Recent Urban Development in Tokyo

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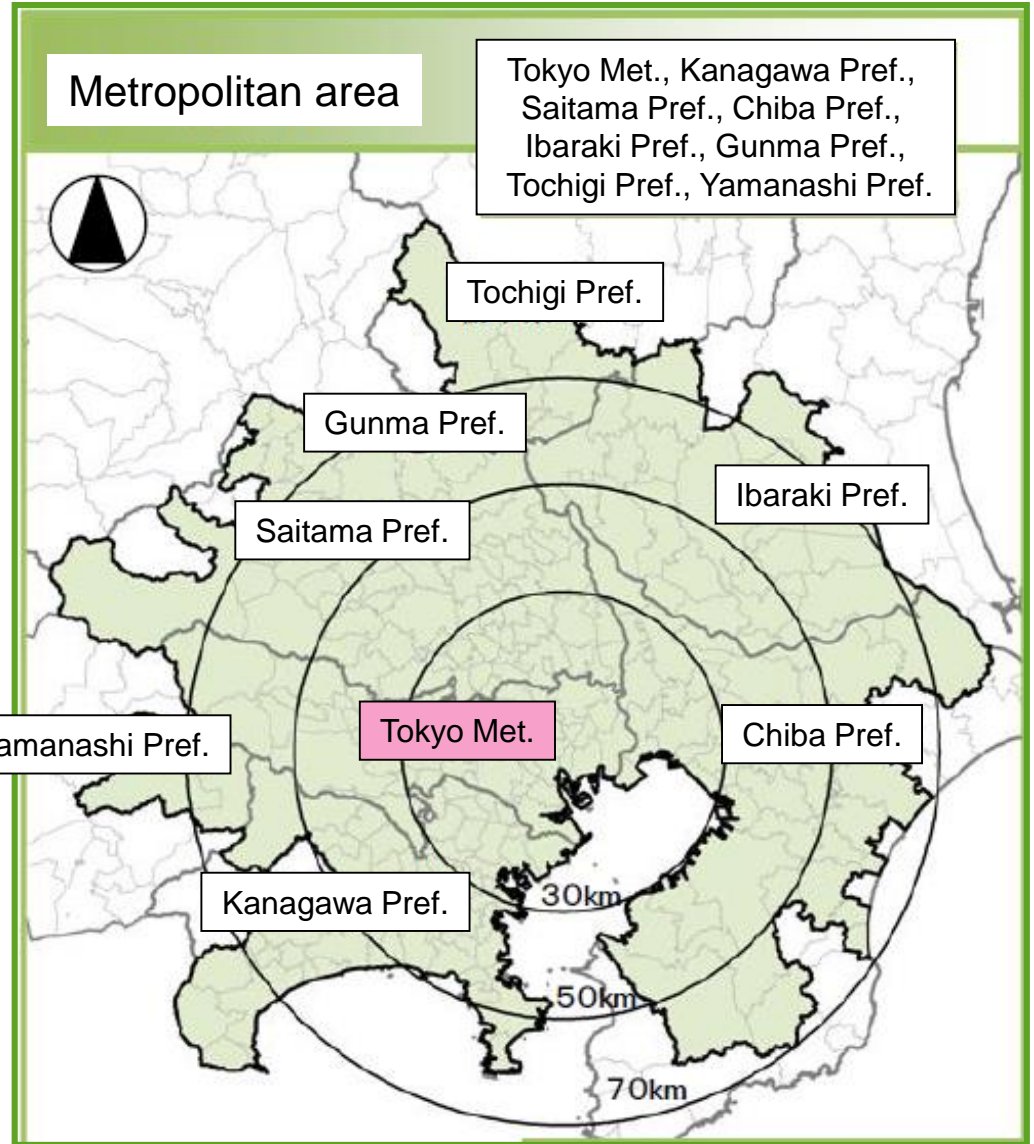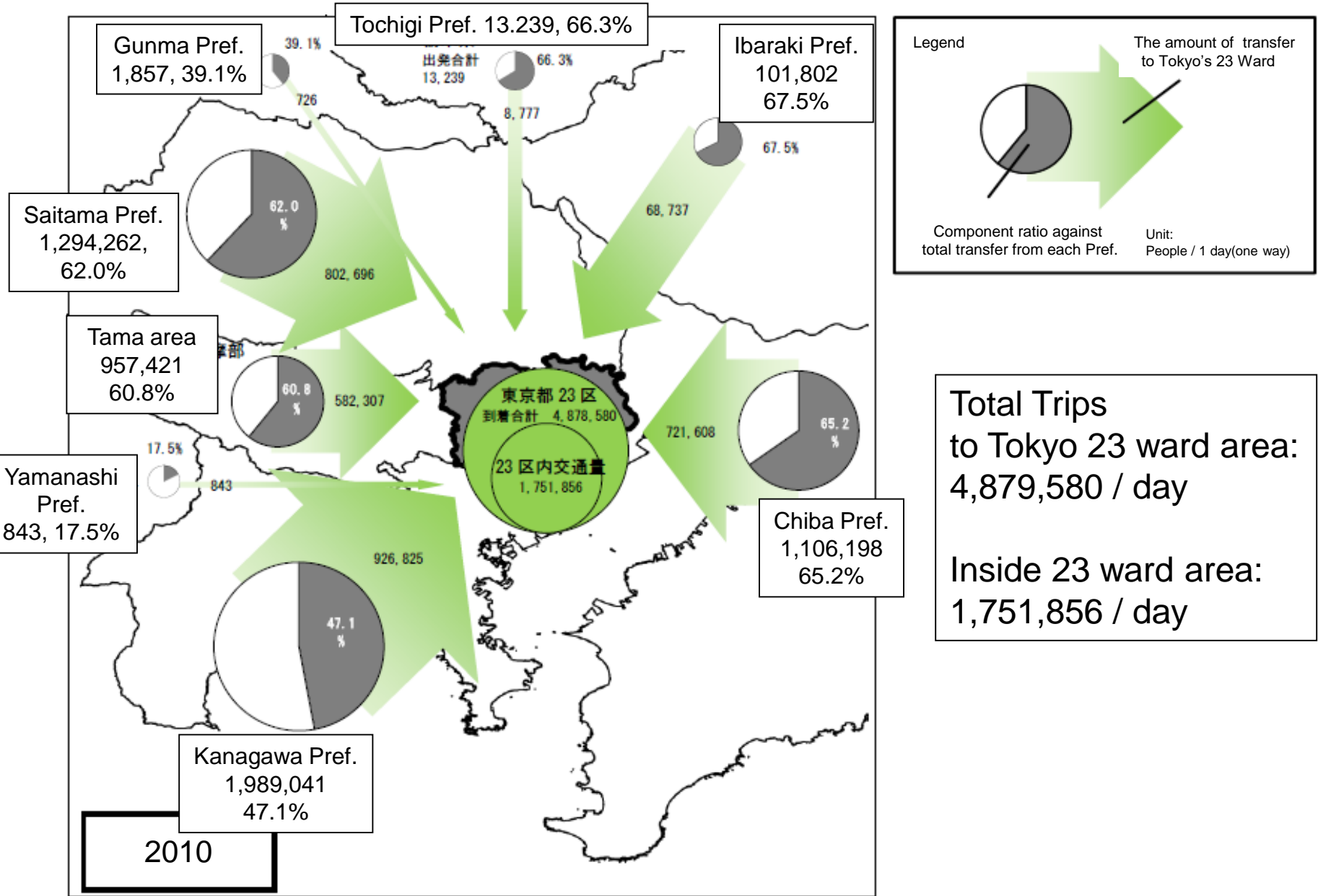 - University of Tsukuba, Japan

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  - Location and Metropolitan area
  - Urban Zones in Tokyo

- **Urban Issues of Tokyo**
  - Aging and Shrinking population
  - Disaster Prevention
  - International Competition & Olympic Game 2020
  - Energy and Environment

Location of Tokyo

Metropolitan area

Tokyo Met., Kanagawa Pref., Saitama Pref., Chiba Pref., Ibaraki Pref., Gunma Pref., Tochigi Pref., Yamanashi Pref.

Tochigi Pref.

Gunma Pref.

Ibaraki Pref.

Saitama Pref.

Yamanashi Pref.

Tokyo Met.

Chiba Pref.

Kanagawa Pref.

