TEAM 2024-15012

-TOKYO

X-tokyo is the crystallization and exploration of Tokyo's future. In this design, X represents the future, symbolizing infinite possibilities and cultural diversity. We are committed to creating a city space that integrates tradition and modernity, breaking boundaries, and making Tokyo a global cultural hub that attracts people from all over the world.

T.O.D.& Country yard garden
Waterfront slow mobility line
Ferry terminal
Circular trail
Water-friendly platforms
Living facilities

Shopping street
Fresh produce warehouse
Office-conference complex
International office complex
Designer hotels

connection
economy
resilience
culture

Disaster prevention waterfront
Affordable housing
Ecological slope
Venue Impoundment Park

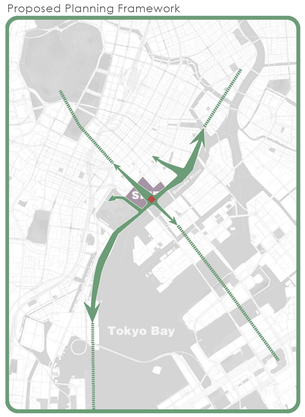
Sports Stadium
The Central Park
Cultural bazaar
Exhibition hall
Art exhibition center
Ring of motion

Resilience

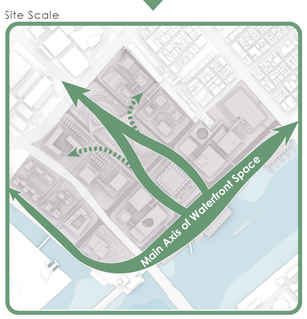
Existing Conditions

The site is located next to the Sumida River, which is rich in blue and green resources, and the waterfront public space along the river awaits Cosmos. The site is often subject to flooding, so flood prevention is also taken care of while creating an open waterfront public space.

Proposed Planning Framework

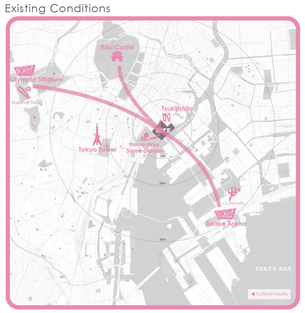


Site Scale



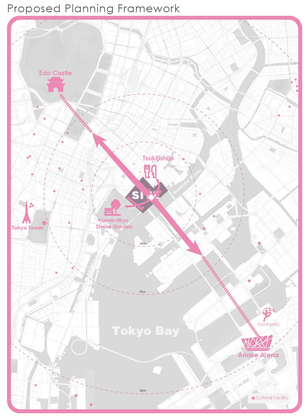
Culture

Existing Conditions

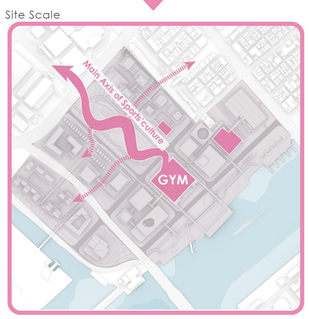


The site was formerly the Tsukiji Market, which has a rich culinary culture, and to the southwest is the historic Hamarikyu Shrine Garden of Grace. The neighbouring large-scale stadium facilities are far away, and there is an urgent need for a new sports culture.

Proposed Planning Framework



Site Scale

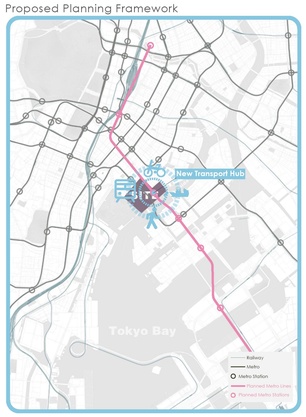


Connection

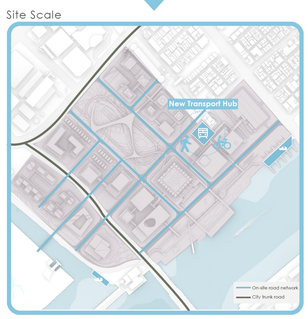
Existing Conditions

As the site of a newly planned metro station, we hope to create a major transport hub within the site, unite the waterfront piers, build a diverse network of communities, create a green slow-moving pedestrian system, and promote cross-sectoral co-operation.

