City Planning and Urban Development in Tokyo

Bureau of Urban Development
Tokyo Metropolitan Government
I : Outline of Tokyo

II : The Grand Design for Urban Development
I : Outline of Tokyo
Outline of Tokyo

Population: 13.52 million
Area: 2,191 km²
GDP: 95trillion JPY (1057.2 billion USD)
History of Development in Tokyo

Edo period (1603-)

Map of Edo

Ryogoku Bridge (Sumida River)

Bird's-eye view of Edo

Great Fire of Meireki (1657)
History of Development in Tokyo

Meiji period (1868-)

- So called “Hired foreigners” drafted city center plans but these were not realized.

- In Marunouchi, the land appropriated to the army was sold to the private sector in 1890, then the area was developed as Japan’s first central business district.

  “London Block” was so-called due to its western appearance of streets lined with red-brick buildings and the area which housed large-scale office buildings was named “New York Block” due to its scenery.
History of Development in Tokyo

Taisho period (1912-)

Great Kanto Earthquake (1923)

Shimpei GOTO (1857-1929)

Kiyosu Bridge (Sumida River)

Imperial Capital Reconstruction Plan (implementation proposal, 1930)
History of Development in Tokyo

Showa period (1926-)

- The Postwar Reconstruction plan drafted after World War II

- The agricultural land reform in 1946 promoted the individual possession of land.
History of Development in Tokyo

- Construct Infrastructure

Tokaido Shinkansen
(In service from October 1964)

Tokyo Metropolitan Expressway
Urban Structures

Bipolar Structure (1971)

Circular Megalopolis Structure (2000)

Multi-Core Urban Structure (1982)
The population of Tokyo will decline after **hitting a peak in 2025.**

By 2040, it is projected that this will be **13.46 million people** (shrinking by about 500,000 from 2025).
II: The Grand Design for Urban Development
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I. Role of the Grand Design for Urban Development

Chronology

09/2016  TMG City Planning Commissioned Report
「The Urban Image of Tokyo in 2040 and the Route towards its Implementation」

09/2017  「Grand Design for Urban Development」 Released

Plan Outline

Outline the urban form that Tokyo should aim for, as well as the fundamental urban development policy and concrete plan for its implementation.

Time Period

- Target period roughly a quarter-century forward to 2040s
Ⅱ. Tokyo society and the activities of citizens in the 2040s

As a bright future prospect taking into account factors such as a graying society, technological innovations in a wide range of fields, and progress in infrastructure development, an image of social conditions and Tokyo resident activities in the 2040s was drawn up as a premise for urban development with a view to make Tokyo a better city.

<Examples of expected infrastructure developments and social changes>

- **3 ring expressways**
- **Chuo Shinkansen (maglev)**
- **Automated driving**
- **Tokyo’s population**

**Sustainable development in Tokyo**

-约90%线路开放
-2020年奥运会
-2020年

**2040年**

-服务开始大阪
-完成
-近完成
-13.98百万（2025年）
-13.46百万年

-东京2020
-在2040年
Ⅲ. The future role of Tokyo

Tokyo’s roles in the world

- Is tolerant and nurtures exchange among **diverse groups of people and cultures**
- Builds and promotes **pioneering models for solving** urban challenges
- Fuses tradition and innovation to create **new value**

Tokyo’s role in Japan

- Exhibits **its capability** as Japan’s capital **to promote economic activities**
- **Cooperates with various areas** to create and promote an even more attractive Japan

＜Showcasing leading technologies in urban spaces＞

＜Projection mapping show at Tokyo Big Sight＞
Ⅳ. The new urban vision Tokyo must strive for

Goal of urban development

“A highly developed mature city that is relaxing and full of vitality”

As a highly developed mature city, grow sustainably in harmony with the global environment while also employing the latest technology.
While evolving upon the circular megalopolis structure with the aim to realize an “urban structure for exchange, collaboration, and taking on challenges,” also take into consideration a wider area, and bolster exchange and coordination among various fields, including industry and tourism.