30km

50km

70km

Urban Structure of Tokyo

Gunma Pref.
1,857, 39.1%

Tochigi Pref. 13.239, 66.3%

Ibaraki Pref.
101,802
67.5%

Saitama Pref.
1,294,262,
62.0%

Tama area
957,421
60.8%

Yamanashi Pref.
843, 17.5%

Kanagawa Pref.
1,989,041
47.1%

Chiba Pref.
1,106,198
65.2%

2010

Legend

The amount of transfer to Tokyo's 23 Ward

Component ratio against total transfer from each Pref.
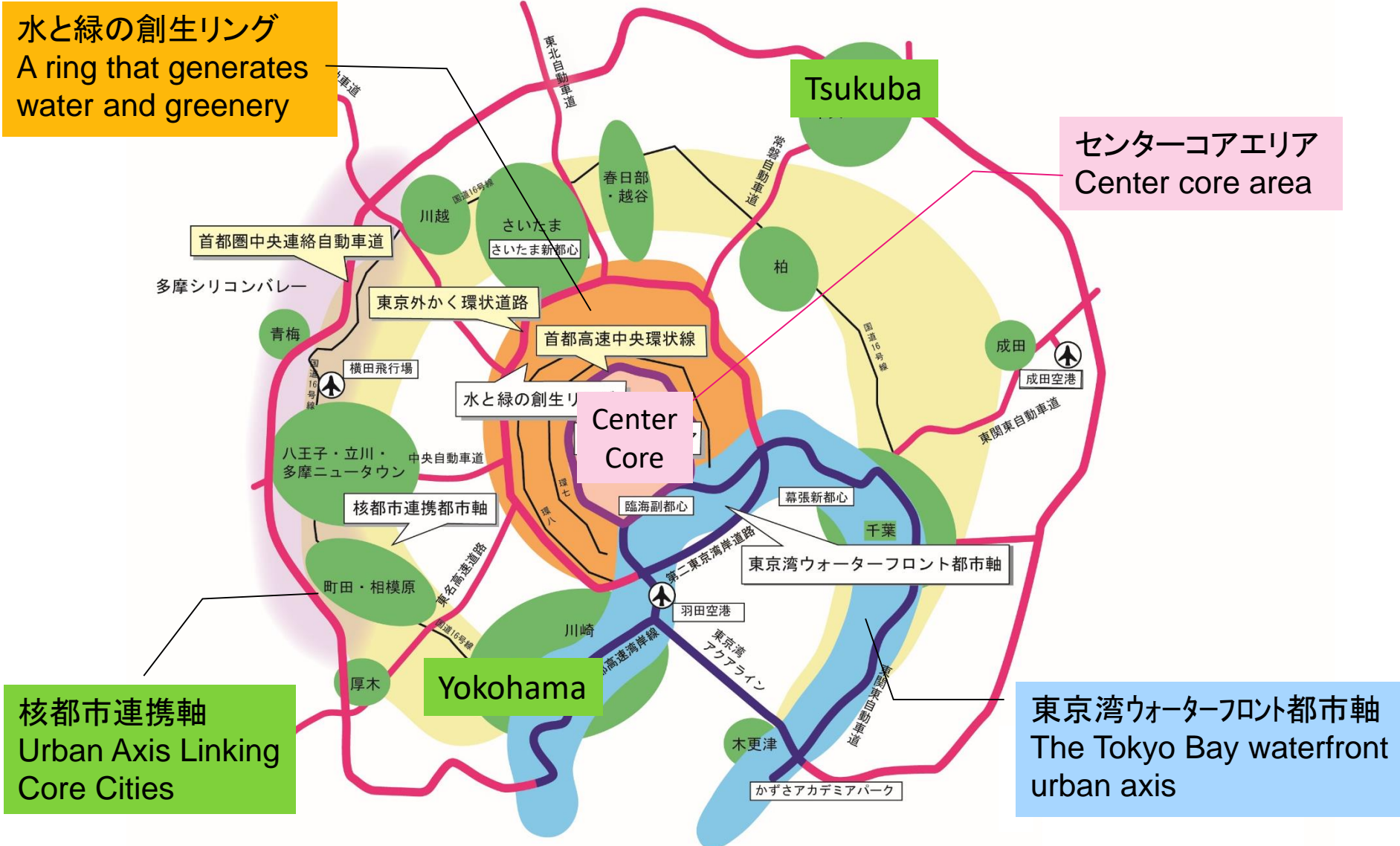
Unit: People / 1 day(one way)

Total Trips
to Tokyo 23 ward area:
4,879,580 / day

Inside 23 ward area:
1,751,856 / day

Urban Structure of Tokyo
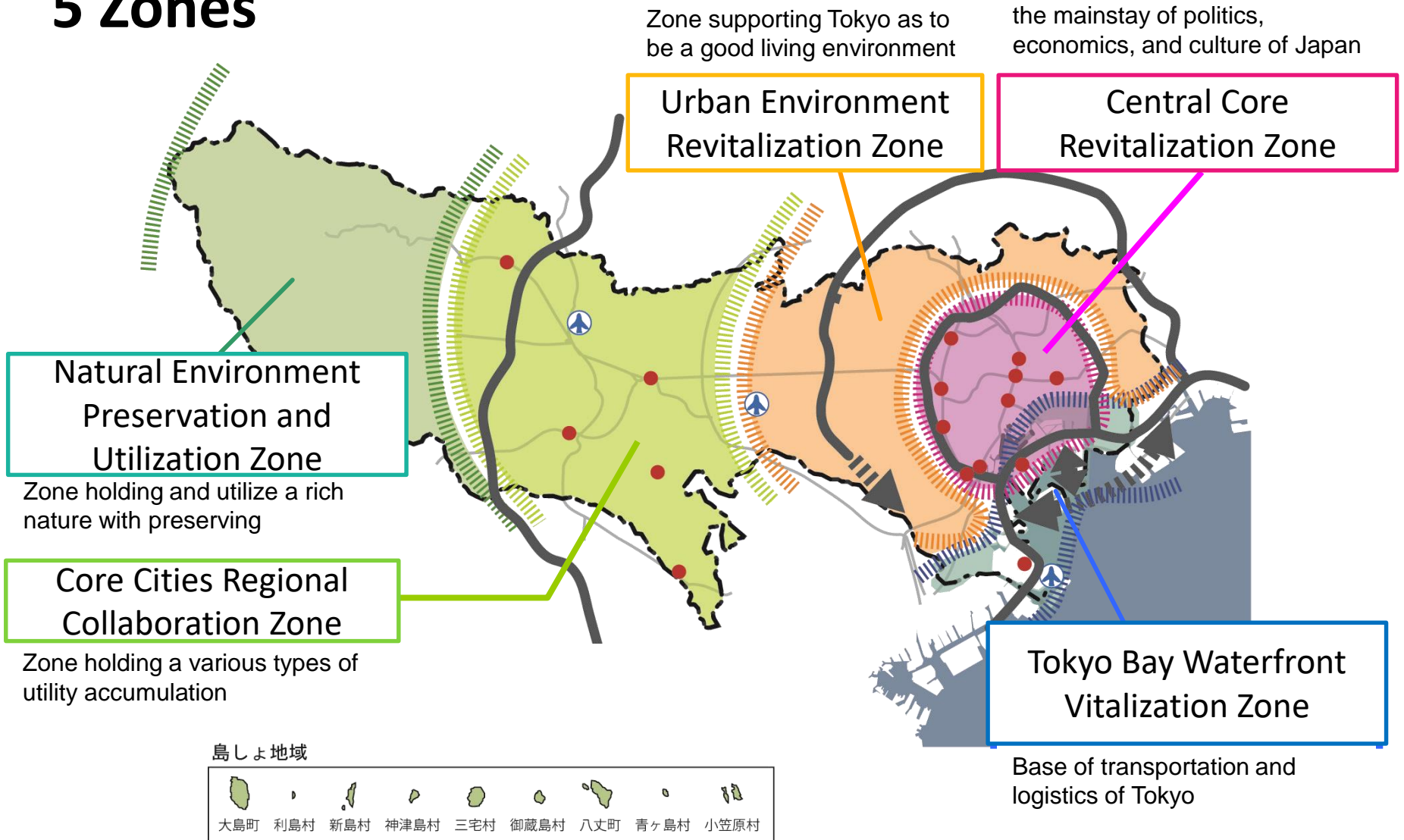
"Circular Megalopolis Structure" 環状メガロポリス構造

水と緑の創生リング
A ring that generates water and greenery

センターコアエリア
Center core area

核都市連携軸
Urban Axis Linking Core Cities

東京湾ウォーターフロント都市軸
The Tokyo Bay waterfront urban axis

Administrative Areas of Tokyo Met.

