

LINEAR CITY PROPOSAL IN TOKYO

A System of recreational connection for pedestrians above JR Yamanote Line

Linear City Concept Proposal

Tokyo is one of the largest metropolitan cities in the world, exceeding 13 millions residence living together. Tokyo is the number one economic growth city in the world in terms of GDP. It is also one of the earliest developed cities in the east after World War II. This showed that the city has a strong economic power. Meanwhile in terms of cultural aspect, Tokyo has a rich history and tradition that passed by generation to generation, and also many sub cultures that are produce by the local people. It has already created a dynamic culture experience, that makes the uniqueness of this city. In any aspect, the city is showing itself as well developed contemporary city. Nevertheless, Tokyo is a city, which is constantly facing changes during many kinds of world events. As Tokyo 2020 Olympic is happening, urban form are inevitably being transform again. In order to be able to handle a huge amount of capacity of visitors, the city must be able to provide good experience for them in the new Tokyo. The Tokyo Metropolitan Government aims to minimize changes through allowing a big impact on the city.

Human movement has always been a key characteristic in a well-developed city. Since Tokyo is a big city with a huge amount of population, transportation infrastructure is one of the main key elements in controlling the human flow. Especially nowadays in Tokyo, residents heavily rely on train and subway system to access their destination for the daily use. Besides the human flow is only determined by the location of these transportation stations. Are there any possibilities to rethink and redesign the railway system so that the continuity between the urban space of trees, square, building and railway could be well connected? Since Yamanote line is the ring of steel that connects different cities together, there are two major types of railway condition along the line. It is where the railway sinking to the group due to its topography. Therefore, this thesis will propose the quality that been study and apply to two locations where such condition has happen as sample experiments. It is the Shinjuku station area.

The proposal idea is to build above the railway structure, creating multi-layers of activities allow only for pedestrian usage. This layers should be well connect to the surrounding building and fit into the urban context. The architecture of the new layer structure is a hybrid product from the railway and new programs that generate from local contextual mapping studies. Ideally this pedestrian highway is to benefit to the Tokyo residence.



Dependence on Railway Infrastructure Tokyo

Tokyo local residence rely on the railway infrastructure in order to travel within the city, the over loaded infrastructure system sometimes stressing on the residence.



Future City Illustration - New Urban Form

Creating an Utopian city has always been the utmost dream of every planners, urbanists and architects. The most influential "City of the Future" by Harvey Wiley Corbett in 1913 has inspired many people on what should a city be with skyscrapers, pedestrian streets and transportation infrastructures that are connected together in many layers. This image also inspired one of the greatest architects and urbanists of all time - Le Corbusier.



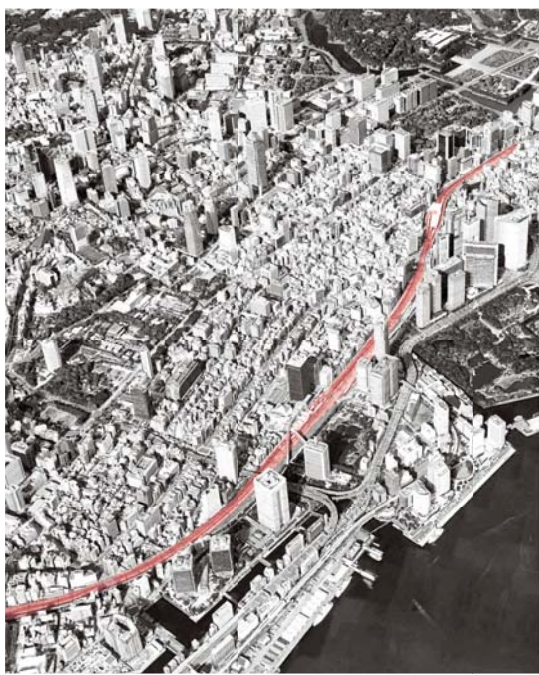
Continuous Monument - Super Studio

In the late 1960s, a team called Super Studio envisioned what would happen in the future city development. The team designed a series of concept drawing called "Continuous Monument". The drawing was an image of the near future showing that all cities formation will be controlled and connected by a continuous grid seen as a "monumental mega structure". This monument is enormously cut through the earth surface and connect cities to cities.



