

Mobilidade Urbana em Tóquio

A panoramic view of the Tokyo skyline at dusk. The sky transitions from a deep blue at the top to a warm orange and yellow near the horizon. The city is densely packed with buildings, many of which are illuminated with lights. The most prominent feature is the Tokyo Tower, which is brightly lit with orange and yellow lights, standing out against the darkening sky. Other skyscrapers are visible in the background, some with their lights on. The overall scene captures the vibrant energy of a major metropolitan area at night.

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EWS Engenharia de Transportes

Sideney Schreiner

Engenheiro Civil (UnB)

Mestrado em Políticas de Desenvolvimento de Infraestrutura de Transportes (Tokyo Univ of Marine Science and Technology)

Doutorado em Modelagem Computacional para o Planejamento de Transportes (Tokyo Univ of Marine Science and Technology)

Pós-doutorado em Sistemas de Transporte e Logística em Caso de Desastres Naturais (Kyoto University)

Passado

- PTV Support Center Japan: Sócio Diretor
- PTV Modelagem de Sistemas de Transportes: Sócio Diretor
- Prefeitura do Recife - ICPS: Diretor Executivo de Planejamento da Mobilidade

Presente

- EWS Engenharia de Transportes: Diretor
- Takumi Engenharia: Chief Modeling Officer
- Consultor STC para o Banco Mundial (Resiliência de Infraestrutura frente a Desastres Naturais)
- Nihon University: Research Fellow

Futuro

- Big Data para Mobilidade
- AI para Mobilidade
- Serviços para MaaS
- DSS-Mobilidade para governos municipais

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Visão geral sobre Tóquio

Pedestres

Ciclistas

Transporte individual

Transporte coletivo

Transporte de carga urbana

Big Data para mobilidade



Greenland

Iceland

Norwegian Sea

Sweden

Finland

Russia

Norway

United Kingdom

Denmark

Ireland

Germany

Poland

Belarus

Ukraine

France

Austria

Romania

Kazakhstan

Mongolia

Sea of Okhotsk

Spain

Italy

Greece

Turkey

Uzbekistan

Kyrgyzstan

Sea of Japan

Portugal

Morocco

Tunisia

Syria

Iraq

Iran

Afghanistan

Pakistan

China

South Korea

Japan

East China Sea

North Atlantic Ocean

Puerto Rico

Western Sahara

Mauritania

Algeria

Libya

Egypt

Saudi Arabia

Yemen

Gulf of Aden

Arabian Sea

India

Nepal

Bay of Bengal

Myanmar (Burma)

