	_Collect direct share of city / co-developed assets such as retail / hospitality	_May not be enough economic activity to under-write the revenue for new development/ renovation projects
State/ City Funding	_Funnel general bond funds or other municipal funding; seek federal resiliency project support	_Funding capital works associated with repositioning of pier / water front	_Bond capacity of City may be insufficient _May require splitting of phases _May not attract funding grants or Federal support
Private Funding/ Finance	_Source a private placement or alternative financing product; work with private sector for endowment or donor base	_Provide upfront capital to fund improvements _City pays down debt over fixed term	_Cost of capital is greater than equivalent Gov back bond issuance _May not attract suitable private sector interest (donors)



HASSELL

Cost Considerations:

_In contemplating any undertaking to the San Francisco Embarcadero and piers precinct, there are many factors to consider in the restoration, preservation, and enhancement of this important historic area.

_Here we have outlined some of these considerations including specific cost drivers unique to this type of restorative, historical and enhancement work. Exploring each of these within a range of design option and solutions is crucial to overall viability and success.

Key Cost Drivers:

- _Geotechnical conditions as they relate to and impact design requirements
- _Dredging, shoring or underwater work requirements (area, methodology and equipment, depth) including environmental impacts
- _Construction staging to accommodate existing infrastructure, terminal, shipping and transport operations as well as public interface
- _Specialist equipment such as floating barges and pontoons
- _Human sea divers for surveying and retrofit works
- _High grade materials for durability of structural components

Constructability Issues:

- _ Security and operation requirements for built structures
- _Gauge and survey the needs, demands and sentiment of the public as well as special interested groups via engagement
- _Accurate determination of scope of works prior to procurement via thorough engineering and surveying inputs
- _Cathodic and barrier protection techniques for minimizing or eliminating salt water ingress
- _Benefit and efficiencies of land or marine based equipment and installation methods
- Load and localized seismic requirements for new and retrofitted pier structures and buildings.

WT Partnership has advised clients throughout the development of various major P3 developments, many in excess of \$1bn dollars including:

- _University of California, Merced, CA
- _University of California, Santa Cruz, CA
- _Aloha Stadium Redevelopment, Hawaii, USA
- _Darling Harbor Live, Sydney NSW
- _Optus Stadium, Perth, WA
- _Barangaroo Development, Sydney, NSW
- _Port of Melbourne Expansion, VIC, AUS
- _Port of Hastings, VIC, AUS