Proposed Planning Framework

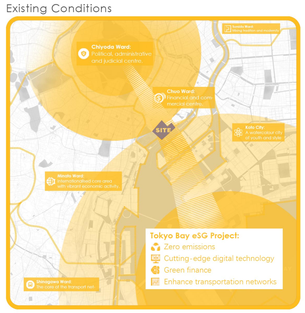


Site Scale



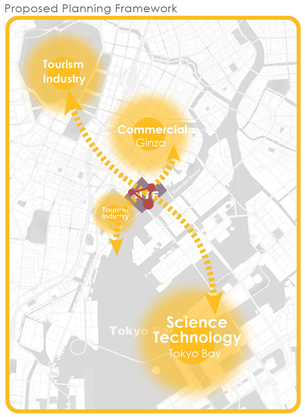
Economy

Existing Conditions

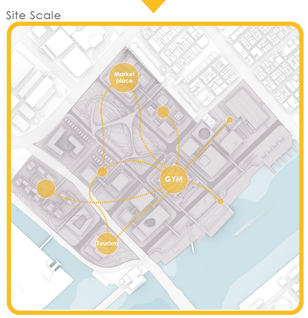


The site is located in Chuo Ward, the financial and commercial centre of Tokyo, and is situated between Chiyoda Ward and Tokyo Bay, serving as a hub linking politics, finance and future technology industries.

Proposed Planning Framework



Site Scale



Benchmarking analysis of economic benefits :

STADIUM

Cost reference for the construction of stadium

Tokyo Olympics Venue (Tokyo)	
Completion time	2020
Cost of venue construction only ($ billion)	10.96
Capacity (persons)	68,000
Construction cost per unit of accommodated space ($ billion)	0.000161176

Staples Arena (Los Angeles)	
Completion time	1999
Construction costs ($ billion)	3.75
Discount rate (estimated at the United States 10-year Treasury yield)	3.50%
Post-discounted construction costs ($ billion)	6.28
Capacity (persons)	19,000
Construction cost per unit of accommodated space ($ billion)	0.000330661

Estimated cost

Option 1: Estimated cost of construction of the stadium		
Stadium capacity	5200	(persons)
construction cost	1.278777302	($ billion)

Result

Inflation rate (estimated)
2.50%
Number of visitors per year (persons)
24000
Internal Rate of Return after 20 years
8.26%

The stadium could have an internal rate of return of 8.26% after 20 years.

VS

CULTURAL CENTER

Cost reference for the construction of cultural centres

M+ Museum, Hong Kong	
Completion time	2021
Construction costs ($ billion)	2.77
Capacity (persons)	20,000
Construction cost per unit of accommodated space ($ billion)	0.0001385

Las Vegas Spherical Theatre	
Completion time	2023
Construction costs ($ billion)	23
Capacity (persons)	21,500
Construction cost per unit of accommodated space ($ billion)	0.001069767

Estimated cost

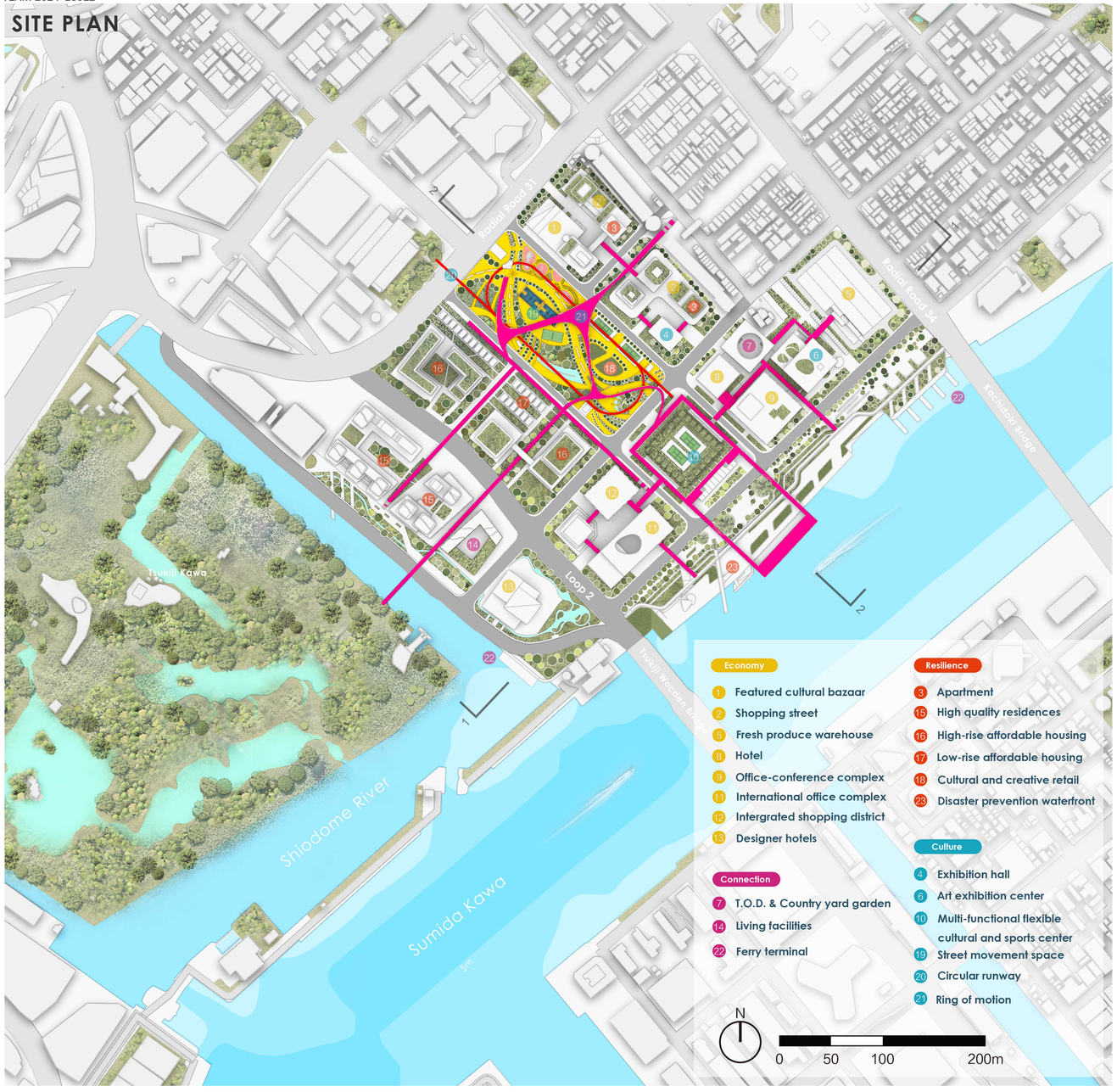
Option 2: Estimated cost of construction of the exhibition multipurpose hall		
Capacity of the exhibition function room	1500	(persons)
construction cost	0.906200581	($ billion)