GDP : 92 trillion Yen
18% of Japan
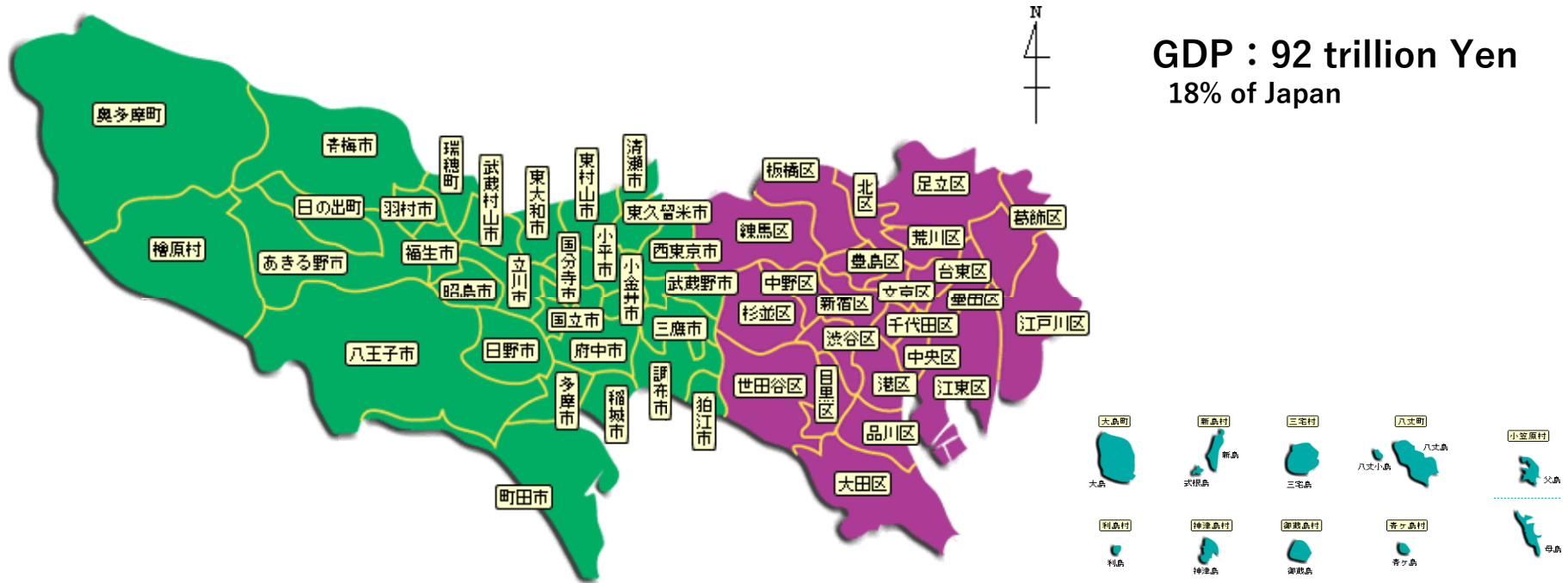
	Area（km²）	Population	Density (persons/km²)
23 Special wards	617	8,950,000	14,498
26 cities, 3 towns and 1 village in Tama area	1,160	4,190,000	3,608
2 towns and 7villages in islands	401	27,815	69
Total	2,178 0.6% of Japan	13,160,000 10% of Japan	6,042

Date : 1/Oct/2012

Urban Development Strategies by 5 Zones

5 Zones

Zone supporting Tokyo as to be a good living environment

the mainstay of politics, economics, and culture of Japan

Urban Environment Revitalization Zone

Central Core Revitalization Zone

Natural Environment Preservation and Utilization Zone

Zone holding and utilize a rich nature with preserving

Core Cities Regional Collaboration Zone

Zone holding a various types of utility accumulation

Tokyo Bay Waterfront Vitalization Zone

Base of transportation and logistics of Tokyo

島しょ地域

| 大島町 | 利島村 | 新島村 | 神津島村 | 三宅村 | 御蔵島村 | 八丈町 | 青ヶ島村 | 小笠原村 |

Urban Development Strategies by 5 Zones

Central Core Revitalization Zone

◯strengthening of functions of international business center

◯implementation of environmentally-friendly urban development
◯creation of the urban spaces surrounded by forests and waterfront
◯creation of the urban spaces with its history and culture
◯implementation of urban residence for enjoyment of urban life

Urban Development Strategies by 5 Zones

Tokyo Bay Waterfront Vitalization Zone

◯enhancement A Window on the World as an international city Tokyo

◯interaction among Asia and world countries
◯implementation of environmentally symbiotic urban development
◯developing accessible water front areas as "Waterfront Capital"

Urban Development Strategies by 5 Zones

Urban Environment Revitalization Zone

○development of Compact City
○promoting greenery to coincide with urban development
○formation of verdant and affluent landscape
○development of affluent residential environment
○improvement of the safety and residential environment

Core Cities Regional Collaboration Zone

○building to leading spot to develop Tama as a Vibrant city
○promotion of Establishment of New Industrial Facilities
○conservation and utilization of Green space and Farmland
○development of High quality and deliberate residential area

Natural Environment Preservation & Utilization Zone

○establishing recreational zones with rich nature across Tokyo

11

○revival of the beautiful forest with softwood and hardwood

【Ogasawara islands (World Heritage by UNESCO)】
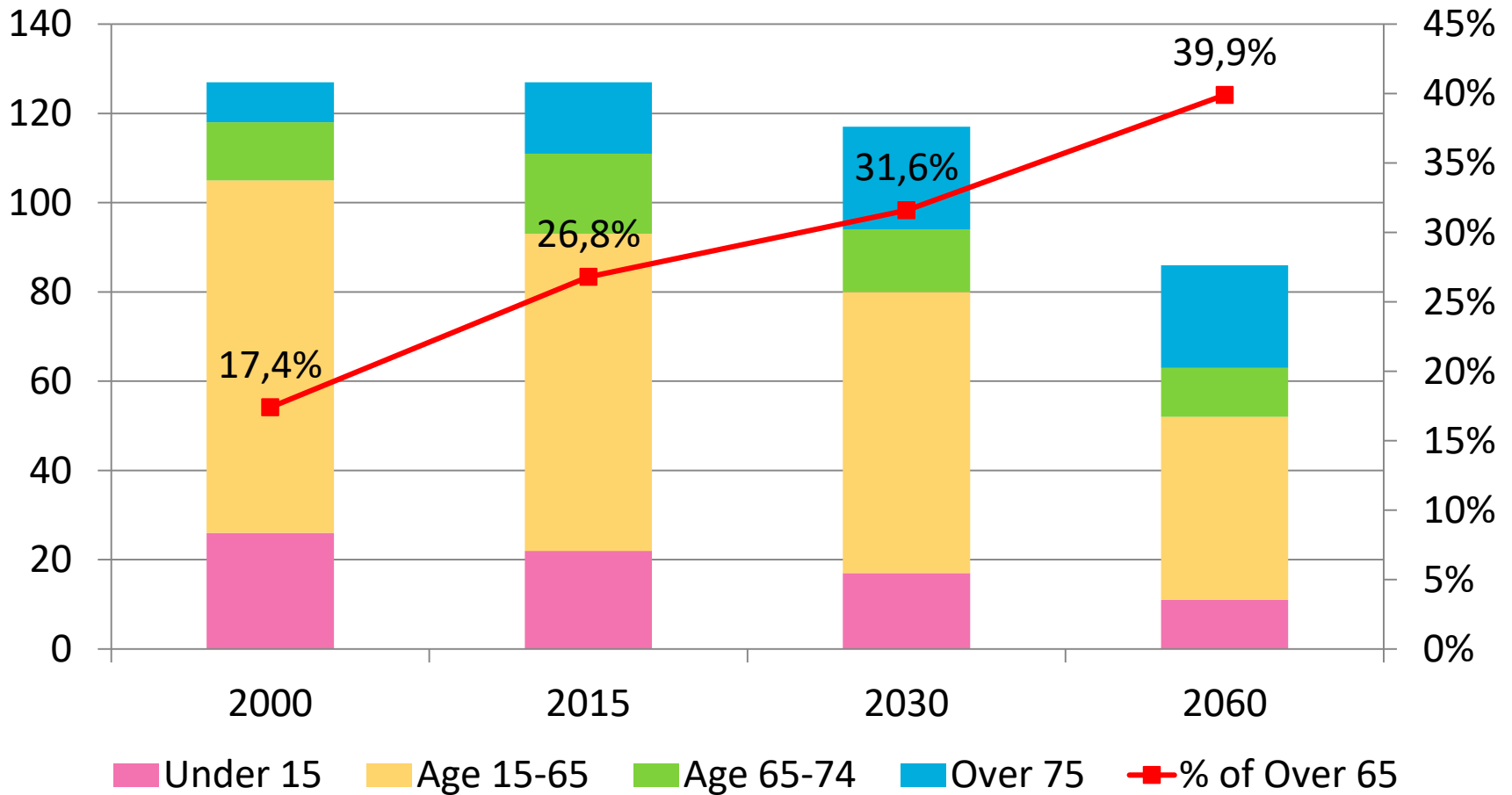
Urban Structure of Tokyo

Urban Issues in Tokyo

- **Aging and Shrinking population**
- **Disaster Prevention**
- **International Competition & Olympic Game 2020**
- **Energy and Environment**