Thailand

Gulf of Thailand

Vietnam

Philippines

Philippine Sea

Indian Ocean

Venezuela

Guyana

Suriname

Colombia

Brazil

Bolivia

Paraguay

Chile

Argentina

Uruguay

South Atlantic Ocean

Mali

Niger

Chad

Sudan

South Sudan

Ethiopia

Yemen

Somalia

Kenya

DRC

Tanzania

Angola

Zambia

Mozambique

Namibia

Botswana

Zimbabwe

Madagascar

South Africa

Indian Ocean

Malaysia

Indonesia

Banda Sea

Arafura Sea

Papua New Guinea

WA

NT

SA

QLD

NSW

VIC

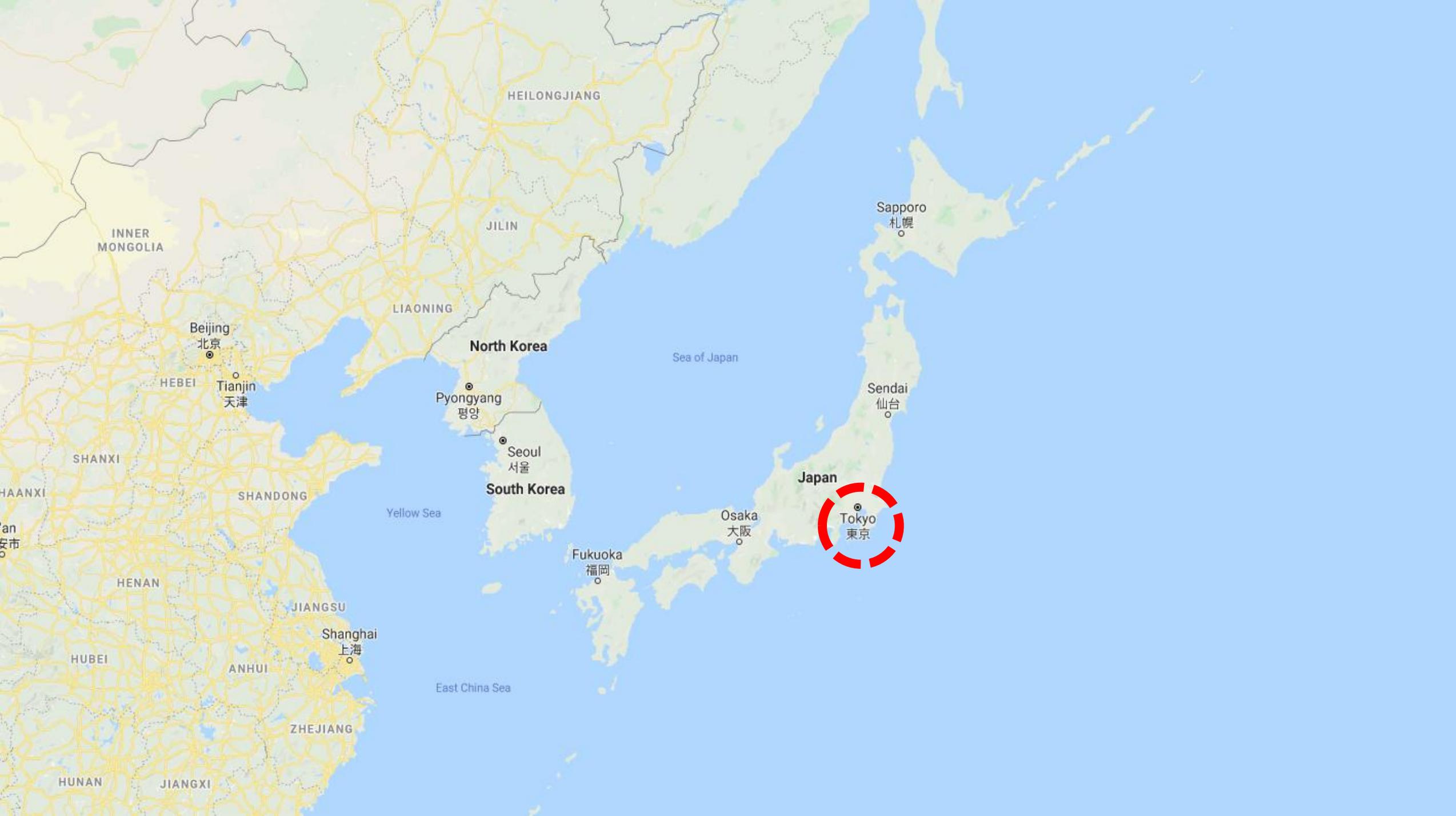
TAS

Great Australian Bight

Coral Sea

Tasman Sea