Hybridization Between Architecture and Infrastructure

Above case studies showing the possibilities of hybridization between architecture and infrastructure. Such proposal used to be experimental, but nowadays, it happens different cities in the world. The utmost idea is to finding a pedestrian owned space in the city for public use.



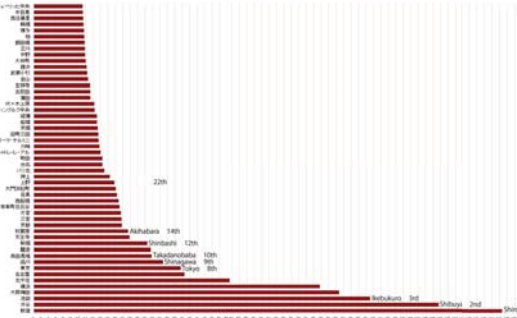
Tokyo Railway Infrastructure

Looking at any major cities in Tokyo, a continuous transportation infrastructure appears that is cutting through the city surface, delivering people to their destination. It looks similar to the sketches illustrated by Super Studio. However, lets not forget the damage that the Japanese people had during the 3-11 earthquakes in 2011. All the railway system shut down, the city immediately shut down.



Annual Subway Ridership

1. Beijing	3,410 billion	5. Moscow	2,500 billion	9. Hong Kong	1,600 billion
2. Tokyo	3,217 billion	6. Guangzhou	2,280 billion	10. Paris	1,527 billion
3. Seoul	2,560 billion	7. New York City	1,751 billion		
4. Shanghai	2,500 billion	8. Mexico City	1,685 billion		



Top 50 Most Busiest Stations in the World

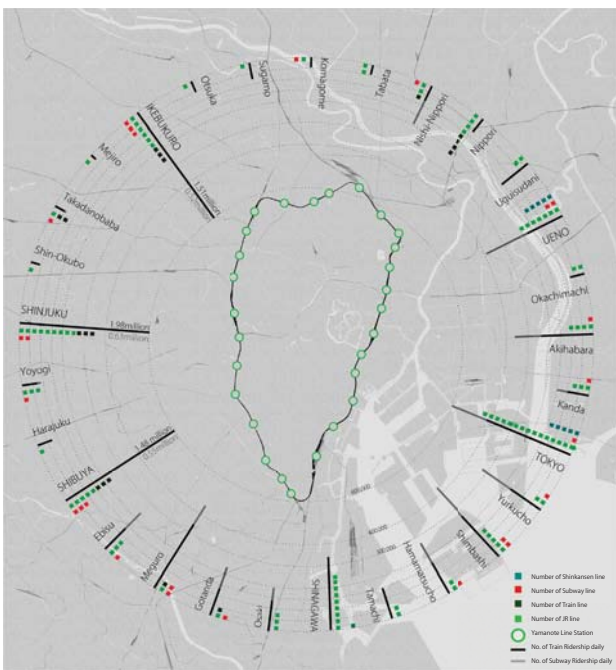
1 Shinjuku Station	2 Shibuya Station	3 Ikebukuro Station	8 Tokyo Station
9 Shinagawa Station	10 Takadanobaba Station	12 Shinjuku Station	14 Akihabara Station
22 Ueno Station			

Topography Mapping



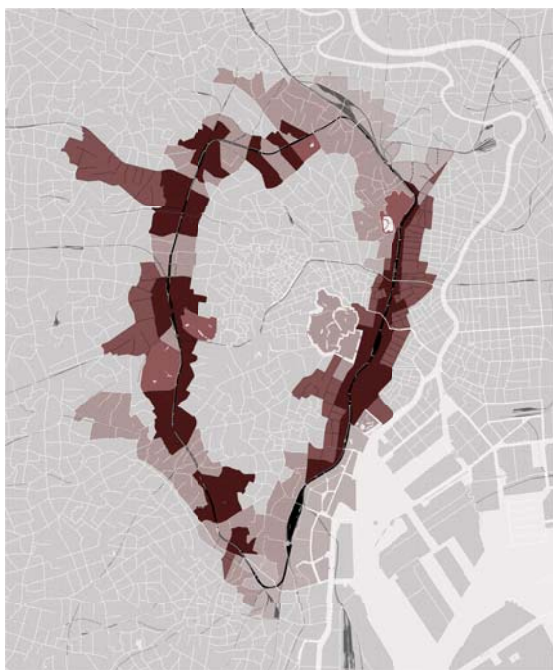
JR Yamanote Line Condition

Understanding the JR Yamanote line condition can allow finding the opportunity that allow for the physical condition of the railway.