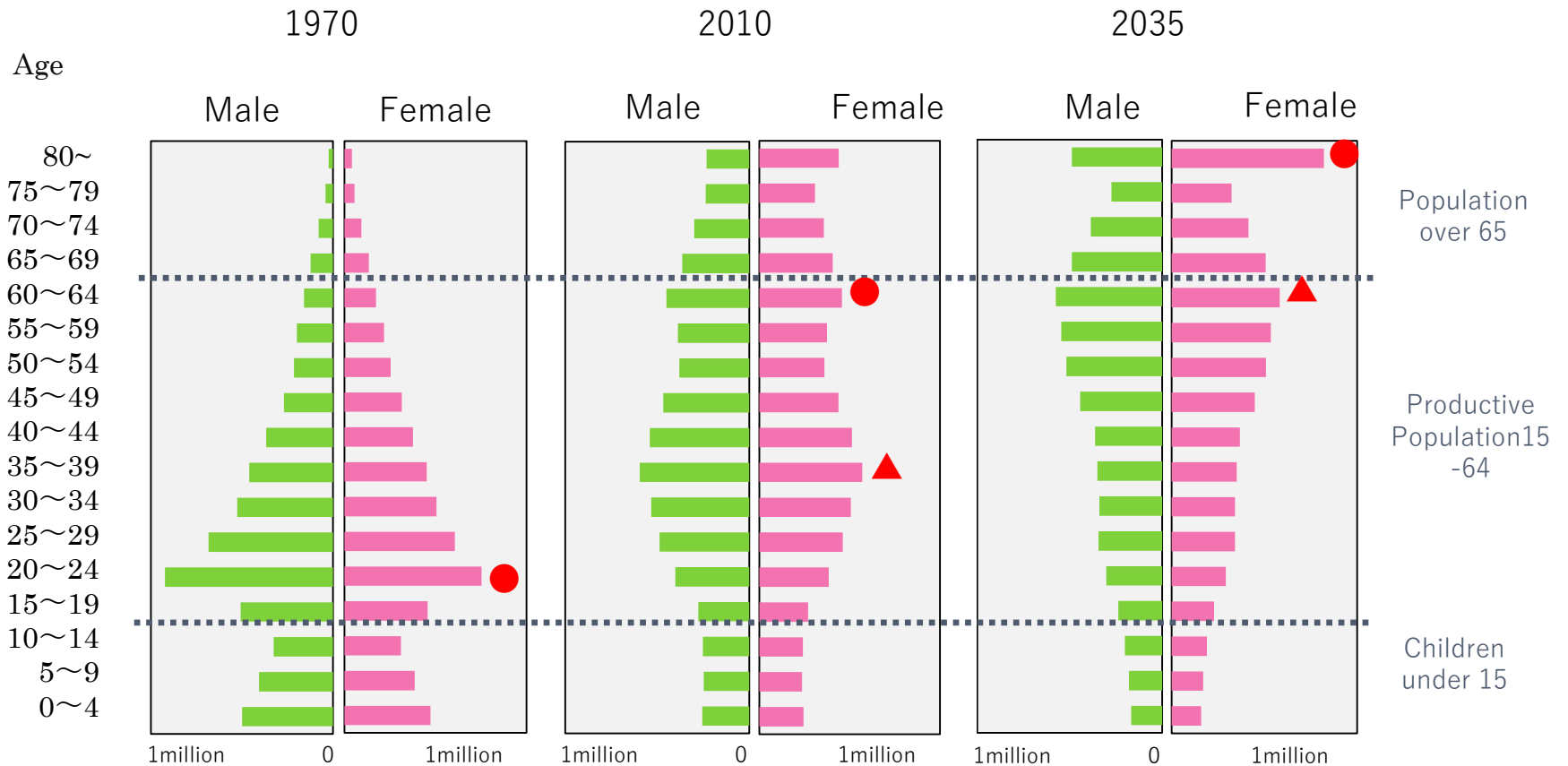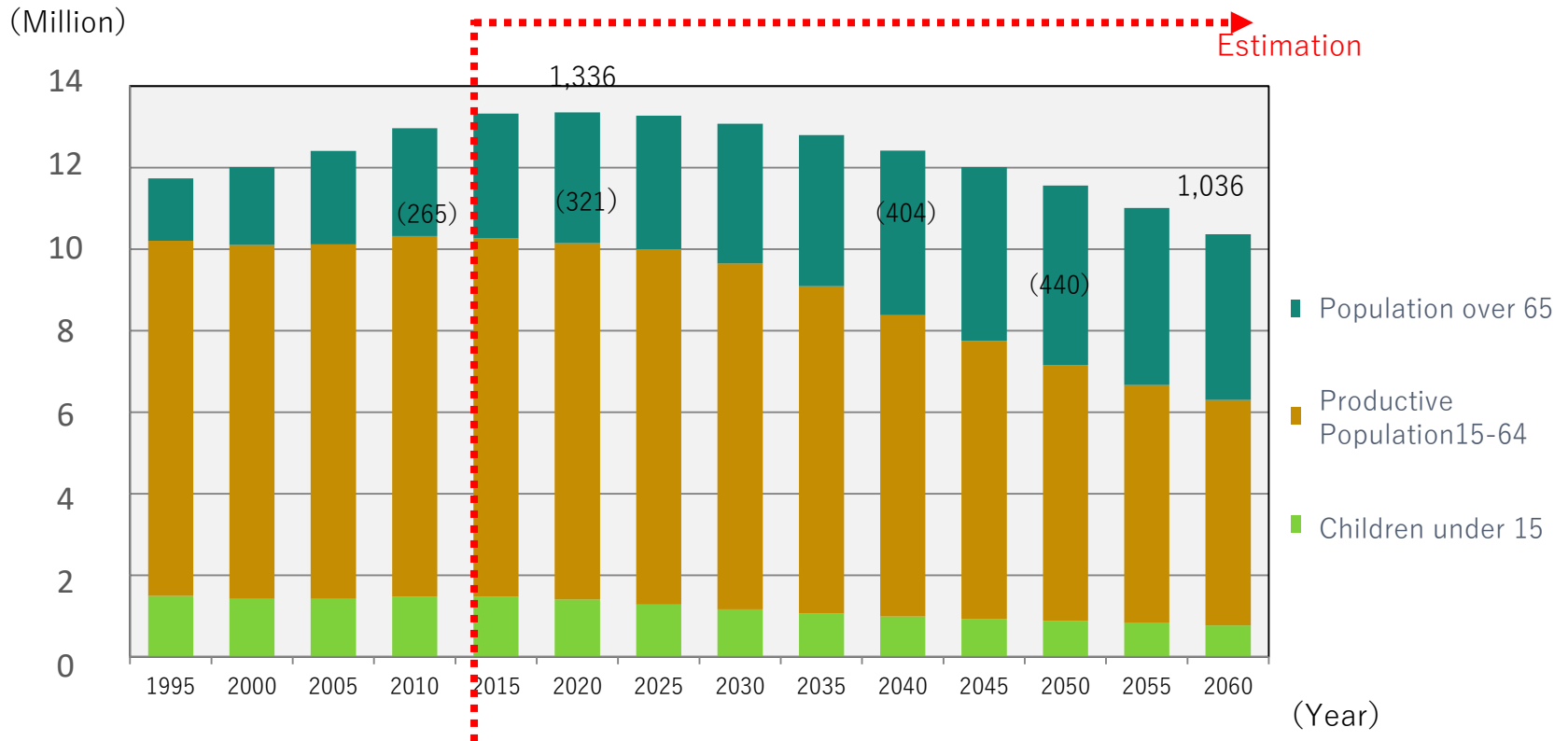# Aging and Shrinking population

Population of Japan

In millions

- Under 15
- Age 15-65
- Age 65-74
- Over 75
- % of Over 65

39,9%

31,6%

26,8%

17,4%

Aging and Shrinking population

Population of Tokyo

●:Baby-boom generation
▲:Children of Baby-boom generation

Aging and Shrinking population
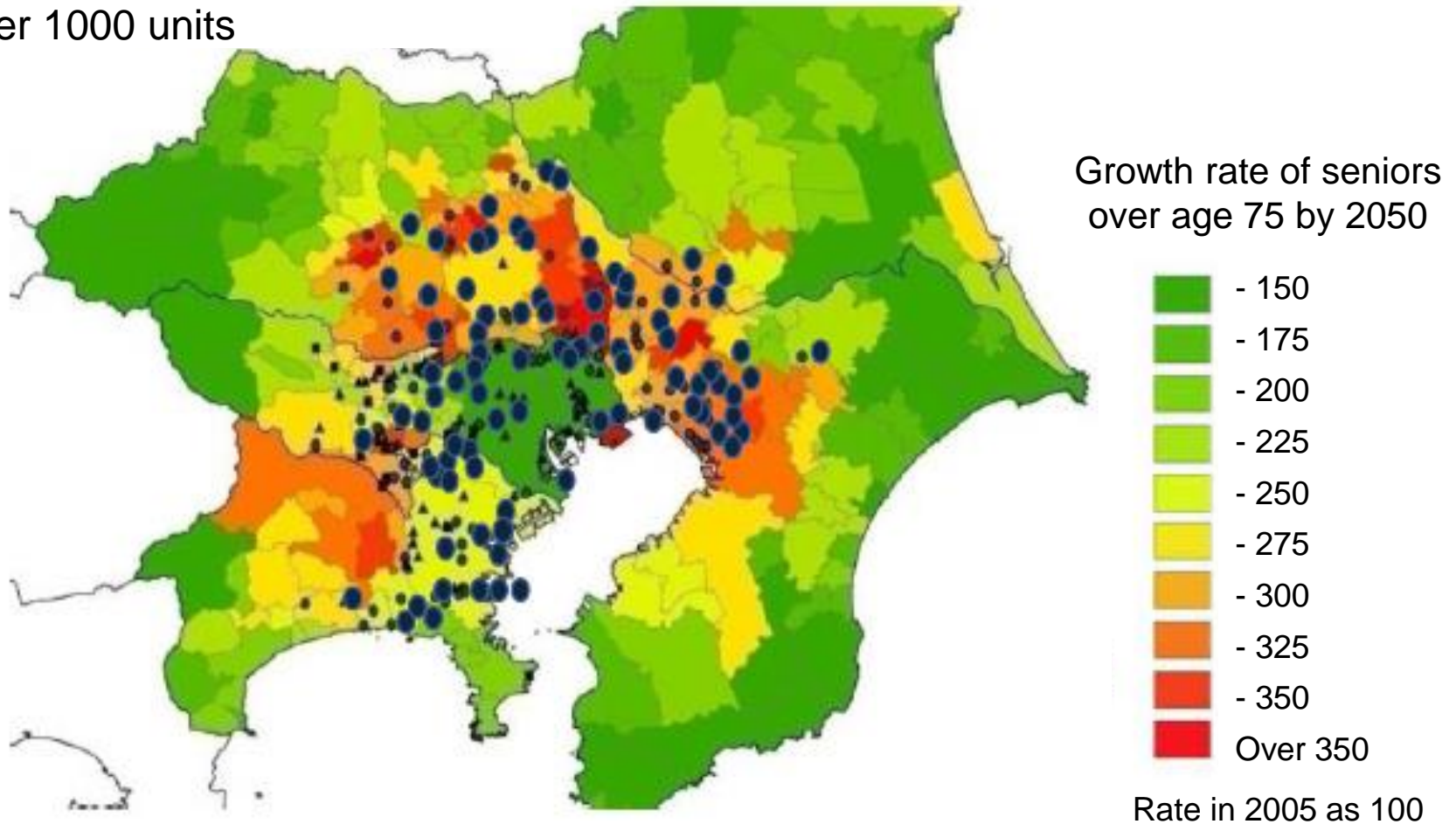
Population Estimation of Tokyo