Result

Inflation rate (estimated)
2.50%
Number of visitors per year (persons)
266605
Internal Rate of Return after 20 years
1.82%

The cultural center could have an internal rate of return of 1.82% after 20 years.

SITE PLAN



Economy

1. Featured cultural bazaar
2. Shopping street
5. Fresh produce warehouse
8. Hotel
9. Office-conference complex
11. International office complex
12. Intergrated shopping district
13. Designer hotels

Connection

7. T.O.D. & Country yard garden
14. Living facilities
22. Ferry terminal

Resilience

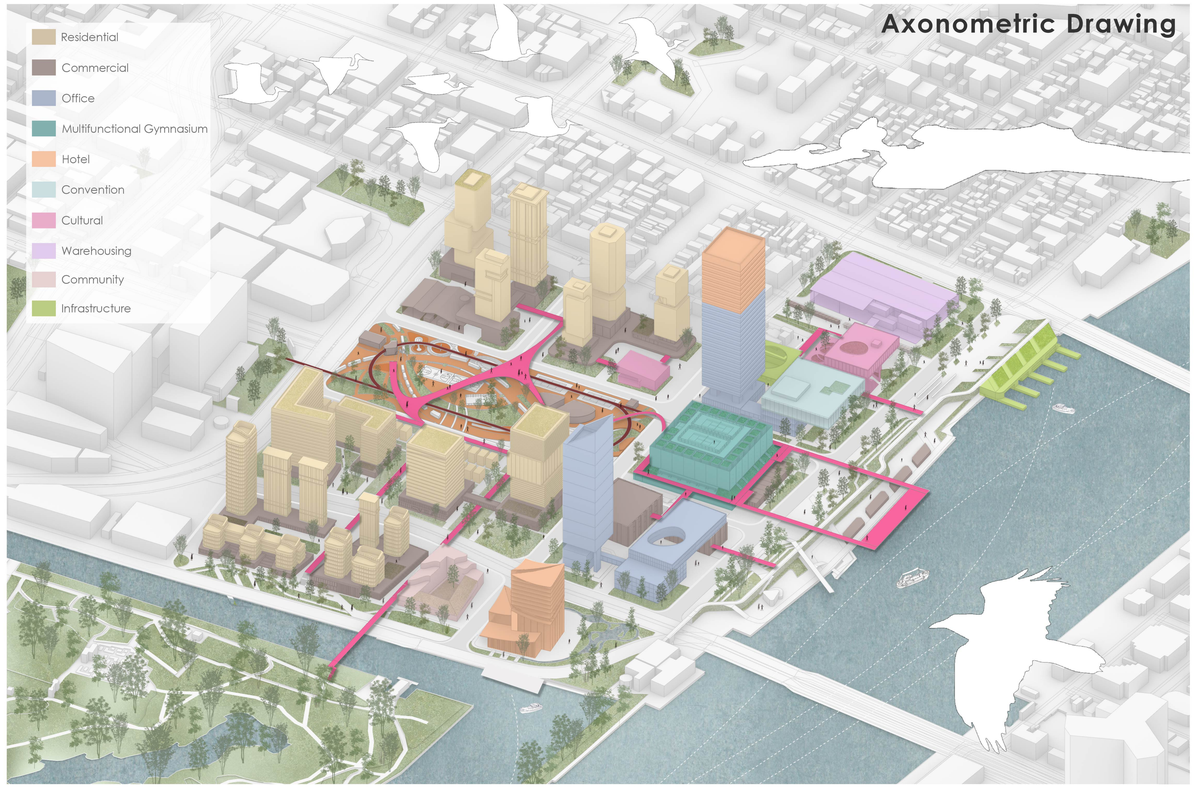
3. Apartment
15. High quality residences
16. High-rise affordable housing
17. Low-rise affordable housing
18. Cultural and creative retail
23. Disaster prevention waterfront