JR Yamanote Line Stations Statics

JR Yamanote line is the railway loop line in Tokyo, Japan, is operated by East Japan Railway Company. It is the world busiest railway line and also one of the most important lines in Tokyo. Its total length is 345 kilometers. Since the JR Yamanote line is at the heart of Tokyo, it is estimated around that 3.68 million passengers ride every day on its 29 stations per day on 12 lines serving 275 stations.



Programs along JR Yamanote Line

Tokyo's city centers are generate from the station itself, which become a major node in the urban context. The important idea is to understand how the railway could connect with these nodes together. Although the existing railway is physically connected, open spaces could also connect by a Sky-Deck, a pedestrians pathway, generating a series of recreational programmes. Therefore, to analysis the existing programs along the JR Yamanote line could provide the chance of finding the opportunity to developing the new urban form



Programs around City Centre

The railway services delivering visitors to their designated city centers, thus the city centers become the most economical valuable district. To analysis the local context, programs mapping within 1km radius distance from the station shall provides hence on rather what types of building programs are the majority in the area, then it can provides the suitable programs to be built on this location and connect with the Sky-Deck.



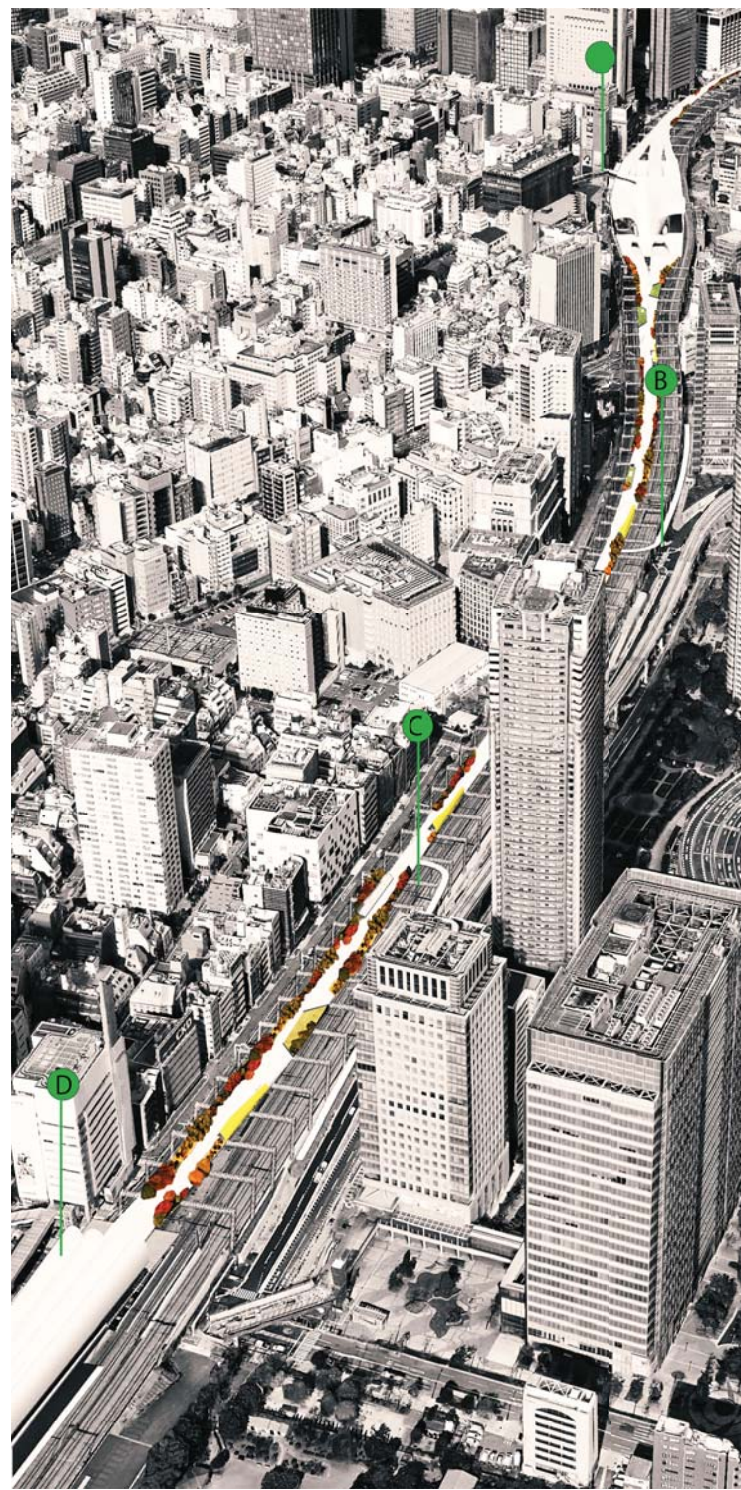
Hamamatsucho - Shimbashi Station