（Million）

Estimation

14

12

10

8

6

4

2

0

1,336

（265）　（321）　　　　　　（404）

（440）

1,036

1995　2000　2005　2010　2015　2020　2025　2030　2035　2040　2045　2050　2055　2060

（Year）

■ Population over 65

Productive Population15-64

Children under 15

○ 総人口は、今後しばらくは増加を続けるものの、2020年の1,336万人をピークに減少に転じ、2060年には1,036万人となる。（2010年に比べ約２割減少）

○ 高齢者人口は、2040年には404万となる。（2010年に比べ139万人の増加）

○ 2060年には生産年齢人口1.4人で１人の高齢者を支える。（2010年には3.3人で１人）

Aging and Shrinking population

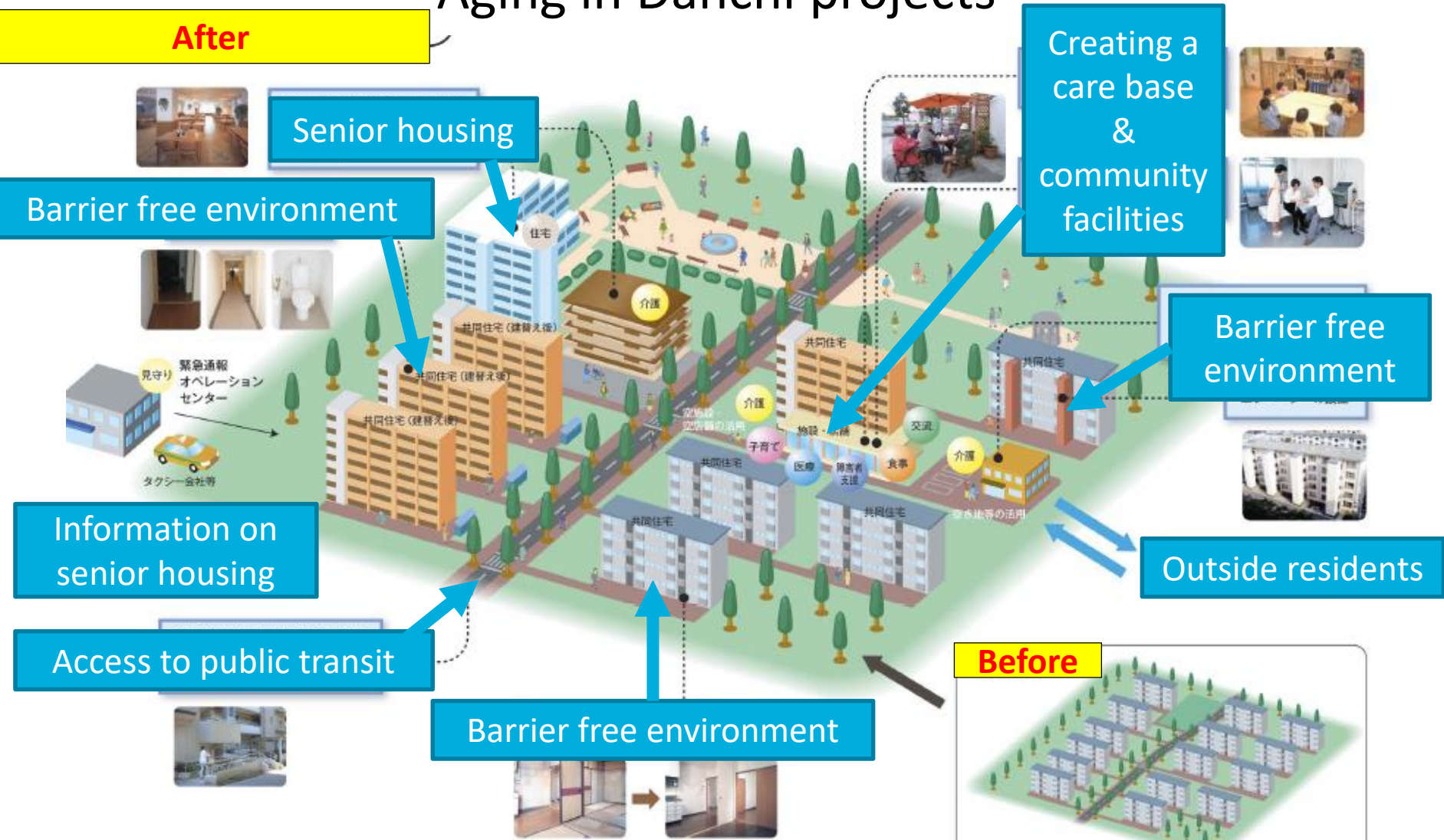## Aging in large URA public housing estates in Tokyo M. A.

● URA Public housing estates with over 1000 units

Growth rate of seniors over age 75 by 2050

- - 150
- - 175
- - 200
- - 225
- - 250
- - 275
- - 300
- - 325
- - 350
- Over 350

Rate in 2005 as 100

Aging and Shrinking population

Aging in Danchi projects

After

Senior housing

Barrier free environment

Creating a care base & community facilities

Barrier free environment

Information on senior housing

Access to public transit

Outside residents

Before

Barrier free environment

creating senior-friendly housing by revitalization

Urban Issues in Tokyo

- **Aging and Shrinking population**
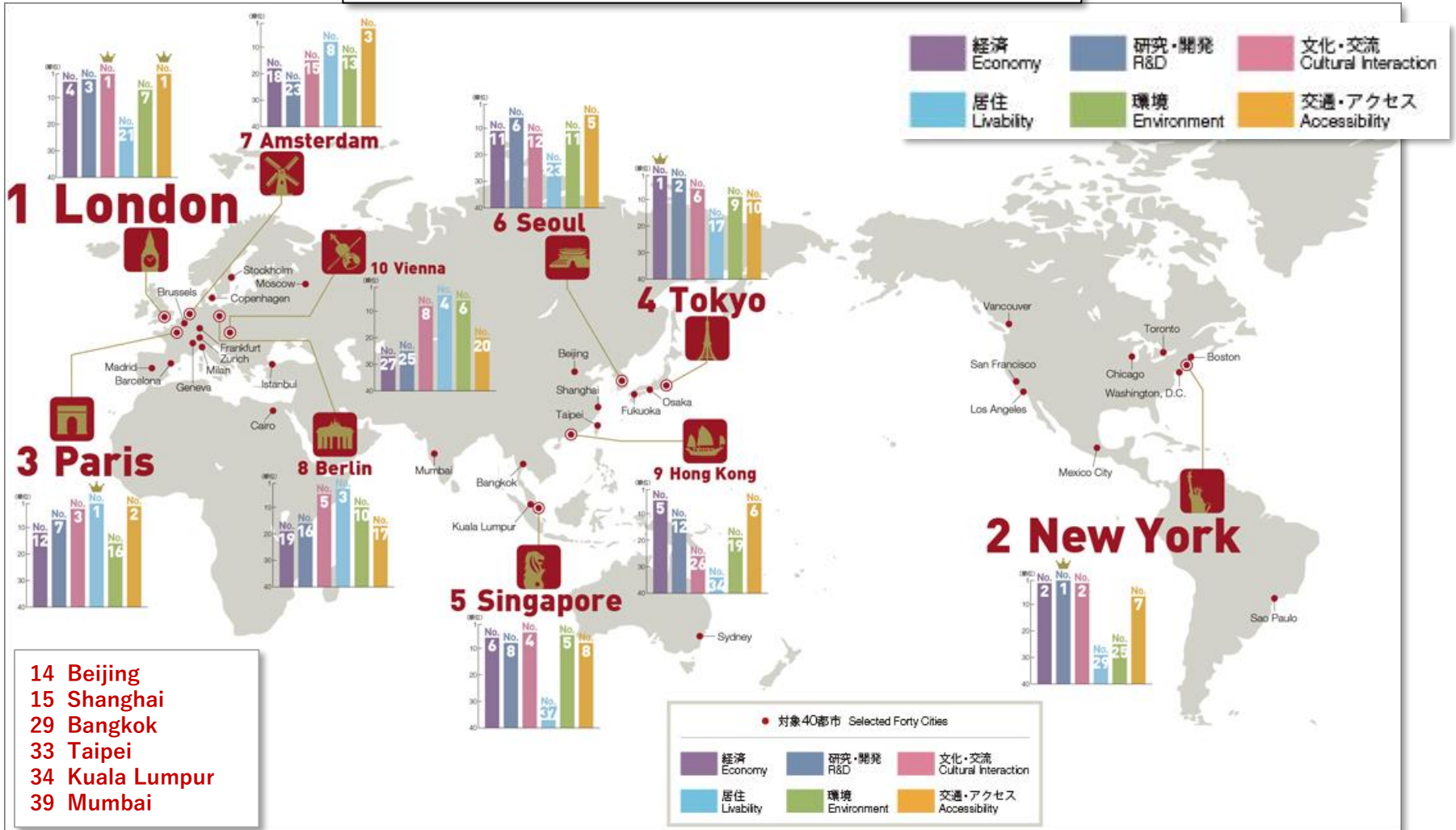- **Disaster Prevention**
- **International Competition & Olympic Game 2020**
- **Energy and Environment**