Culture

4. Exhibition hall
6. Art exhibition center
10. Multi-functional flexible cultural and sports center
19. Street movement space
20. Circular runway
21. Ring of motion

Bird's-eye Rendering

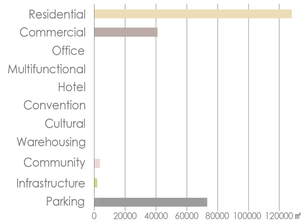
Axonometric Drawing



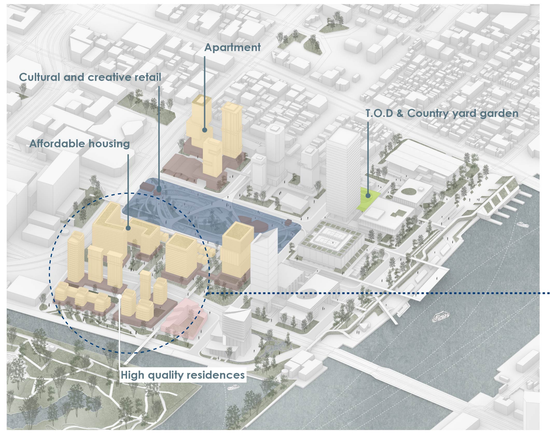
Multiculturalism

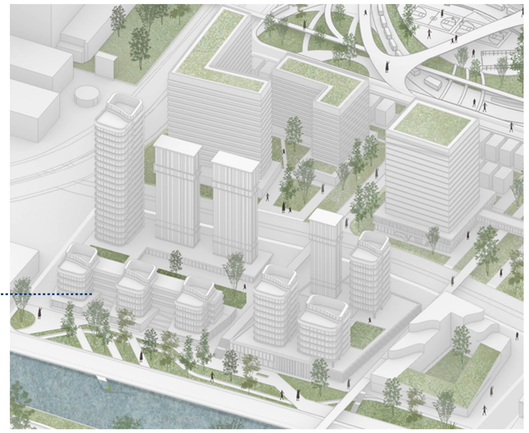
The most tokyo cultural events are happening here all the time, sports culture is the loudest label of this neighbourhood, and the injection of new cultures will lead to the food culture of Tsukiji Market, the culture of the old Gyogoku Shrine, the fashion culture of Ginza, and so on.

PHASE I
Making a place

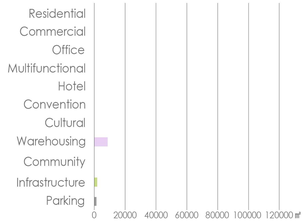


Total Floor Area: 245615㎡
Site Area : 95134㎡
Open Space: 33182㎡
Total Cost: ¥ 150,983,841,376.28
Total Value: ¥ 166,135,371,402.96