Shimbashi area is a major commercial district, many workers need to access to this station everyday. The idea of proposing mixed use programs such as workshop, library and theater is to provide local workers with activities during their time after works. In order to maintain the vibrant and dynamic qualities that mentioned above, Shimbashi station is one of the best locations to be selected for such an experimental proposal.



Linear City - Skydeck

The Linear City proposal is focusing on the open space generated from the JR Yamanote line above. The use of existing space is mainly for railway transportation. Through reading the existing Tokyo context, city center is generate from the station itself, which become a major node in the urban context. The question is how to connecting these nodes together. Although the existing railway is physically connected, open spaces could also connect by a Sky-Deck, a pedestrians pathway, generating a series of recreational programmes. This network could provide a better public space only for pedestrians, so that the residents can experience the city in a difference perspective.

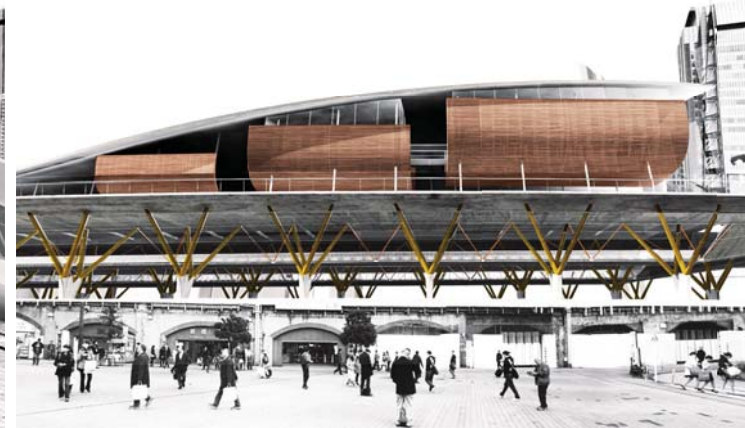


Master Layout Proposal



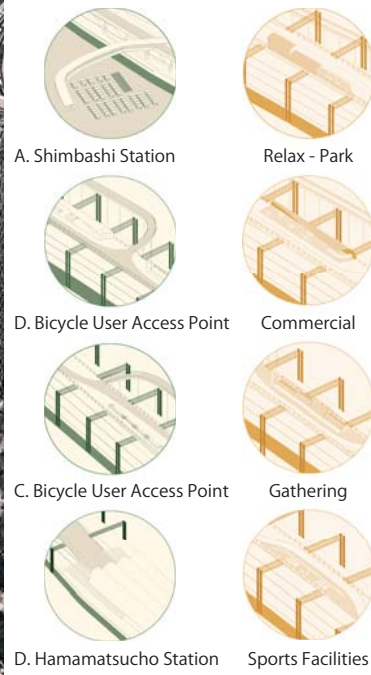
Shimbashi Station - Skydeck Circulation

Image above showing how the relationship between the skydeck to the station front plaza. It is important to have an easy access for visitor to be able to travel to the sky deck. Being the major open space in front of the station plaza, it provide a good circulation access to connect to both layers.