Promote broader exchange and cooperation with other areas in Japan and abroad.

Make the most of the beneficial effects of building the 3 ring expressways and other infrastructure.

Two regional centers—the 23 special-ward area and Tama area—lead activity in the Greater Tokyo Area.

Further improve the highly concentrated railway network for maximum utilization.
Urban Structure Tokyo Should Pursue

- **Concentrate** functions essential for living **around major stations and other centers**, and realign urban structures into “**compact cities**”

- **Through the securing and effective use of transportation networks**, rebuild areas into communities where everyone can easily engage in activities

- Turn each community into a place where local **resources and features are harnessed and people can feel attached to the community**

*Image of compact city structure*
New division of regions/zones

- **Four regions** are newly defined, with an eye to achieve the integrated development of central Tokyo and the waterfront area.
- **Two zones** serve as the engines driving Japan and Tokyo.

※ The characteristics of adjacent regions/zones loosely merge for continuity.
※ The range of the zones may change in line with changes in the concentration of urban functions and social changes.
Establishment of 7 strategies, 30 policy directions, and 80 measures that are cross-sectoral

Strategy 01: Create hubs full of vitality that generate sustainable growth

Strategy 02: Achieve flexible, unrestricted Exchange of people, goods, and information

Strategy 03: Build a city that addresses the risk of natural disasters and environmental issues

Strategy 04: Build a supportive and comfortable environment for all

Strategy 05: Realize highly convenient lifestyles and create diverse communities

Strategy 06: Build a city with a network of beautiful seasonal greenery and water

Strategy 07: Create new appeal through the arts, culture, and sports
Future Images

Global business activities are conducted in the central part of the special-ward area.

On Tokyo's islands, many people enjoy local “treasures” that have been refined.

Young foreign students and researchers gather to create innovations in the Tama area.

Waterfront at night offers opportunities to enjoy Tokyo's unique charms.
Challenge of urban development

- By implementing concrete efforts across sectors, we will realize the intended city image.
- Clearly define a positive attitude towards the challenge of urban development and present the future situation for which the city should aim.

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<th>City rankings of the world</th>
<th>Secure Tokyo’s No. 1 position</th>
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<td>Peak congestion of roads and railroads</td>
<td>Resolve congestion</td>
</tr>
<tr>
<td>Dense wooden housing area 13,000ha</td>
<td>No wide-area fires</td>
</tr>
<tr>
<td>No-electric poles in Tokyo</td>
<td>Removal of utility poles</td>
</tr>
<tr>
<td>Life satisfaction level of Tokyo citizens</td>
<td>70% or more</td>
</tr>
<tr>
<td>Public transport blank areas</td>
<td>Resolved</td>
</tr>
<tr>
<td>Total amount of greenery</td>
<td>Do not reduce</td>
</tr>
<tr>
<td>Citizen sports implementation rate</td>
<td>70% or more</td>
</tr>
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Seven strategies for urban development
Strategy 1: Create hubs full of vitality that generate sustainable growth

Concentration of universities and research facilities

Continue to be an international business city that leads the world

Tama area creates innovation

Characteristic, diverse hubs and neighborhoods are new urban attractions

Sustainable growth of business hubs
We will advance vibrant urban development to support Tokyo’s growth.

1. Ikebukuro
Vibrant international center that draws on its rich base of arts and culture

2. Shinjuku
Center of exchange that leads Tokyo’s development with various functions such as business, exchange, and tourism

3. Kita-Aoyama 3-Chome
Trendsetting center for culture and fashion

4. Takeshiba
Business center that builds on the strengths of the private sector and contributes to greater global competitiveness