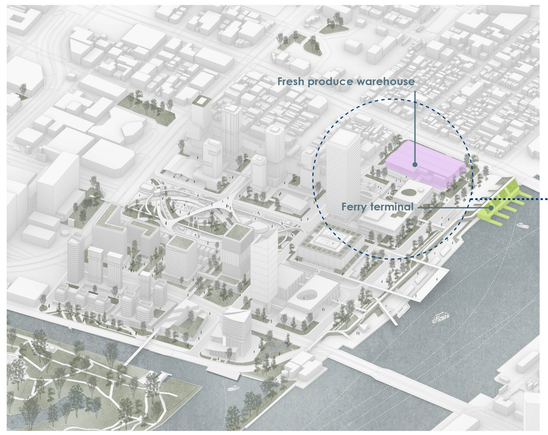


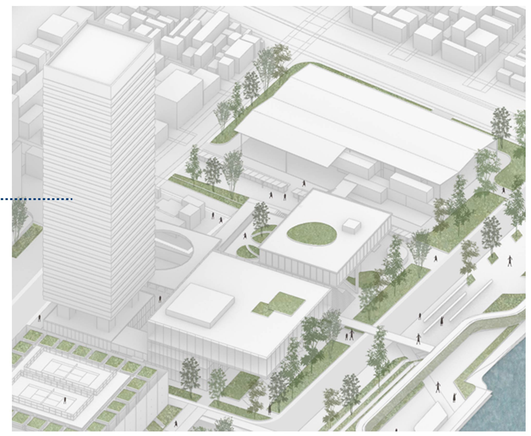


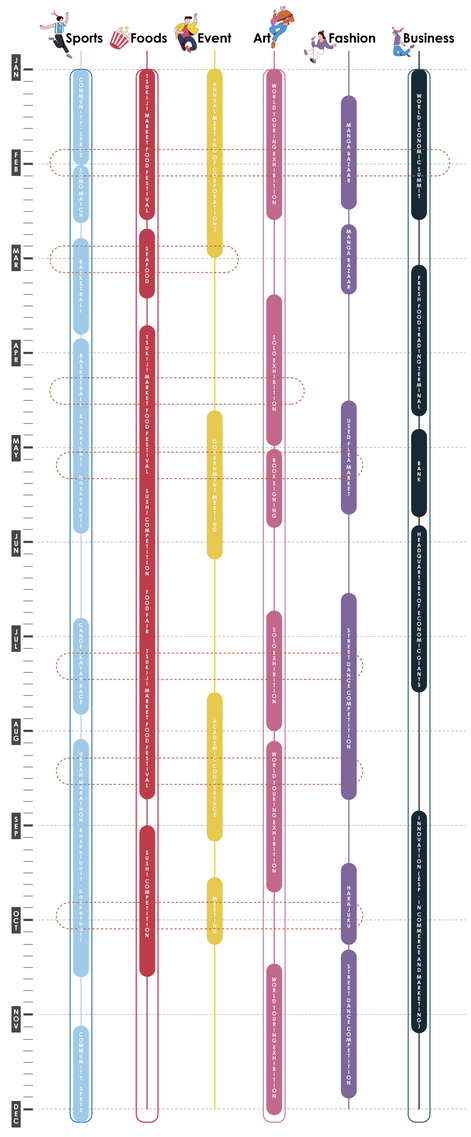
PHASE II
Catalyzing Community



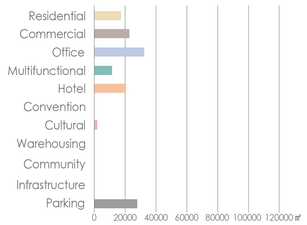
Total Floor Area: 7577㎡
Site Area : 11971㎡
Open Space: 6186㎡
Total Cost: ¥ 5,088,236,250.00
Total Value: ¥ 7,856,470,588.24



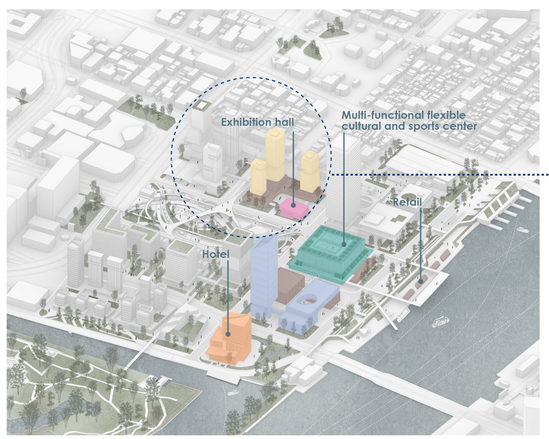


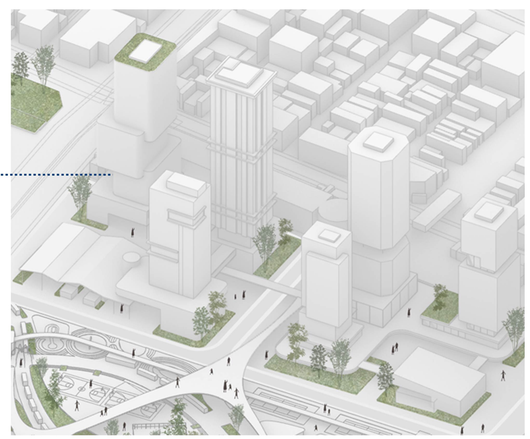


PHASE III
Establishing the future

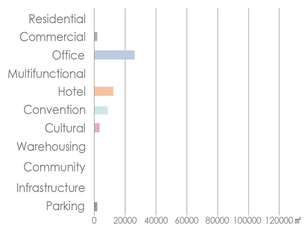


Total Floor Area: 138194㎡
Site Area : 49752㎡
Open Space: 17273㎡
Total Cost: ¥ 120,853,177,310.89
Total Value: ¥ 168,807,089,108.24