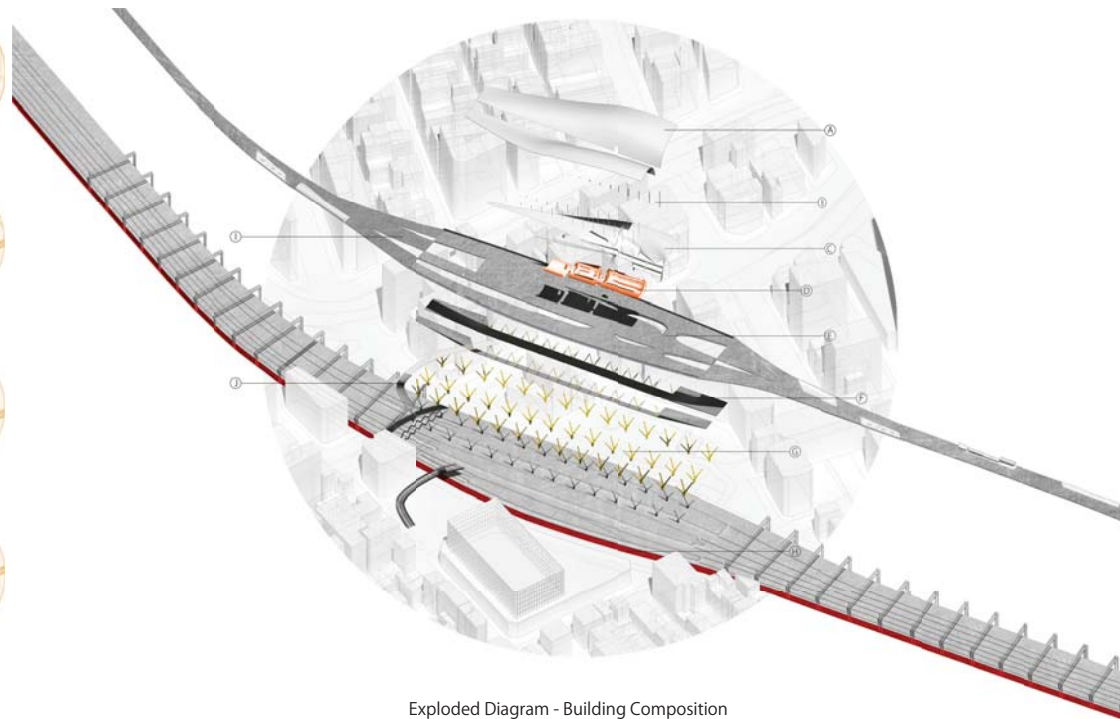
Shimbashi Station Front Plaza

Shimbashi station front plaza is one of the most famous and popular plaza within Tokyo district, often time the plaza have held many types of event. Therefore it is important to create an attractive and eyes catching building structure to provide a nice scenery. Moreover, being one of the open space within the Shimbashi city center, the proposal try to maintain a lower building height.