Disaster Prevention

Earthquake center over M5.0 between 1994 and 2003

Disaster Prevention

Hazard Ranking Map
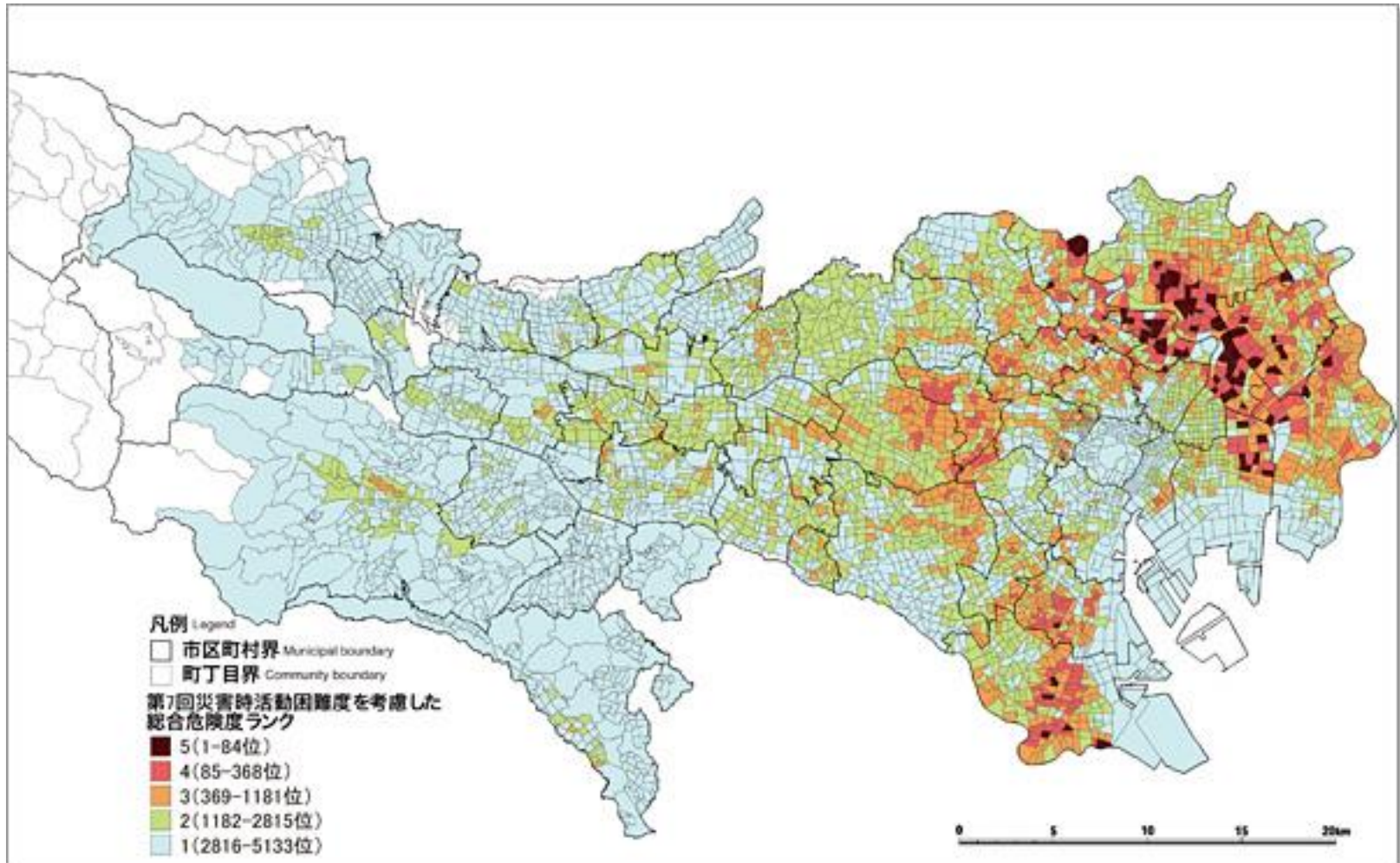
Disaster Prevention

Redevelopment in the wooden congested housing area

Before

After

Redevelopment project

Urban Issues in Tokyo

- **Aging and Shrinking population**
- **Disaster Prevention**
- **International Competition & Olympic Game 2020**
- **Energy and Environment**

International Competition

Top 10 Cities by function 2014

14 Beijing
15 Shanghai
29 Bangkok
33 Taipei
34 Kuala Lumpur
39 Mumbai

Global Power Inner City Index
The Mori Memorial Foundation 2014

Olympic Game 2020

2 Olympics in Tokyo

| 1 9 6 4	Postwar development for Tokyo to be a modernized city Urban transportation developments, such as the super express railway, monorail and highways, were accelerated by the Olympic Rapid economic growth society
2 0 2 0	Mature urban environment Revitalizing Tokyo and making a new model city for new ara

Olympic Game 2020

2 Olympics in Tokyo

○ Tokyo became a world megalopolis after the rapid growth and
   urban development after 1964 Olympic

○ Tokyo focuses on keywords: Harmony with nature, Environment friendly,
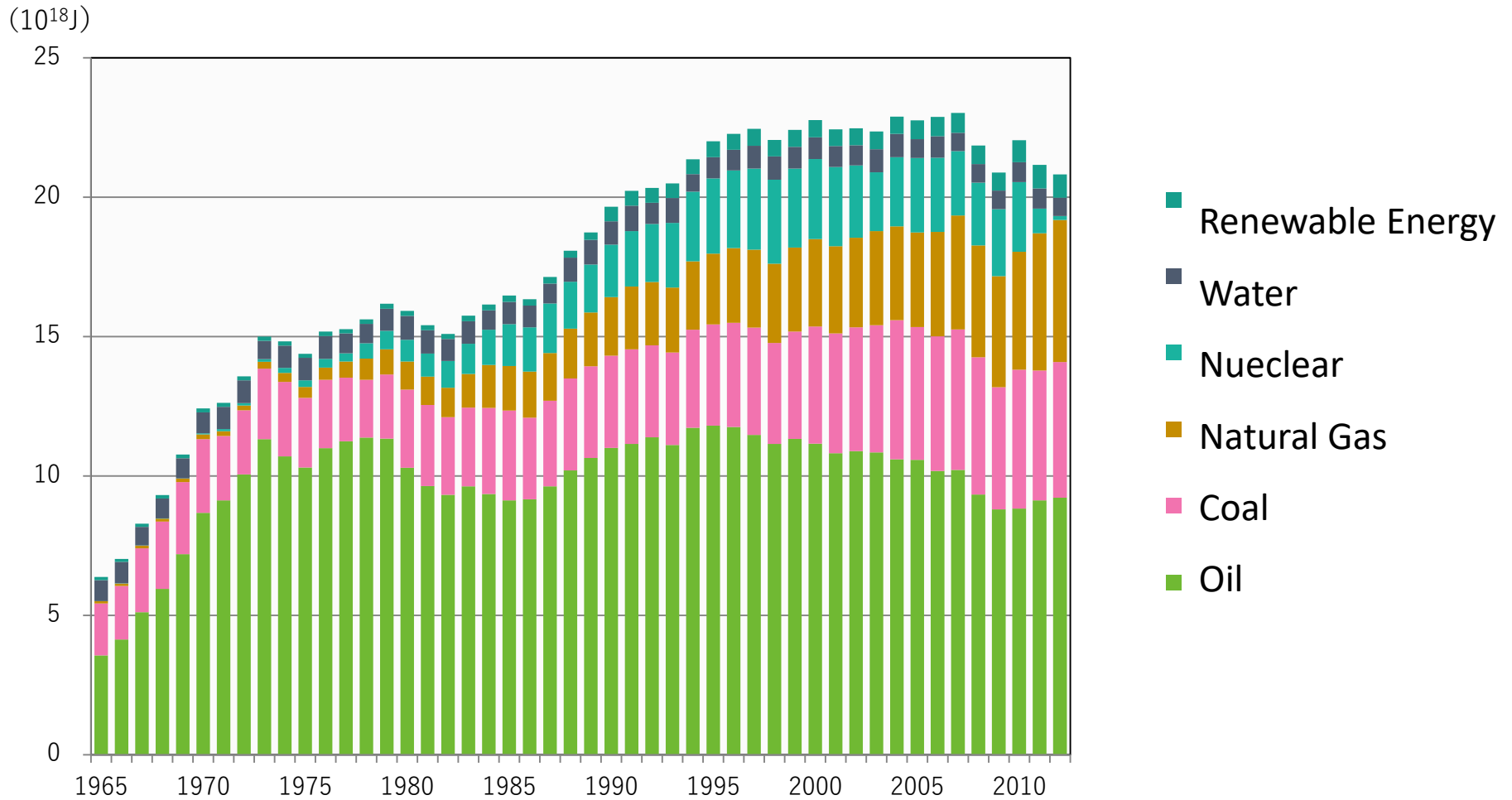   History and Culture, Livability etc