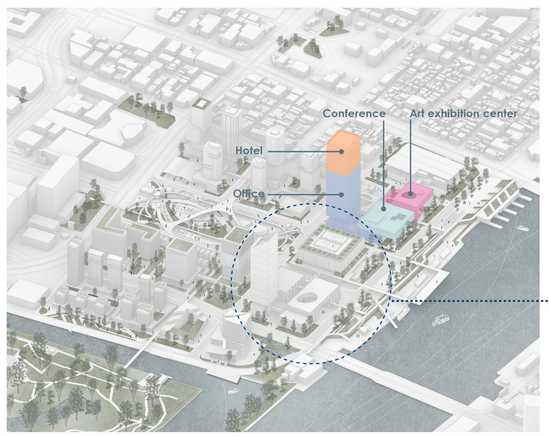


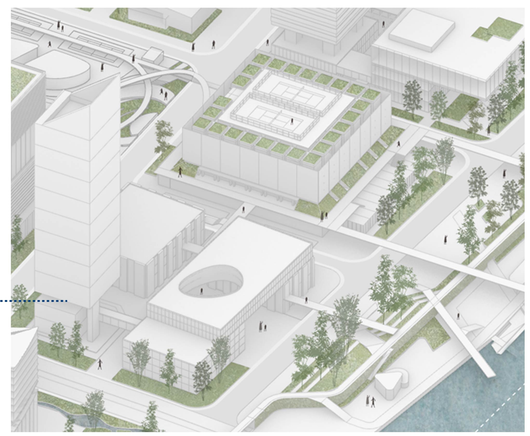


PHASE IV
Establishing the future

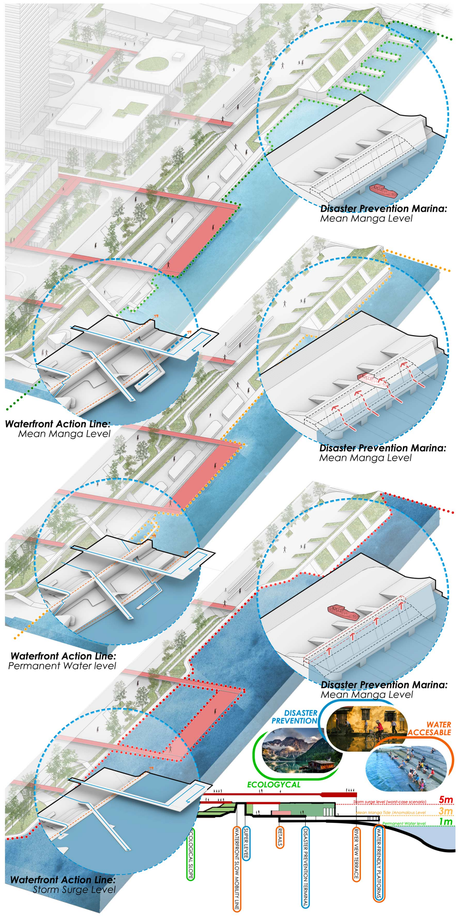


Total Floor Area: 56193㎡
Site Area : 20500㎡
Open Space: 12390㎡
Total Cost: ¥ 39,125,751,090.10
Total Value: ¥ 41,935,530,029.78





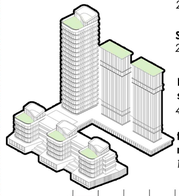
Waterfront Resilience Measures



Parcel Breakdown

Parcel A

Parcel A-1



commercial
resident
0 5000 10000 15000 20000m²

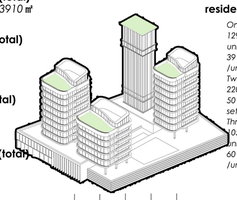
Parcel A-2

Floor area(total)
23240 ㎡+13910 ㎡

Site area(total)
29110

Parking spaces(total)
480

floor area ratio(FAR)(total)
1.44



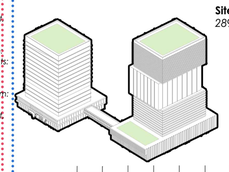
Number of residential units

One-bedroom: 129 units (90 units: 35 ㎡/unit, 39 units: 42 ㎡/unit)
Two-bedroom: 220 sets (60 sets: 50 ㎡/set, 160 sets: 55 ㎡/set)
Three-bedroom: 105 units (45 units: 70 ㎡/unit, 60 units: 85 ㎡/unit)

commercial
resident
0 5000 10000 15000 20000m²

Parcel B

Parcel B-1



commercial
resident
0 5000 10000 15000 20000 25000 30000m²

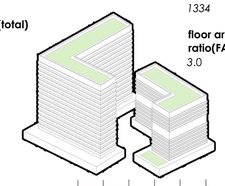
Parcel B-2

Floor area(total)
45017 ㎡+37876 ㎡+4140 ㎡

Site area(total)
28909

Parking spaces(total)
1334

floor area ratio(FAR)(total)
3.0



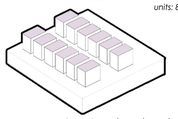
commercial
resident
0 5000 10000 15000 20000 25000 30000m²