5. Shibuya
Center setting trends for lifestyle culture

6. Toranomon
Transportation hub connected to airports and the waterfront area

7. Shinagawa
New international center

8. Nihombashi
International financial and business center that comes with hotels and residences

9. Otemachi
Hub for international business and new industry creation / Elegant cityscape

10. Yaesu
Vacant site formerly used by Haneda Airport
Otemachi – Marunouchi - Yurakucho

District area 120 ha
Working population 230,000 people
Site area 66 ha
Building total floor area 678 ha
Number of buildings 107 buildings
(Including the planning construction)
Shibuya
Shinagawa

New Station (Yamanote Line) Scheduled to open in 2020

Linear Chuo Shinkansen (Maglev Train)

Tokyo-Osaka 1hr./438km (scheduled to open in 2037)
Tokyo-Nagoya 40min./286km (scheduled to open in 2027)

← Tamachi Station

New Station (Yamanote Line)

Planned Skyscraper Site

Shinagawa Station
Toranomon

Toranomon Hills

Ring Road No.2

HOTEL
(47F - 52F)

RESIDENCE
(37F - 46F)

OFFICE
(6F - 35F)

FORUM
(4F - 5F)

SHOPS AND RESTAURANTS
(1F - 4F)

Road zone

BRT : Bus Rapid Transit

New Bus Terminal

New Station (Subway)
Shinjuku

- Nishi-Sinjuku is the site of a former water purification plant
Strategy 2: Achieve flexible, unrestricted exchange of people, goods, and information

Further enhancing the functions of Haneda Airport

- 1964: Runway C completed
- 1978: Narita Airport opened (Haneda became a domestic airport.)
- 2000: Expansion using new landfill
- 2010: Runway D completed
  <Haneda resumed handling international flights.>

Functions to be further enhanced by 2020
Development of the Three Ring Expressways

- About 79% has been completed (as of February, 2017)
- About 90% of the Three Ring Expressways is scheduled to be opened by fiscal year 2020.
Remake road spaces to create more comfort and vitality

- **Build a road network for smoother traffic**

  Remake road spaces to maximize the effects of construction of the three ring expressways and other developments, and which consider future changes in traffic volume, to generate new added value such as comfort and vitality.
Development of Road Network (City-Planned Roads)
Many train lines have been constructed by private companies.
• In most parts of central Tokyo, it takes 10 minutes or less to get to the nearest railway station.

### Railways

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<thead>
<tr>
<th></th>
<th>35</th>
<th>23</th>
<th>14</th>
<th>12</th>
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<tbody>
<tr>
<td>Tokyo 23 wards</td>
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<td>Greater London</td>
<td>12</td>
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<td>10</td>
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<td>8</td>
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<tr>
<td>New York</td>
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<tr>
<td>Beijing</td>
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- **Within 5 min. access to the nearest train station** (radius: 400 meters)
- **Within 10 min. access to the nearest station** (radius: 800 meters)
Rail Network

- Upgrading facilities for safety and convenience

Installation of platform screen doors

Installation of elevators, etc.

Installation of universal-access toilets

Improvement and renewal of stations

Kachidoki station (Oedo line)
- Expand concourse
- Construct new platform
- Build new entrance/exit

Shibuya station (Ginza line)
Using rail stock as a key, create a town where anybody can move around easily

- Make Metro stations the face of the city
  Outfit stations with sunken gardens, introduce various functions reflecting local needs, and create a convenient and lively space.

- Complete feeder routes to make life more convenient
  By maximizing the use of rail networks, as well as combining leading-edge technology with various transport modes make a transport environment where anybody using stations as a central point can move easily

例：前地下駅前の広場（中央区京橋東京スクウェアガーデン）

例：運行ルート（バス、自転車等）を示す人々の流れ
Strategy 3: Build a city that addresses the risk of natural disasters and environmental issues

Build a city resistant to disaster by contemplating various possible forms of damage

- **Form a city that won’t burn or collapse**
  Along with maintaining important disaster-prevention routes
  Facilitate fire-resistant building upgrades along corridors to create fire breaks.

- **Revitalize the cityscape unique to Tokyo**
  While maintaining the allure of alleyways and wooden architecture, encourage fire-proofing and earthquake-safe buildings.