New Zealand



HEILONGJIANG

JILIN

Sapporo
札幌

INNER MONGOLIA

LIAONING

North Korea

Sea of Japan

Beijing
北京

Tianjin
天津

Pyongyang
평양

Sendai
仙台

HEBEI

Seoul
서울

South Korea

Japan

Tokyo
東京

SHANXI

SHANDONG

Yellow Sea

Osaka
大阪

Fukuoka
福岡

SHAANXI

HENAN

JIANGSU

Shanghai
上海

East China Sea

HUBEI

ANHUI

ZHEJIANG

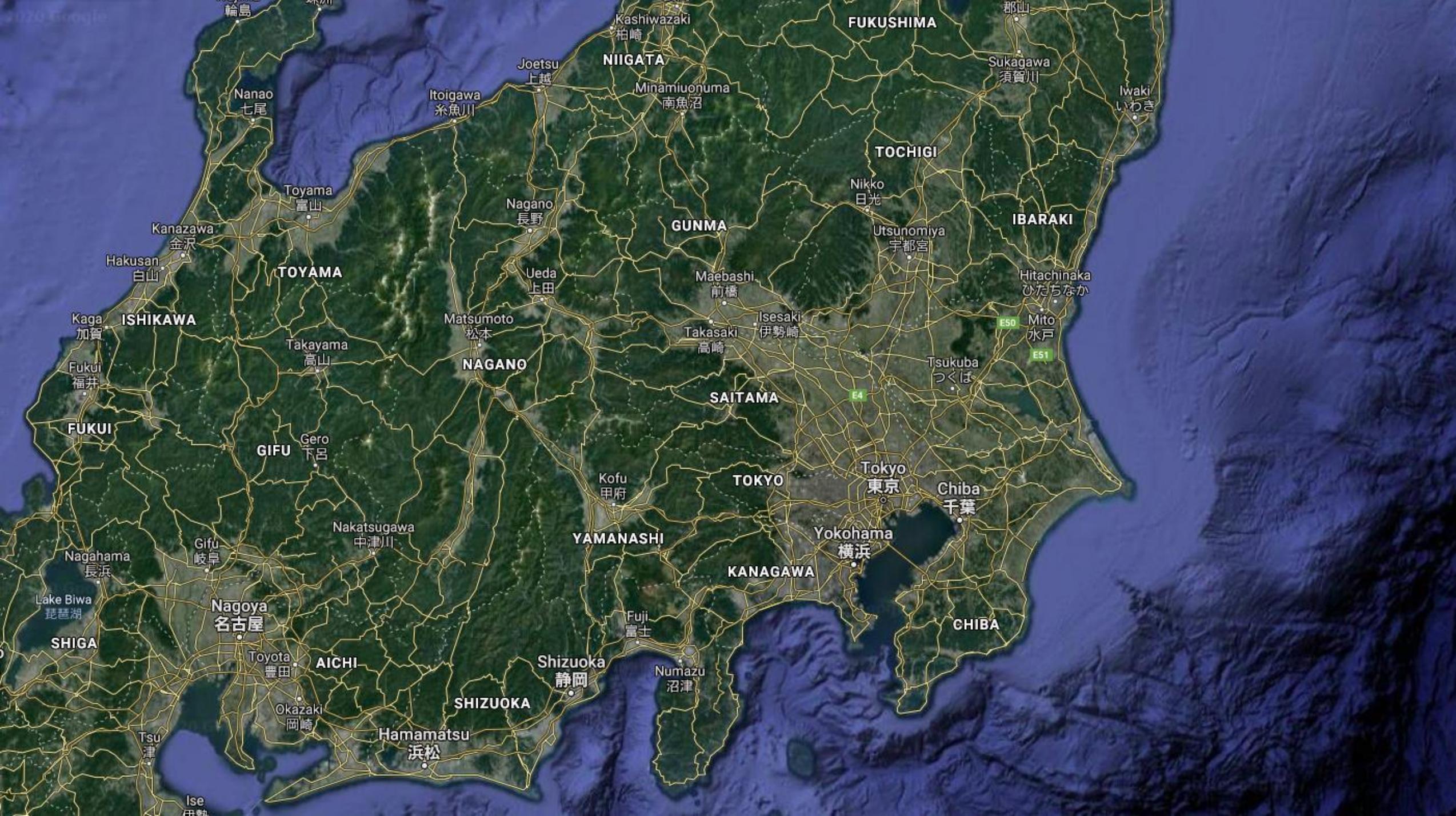
HUNAN

JIANGXI

Greater Tokyo Area

| | |
|------------|-------------------|
| População | 38 milhões (30%) |
| Empregos | 12 milhões |
| Desemprego | 2,5% (pré-covid) |
| PIB | US\$ 1.8 trilhões |