Skydeck Access and Activities

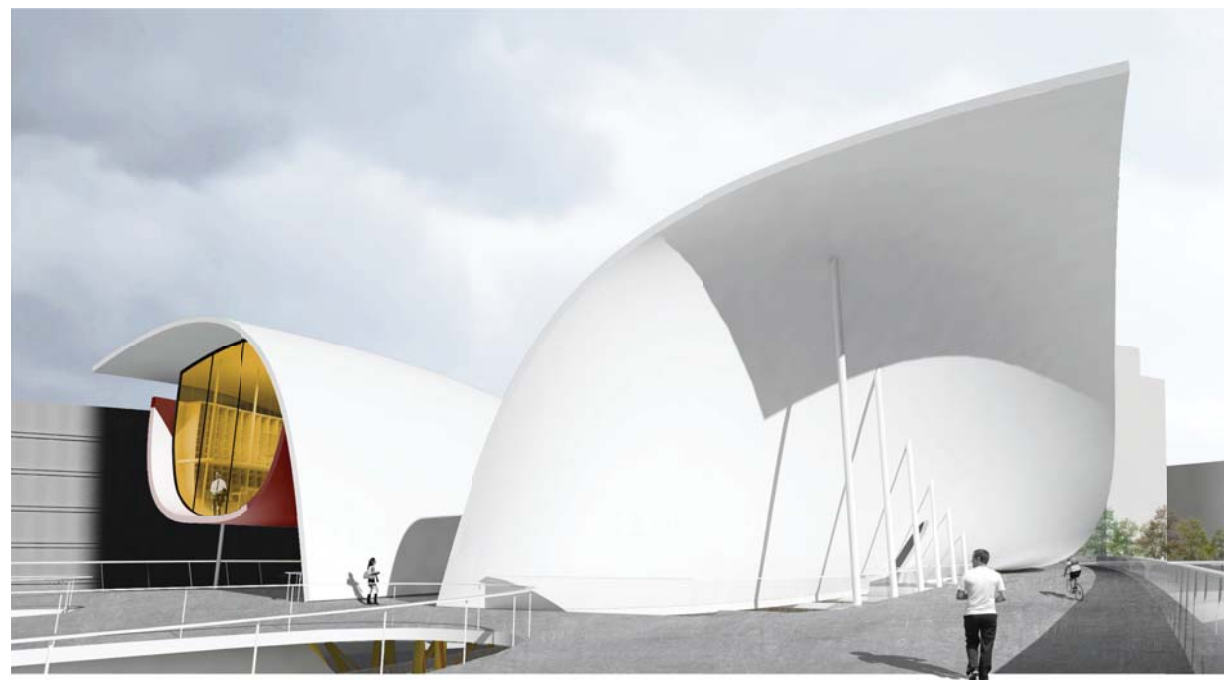
- Access Locations
- Activities



Exploded Diagram - Building Composition

- A. Building Roof
- B. Support Column
- C. Workshop Space and Theatre
- D. Library
- E. Sky Deck
- F. Bicycle Fast Lane and Pedestrian Walkway
- G. Station Support Columns
- H. Existing Railway Track and Retail Space
- I. Pedestrian Designated Utilities on Sky Deck
- J. Ground Connection

Station itself becomes the city center that attract people to access and accumulate activities. Therefore the station building should have a good and easy access for visitors to access to a Sky-Deck. However, the cyclists should access in a far distance away from the stations, due to preventing circulation conflict between pedestrians and cyclists. From this thesis design, an example of master layout proposal is illustrating from Shimbashi station to Hamamatsucho station of how the station center and Sky-Deck work together. As depicted from 10.3A, there are four access points, A, B, C and D to a Sky-Deck. A and D are the access point from the station that allows pedestrians to access. Although location B and C, cyclists access point, are away from the stations, but it is still remain less than 1km distance from A and D.



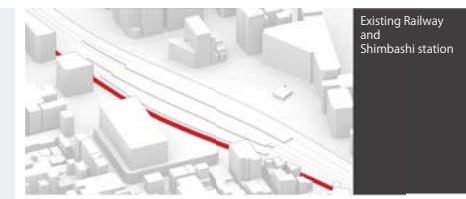
Linear City - Shimbashi Skydeck

This thesis intends to seek the opportunities for the future development of Tokyo city. As one of the most expansive living cities in the world, finding a balanced solution between economical aspect and quality of living is the most challenging question for city development. Tokyo is one of the most developed city, making big changes in the city planning is difficult. The thesis research shows the background of city development in order to analysis of Tokyo city conditions. Find the potential of the railway redevelopment, so that most areas within Tokyo could be linked together allowing for better quality of life and economical prosperity.

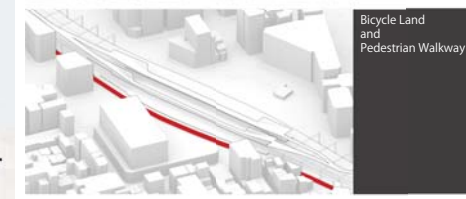


Sectional Perspective

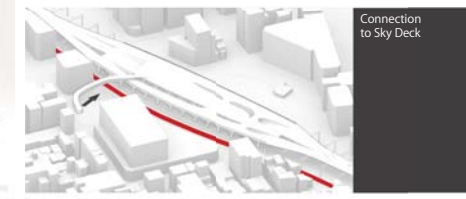
This project is taking advantage in a very expressive way of the situation by adding a new layer of activities on the ring of the Yamanote line. Therefore, this section showing how each of these layers connecting with each others. Although these layers physically separated, however, they are spatially connected.