- **Guarantee the continued appeal of communities at new locations**
  Accelerate the improvement of dense wooden-housing districts, and ensure the appeal of new living locations for residents.

＜Image of appealing new residence＞
Residences

- Many old wooden houses still exist and many people live in them comfortably. → Close-set wooden housing areas are at risk of suffering major damage such as outbreaks of fire.

Large fire in Itoigawa (Niigata pref.) at Dec. 2016
Residences

- Fire resistant

There are about 16,000ha close-set wooden housing areas in Tokyo. 7,000ha of them are designated as development districts.
Decrease the entire city’s energy burden

- **Restrain CO₂ emissions while accumulating urban facilities**

  Promote Zero Energy Buildings (ZEB) and Energy-efficient buildings, while converting various types of useful buildings and adapting the energy for districts and neighborhood plots.

  <Image of area-wide energy usage implementation>

Through coordination with AEMS, wide-area information is shared.

Ensure space for future installation of piping

AEMS

- BEMS coordination within the area
- Promote the mixed-use of land for energy-efficiency within each block.
- Area management that improves vitality and reduces the environmental burden

BEMS

Improve the energy conservation performance of buildings

Maintain the supply of energy even during power outages, and ensure the ability to continue business services during a disaster.

AEMS: A system that manages the energy of several buildings by utilizing ICT.

BEMS: Equipment that plans the optimum energy use for specific buildings.

Applications for waste-heat from incinerators and for energy that hasn’t yet been used
Leading the World in Energy Efficiency

The rise of energy utilization efficiency and the fall of overall energy consumption

- Promote energy saving and low carbon emitting buildings.
- Reducing CO2 emissions by 62% from the 1990 level.
Strategy 4: Build a supportive and comfortable environment for all

Prepare an environment where senior citizens and people with disabilities can feel fulfilled and children can grow strong and healthy.

• Realization of rich lives

Create a society where everyone can lead vibrant lives, can choose where to live according to their life stage and individual attributes, and live with a sense of purpose.

<Example of a housing complex where generations from children to the elderly can interact>
Image of Upgrading Large-scale Multi-unit Apartments while enhancing Urban Functions

- Use the site for reconstructing public housing, while promoting the formation of a green network.
- Using universal design, create safe and comfortable walking spaces.
- Prepare disaster prevention storehouses and private power generation equipment to support the community’s self-reliance during a disaster.
- Support the living of the elderly through shopping delivery services.
- Utilize the created site for introducing support facilities for child rearing.
- Maintain spaces that can be used by the community in both peaceful times and times of disaster.
- Facilitate local access to stations and surrounding area by community buses and share-cycles.

Through area management, implement lively development and environmental reform.

Introduce medical, welfare, and nursing facilities to the upgraded site, and implement a local full-coverage care system.
Residences

- Revitalizing large-scale residential developments

Before

![Before Image](image1.png)

After

1. Shared flats
2. Flats with small farm
3. Flats for elderly with health and welfare services

![After Images](image2.png)
Strategy 5: Realize highly convenient lifestyles and create diverse communities

Raise a local area’s added values by renewing vacant houses and vacant land.

- Make use of vacant houses to create exchanges among people
  Utilize vacant houses for community purposes. At the same time, dispose of old vacant houses and advance the creation of spaces that contribute to community revitalization.

© Image of vacant houses converted into local community facilities, etc. © A warehouse renovated into a cafe

Community facility
Open space
Daycare center
Strategy 6: Build a city with a network of beautiful seasonal greenery and water

A major principle is to not reduce Tokyo’s total amount of greenery

- Protect precious greenery and balance active urban life with a rich ecosystem
- Nurture urban agriculture which is a valuable part of industry and invigorates the community
- Create urban spaces where people can enjoy the water

Preserving and regenerating high quality greenery

Yokosawairi Satoyama Nature Reserve

Branding of local Tokyo vegetables

Harvesting experience

Creating vitality in waterfront areas

Tennozu, Shinagawa-ku
Utilize parks and surrounding public space for cultural events

Maintain the quality and quantity of greenery and water

Use earnings from special exceptions to regulations for outdoor advertisements for area management activities

Promote the greening of private land that faces the park, as well as plan and manage an integrated green space.