Olympic Game 2020
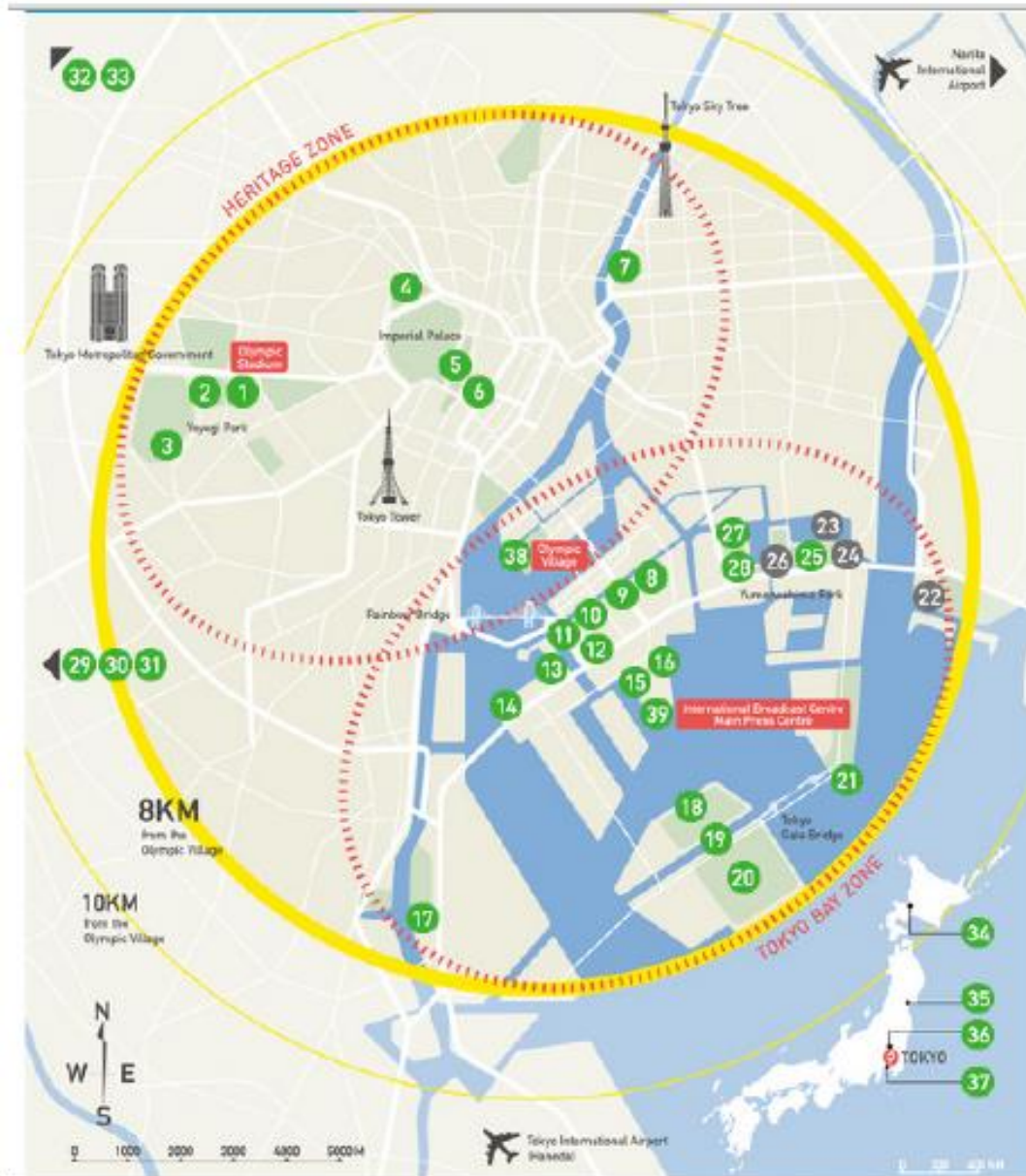
Urban Issues in Tokyo

- **Aging and Shrinking population**
- **Disaster Prevention**
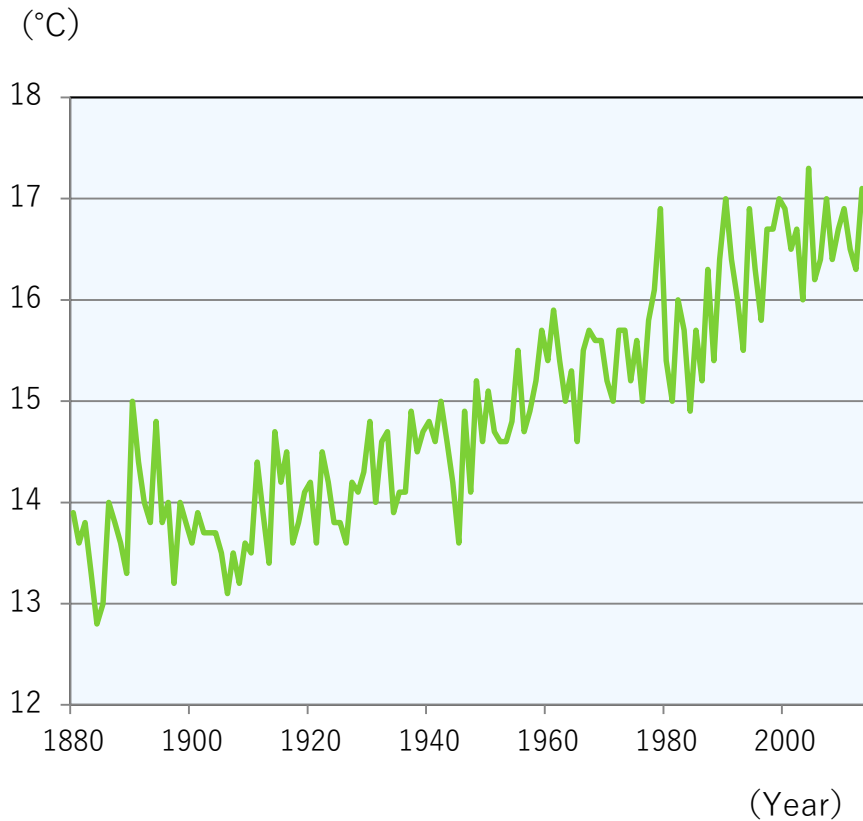- **International Competition & Olympic Game 2020**
- **Energy and Environment**
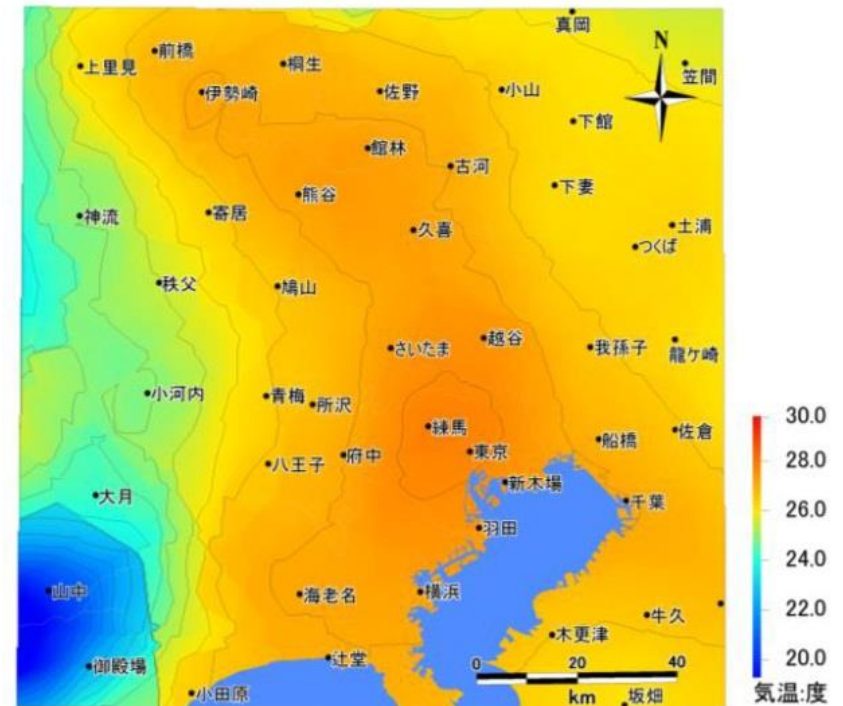
Energy and Environment