Parcel B

Parcel B-3

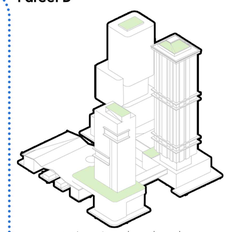
Number of residential units

One-bedroom: 263 units (138 units: 20 ㎡/unit, 125 units: 32 ㎡/unit)
Two-bedroom: 500 units (125 units: 50 ㎡/unit, 375 units: 55 ㎡/unit)
Three-bedroom: 430 units (150 units: 75 ㎡/unit, 120 units: 80 ㎡/unit, 160 units: 85 ㎡/unit)



resident
0 5000 10000 15000 20000m²

Parcel D



Site area
11157 ㎡

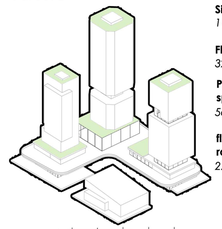
Floor area
39831 ㎡

Parking spaces
675

floor area ratio(FAR)
3.57

commercial
Retail
resident
0 5000 10000 15000 20000m²

Parcel E



Site area
11858 ㎡

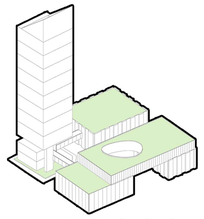
Floor area
32790 ㎡

Parking spaces
564

floor area ratio(FAR)
2.77

commercial
exhibition
resident
0 5000 10000 15000 20000m²

Parcel F-1



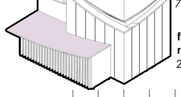
Site area
15343 ㎡

Floor area
38204 ㎡

floor area ratio(FAR)
2.68

Office
Retail
0 10000 20000 30000 40000m²

Parcel F-2



Site area
9474 ㎡

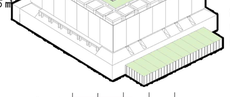
Floor area
20484 ㎡

Hotel housing units
150rooms(50 ㎡)
70rooms(85 ㎡)

floor area ratio(FAR)
2.16

Hotel
0 5000 10000 15000 20000m²

Parcel G



Site area
13077 ㎡

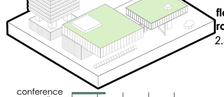
Floor area
14240 ㎡

Parking spaces
200

floor area ratio(FAR)
1.08

Sports
Retail
0 5000 10000 15000 20000m²

Parcel H



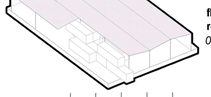
Site area
20500 ㎡

Floor area
50635 ㎡

Parking spaces
20+100

floor area ratio(FAR)
2.47

conference
gallery
transportation hub
office
Hotel
retail
0 5000 10000 15000 20000m²