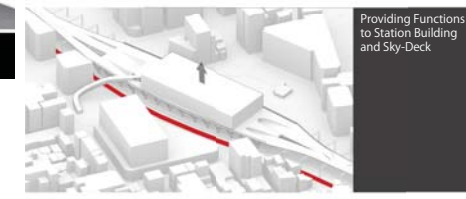
Existing Railway and Shimbashi station



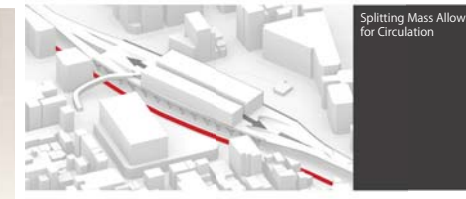
Bicycle Land and Pedestrian Walkway



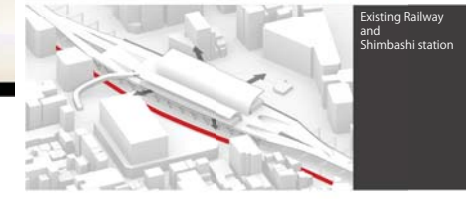
Connection to Sky Deck



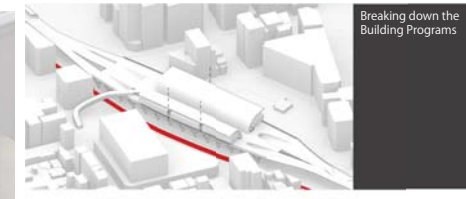
Providing Functions to Station Building and Sky-Deck



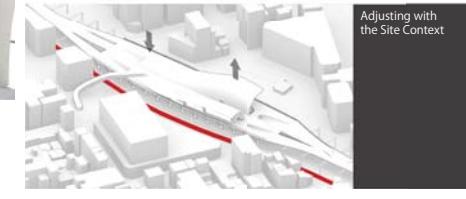
Splitting Mass Allow for Circulation



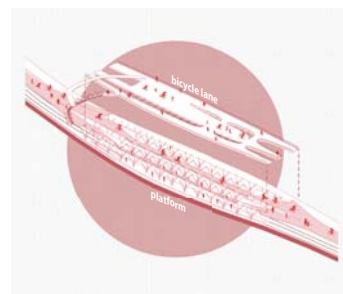
Existing Railway and Shimbashi station



Breaking down the Building Programs

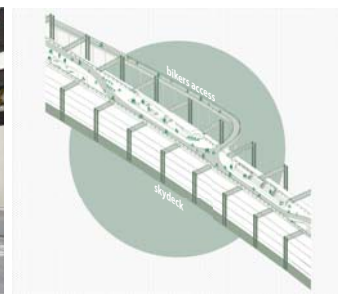


Adjusting with the Site Context



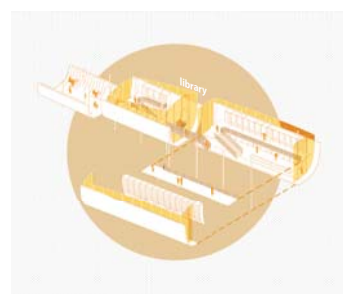
Station Platform - Bicycle Lane

The Building structure mainly separately in four major parts due to its functional use. These four parts of building element are visually identical, however it is still working under the same building structure. These four elements are well connected even though they are separated. In order to create a well visual connection for railway platform and bicycle lane, the bicycle lane extended in between the spaces of railway platform and Sky-Deck empower the linkage from the ground level layer to the upper level.



Skydeck

The Sky-Deck is a extensive public space above the JR Yamanote line railway. It allows for a unique experience for visitor experiencing Tokyo city center differently. It break through the enormous size of the infrastructure to a human activities scale. Where this is the pedestrian owned space and allow the city to create a second layer above the ground.



Left Wing - Library and Bicycle Parking

Above the Station Structure, there is a circulation separating two building structures, the left wing and the right wing. The left wing consists three parts of small scaled structural building elevated from the Sky-Deck. It can open up the ground level space, creating more public space for the visitors. It also allow the separation privacy between the library space and the open space. Also, there is a bicycle parking providing to visitors for their access.



Right Wing - Theatre and Workshop Space

The right wing building structure is a dynamic form with fluid space. It is a big contrast to the left wing building structure but under the similar roof structure system. The functional programmes providing to the office workers for their time after work. The theater space allow for performance and conference. Meanwhile there are varieties of workshop spaces such as dance hall, multipurpose hall, computer learning center providing to the public.