Energy Source of Japan

$(10^{18}J)$

Legend:
- Renewable Energy
- Water
- Nueclear
- Natural Gas
- Coal
- Oil

Energy and Environment
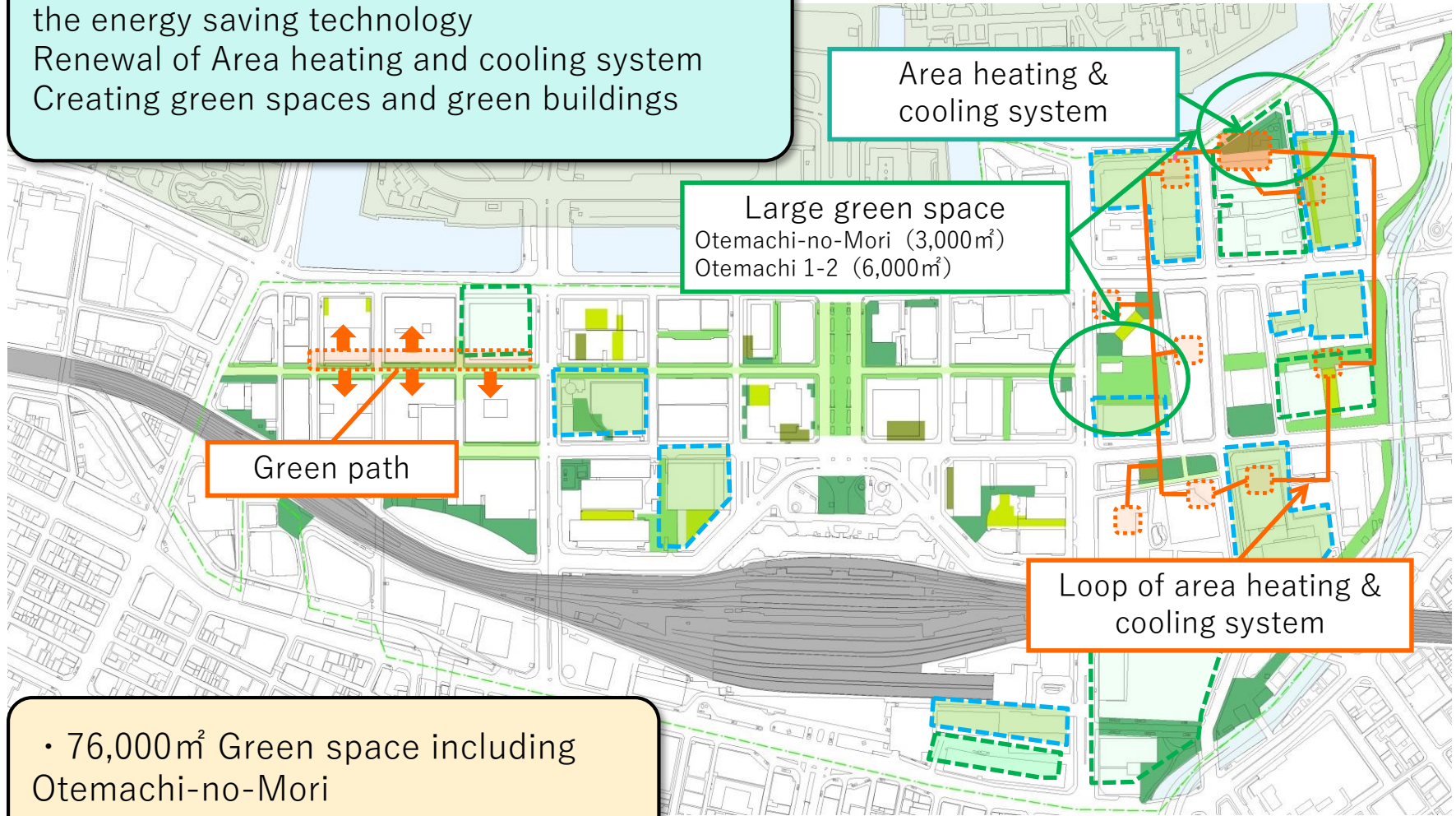
Average Temperature of Tokyo

Average Temperature in August
In Tokyo Metropolitan area
（Average between 2006 and 2010）

(°C)

(Year)

Energy and Environment

Aiming to reduce CO_2 emission by introducing the energy saving technology
Renewal of Area heating and cooling system
Creating green spaces and green buildings

Area heating & cooling system

Large green space
Otemachi-no-Mori（3,000㎡）
Otemachi 1-2（6,000㎡）

Green path

Loop of area heating & cooling system

・76,000㎡ Green space including Otemachi-no-Mori

Energy and Environment

○ Incentive system for constructing green buildings and developments:
Developers can build bigger buildings if they create certain amount of green space

🟩	地上部
🟦	池（水面）
🟩	人工地盤
🟩	屋上部
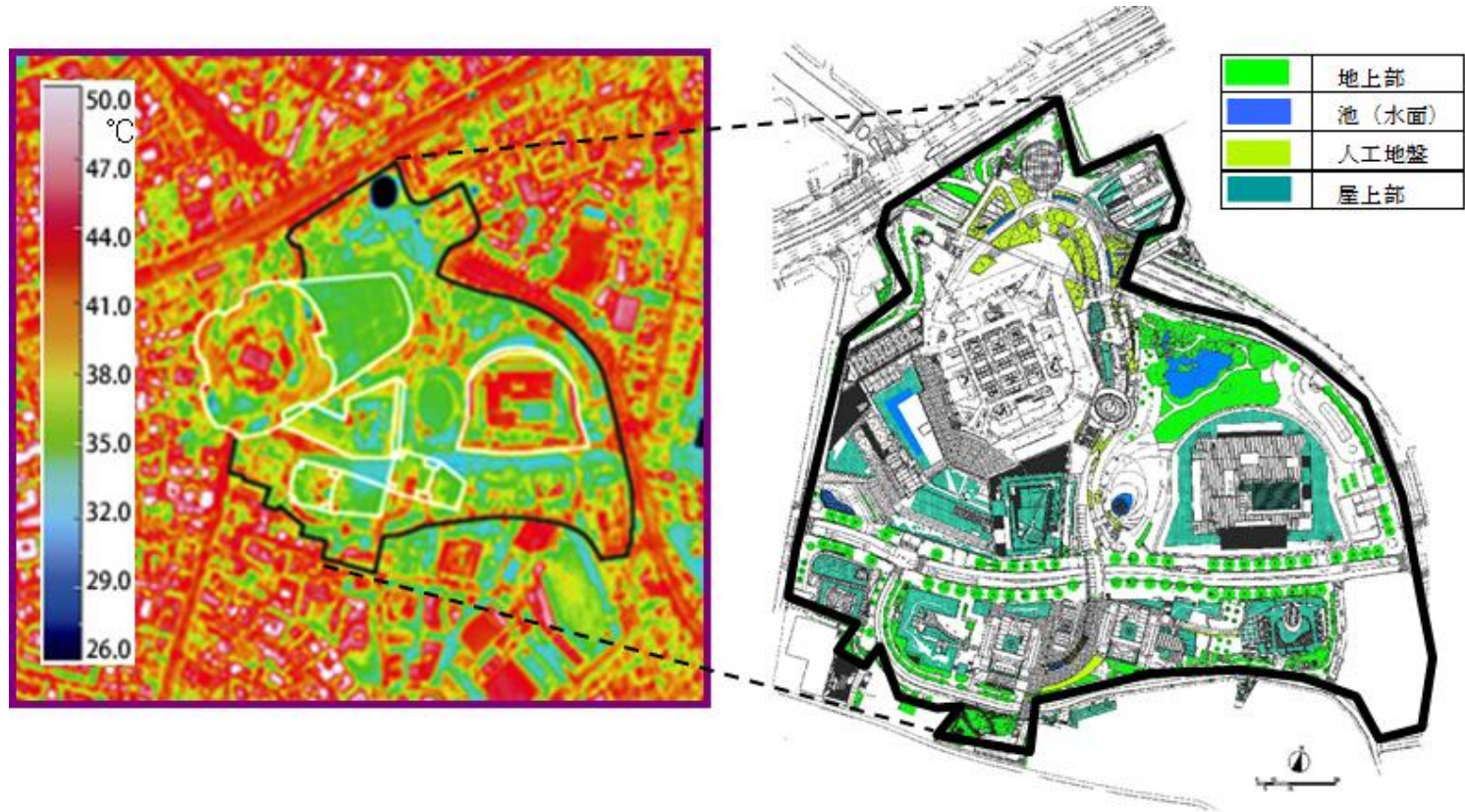
🟩 ：3ha of green space（25% of site area）

○ Temperature decreased by creating 3 ha green space in the redevelopment project
○ Average temperature in summer is cooler by 2-3℃ than surrounding area

Aging and Shrinking population

- **Advantages of Aging in Danchi projects**
  1. High concentration of elderly residents
     - It is efficient and effective to build a care base

  2. Redevelopment enables to provide affordable lands for care bases and cover costs of revitalization

  3. Benefits of URA public housing resources
     - Green spaces and close-knit communities attract new residents

Aging and Shrinking population

Revitalization projects

Type		
Estate redevelopment		80 000
Total redevelopment	40 000	40 000
Partial redevelopment and renovation	40 000	20 000
Downsize and demolition	80 000	20 000
Stock utilization	570 000	---
Conversion	10 000	10 000
Ownership transfer	30 000	20 000

To create care bases for the elderly in 100 estates by 2020