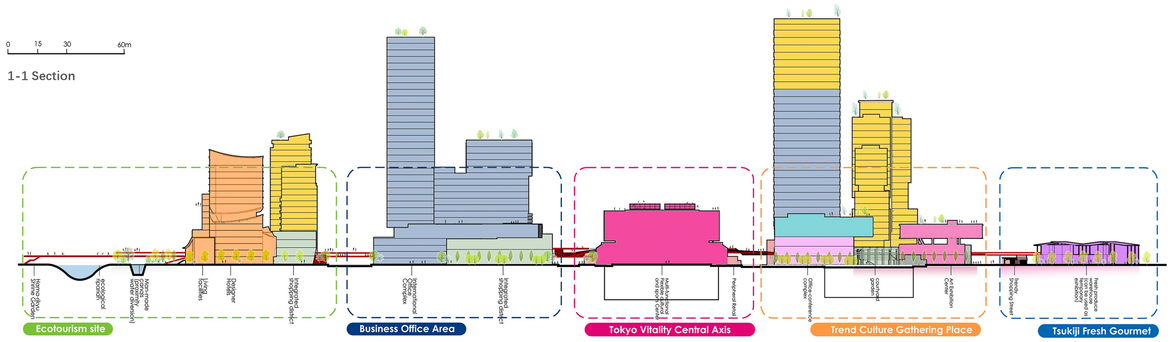
Site area
11971 ㎡

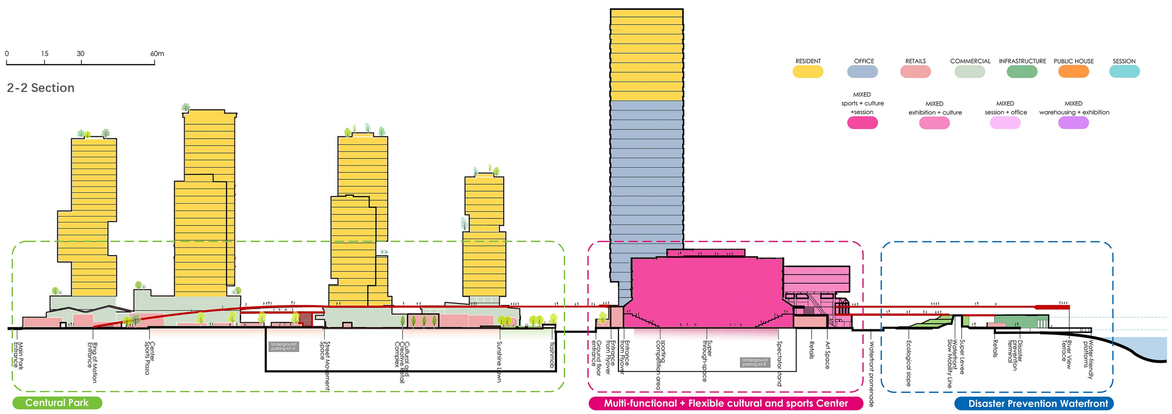
Floor area
6000 ㎡

Parking spaces
10

floor area ratio(FAR)
0.5

factory+
bazaar
0 5000 10000 15000 20000m²





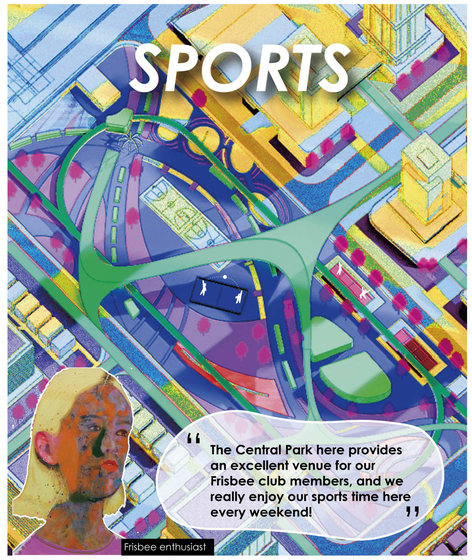
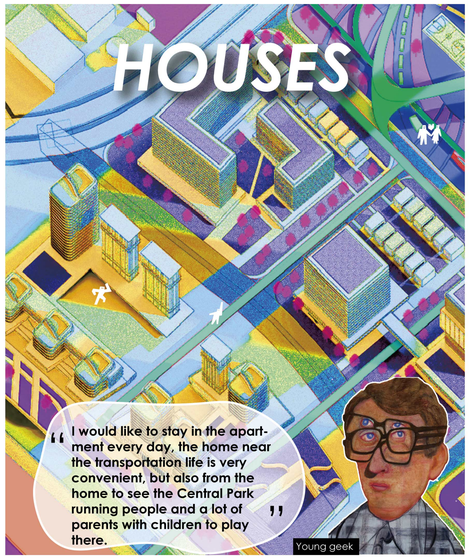
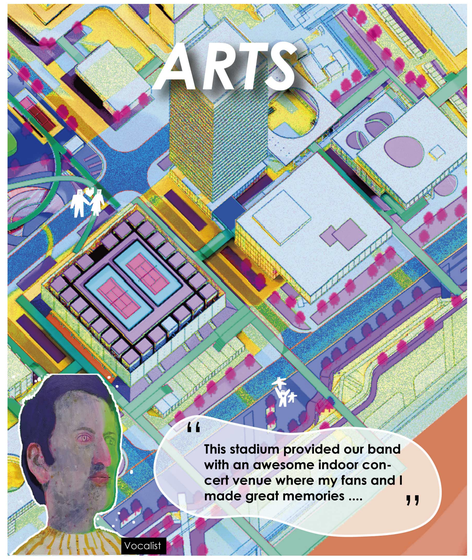
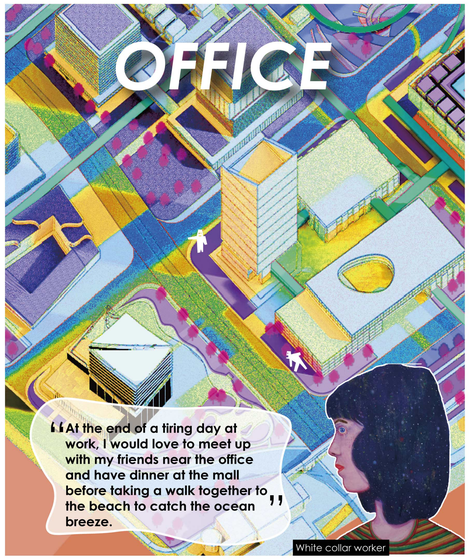
Financial Summary

IRR for all Component

Leveraged Quarterly IRR	Leveraged Annual IRR
4.66%	19.98%

UNLeveraged Quarterly IRR	UNLeveraged Annual IRR
3.59%	15.15%

Cost accounting for each Component

Value accounting for each Component

Component	Total Project Cost(billion ¥)	Return on cost	Net Operating Income(billion ¥)	TOTAL PROJECT VALUE(billion ¥)
A&B	109.4	18.48%	5.5	129.7
C	4.0	77.58%	0.3	7.2
D	37.5	74.74%	1.5	65.5
E	29.9	32.93%	1.7	39.8
F	57.9	60.41%	3.9	92.9
G	32.9	9.40%	1.5	36.1
H	39.1	7.18%	1.8	41.9
I	5.1	54.40%	0.3	7.8