In cooperation with surrounding urban development, improve walkability

Create lively open cafes facing the park

Improve disaster prevention with such things as fire prevention water tanks, emergency stores warehouses

Using public spaces like parks, introduce activities that create lively bustle

Improve the greening of private land that faces the park, as well as plan and manage an integrated green space.
Greenery

Roppongi Hills

Green Area
16,500m² → 26,000m²
Strategy 7: Create new appeal through the arts, culture, and sports

Use local history, tradition and culture for town development

- Can sense Tokyo’s history and culture everywhere in the town

Through utilization of development opportunities and others, steer efforts for preservation and protection of historical buildings, civil engineering heritages, Edo culture, and high quality architectural design.

＜Building a cultural facility using the opportunity presented by a development project＞
GINZA SIX Noh Theater

＜Lighting-up of a historical building＞
Restoring Historical Elements

Coredo Muromachi/Fukutoku Shrine (Nihonbashi, Chuo-ward)

Mitsubishi-ichigokan Bldg.

Tokyo Station
Create Bustling Spaces for Culture and the Arts in the City Center

• Public space is used for Cultural and Arts activities

Maintain a structure where area management organizations can utilize pedestrian and public spaces as lively cultural/arts areas.

＜Example of events in public spaces＞

Chiyoda-ku, Marunouchi Nakadori  Ota-ku Sakasagawa Dori
Athletes Village after Tokyo 2020 (Image)

**Waterfront Scenery and Harmony**
- Improved line of sight and flow of movement from inner city areas out towards the water.
- The nice skyline of a residential district visible from sea.
- Combining seamlessly the residential land with surrounding greenery and wide spaces.

**Liberal Wide-open Spaces**
- Walking paths where you can enjoy waterfront scenery (Rainbow Bridge, etc)
- Cafes set up near the ocean

**A Transformed Townscape**
- Gentle change in colour (Low-rise to High-rise)
- Wall-surface design scheme (Uneven, rugged outside surface)
VI. Individual vision for each area

For Tokyo to achieve further high quality growth, it is crucial that each hub and region use its individuality and potential to the fullest, and compete with each other to create new value.

To realize the new urban vision, various parties, including Tokyo’s residents, municipalities, and private developers, must cooperate to promote attractive urban development and enhance the vitality of Tokyo as a whole.

Here we presented a glimpse of our future vision for Tokyo’s hubs and areas, including:

- Hubs where central functions that support the economy, industry, and others are concentrated
- Hubs serving as the center of people’s lives and exchange
- Areas with historical townscapes and facilities for the arts and culture
- Areas with waterfronts, greenery, and open agricultural land
Toward Realization of the Vision for the 2040s

- Urban development through the participation and collaboration of various parties.
  - In close cooperation with stakeholders, residents, business people, and municipalities, promote urban development leading towards the future vision sought

- Policy-guided urban development
  - Promote the early settlement and reform of specific plans and various policies, such as reform of 「Plan for Development, Preservation, and Maintaining Town Planning Zones」 and 「Plan for the use of committees for urban development」

- Project-style urban development
  - Strive for the best policy with joint-ownership and cooperation by stakeholders, including multi-faceted themes that are able to come to a solution.

- Leave a legacy to the next generation
  - Steadily strive for that which should be achieved and realize a 「Advanced mature city with vitality and comfort」 while reliably handing over our future to the next generation.
The Grand Design for Urban Development is announced on the website of the Tokyo Metropolitan Government.

http://www.toshiseibi.metro.tokyo.jp/keikaku_chousa_singikai/keikaku.html

Thank you for your attention.