FUKUSHIMA

NIIGATA

TOCHIGI

GUNMA

IBARAKI

TOYAMA

ISHIKAWA

NAGANO

SAITAMA

TOKYO

GIFU

YAMANASHI

KANAGAWA

CHIBA

SHIGA

Nagoya
名古屋

AICHI

SHIZUOKA

Shizuoka
静岡

Hamamatsu
浜松

Kashiwazaki
柏崎

Minamiuonuma
南魚沼

Sukagawa
須賀川

Iwaki
いわき

Nanao
七尾

Itoigawa
糸魚川

Joetsu
上越

Nagano
長野

Nikko
日光

Utsunomiya
宇都宮

Toyama
富山

Kanazawa
金沢

Hakusan
白山

Kaga
加賀

Fukui
福井

FUKUI

Takayama
高山

Matsumoto
松本

Ueda
上田

Maebashi
前橋

Takasaki
高崎

Isesaki
伊勢崎

Hitachinaka
ひたちなか

Mito
水戸

Tsukuba
つくば

Gero
下呂

Kofu
甲府

Tokyo
東京

Chiba
千葉

Nakatsugawa
中津川

Yokohama
横浜

Nagahama
長浜

Gifu
岐阜

Lake Biwa
琵琶湖

Fuji
富士

Numazu
沼津

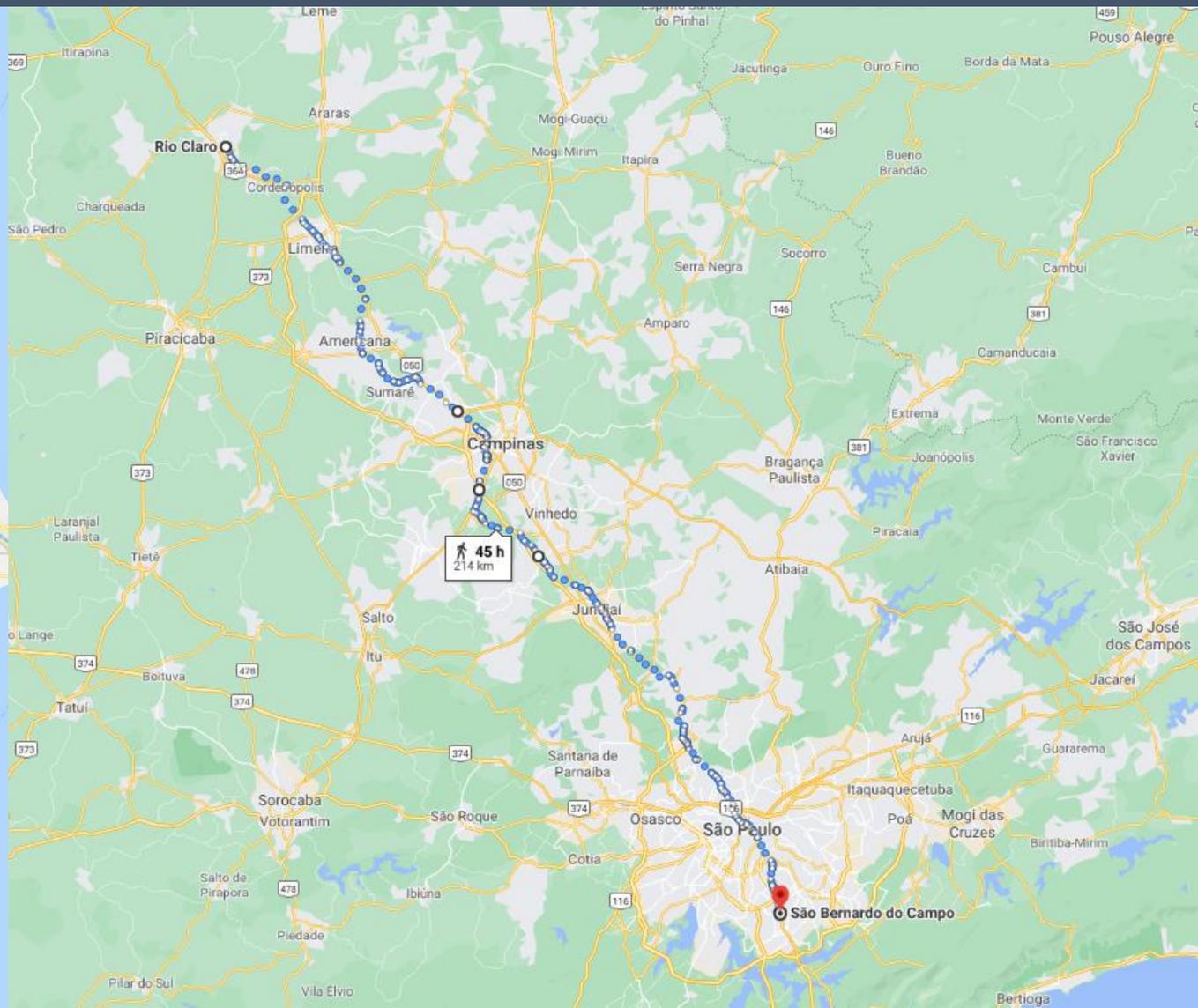
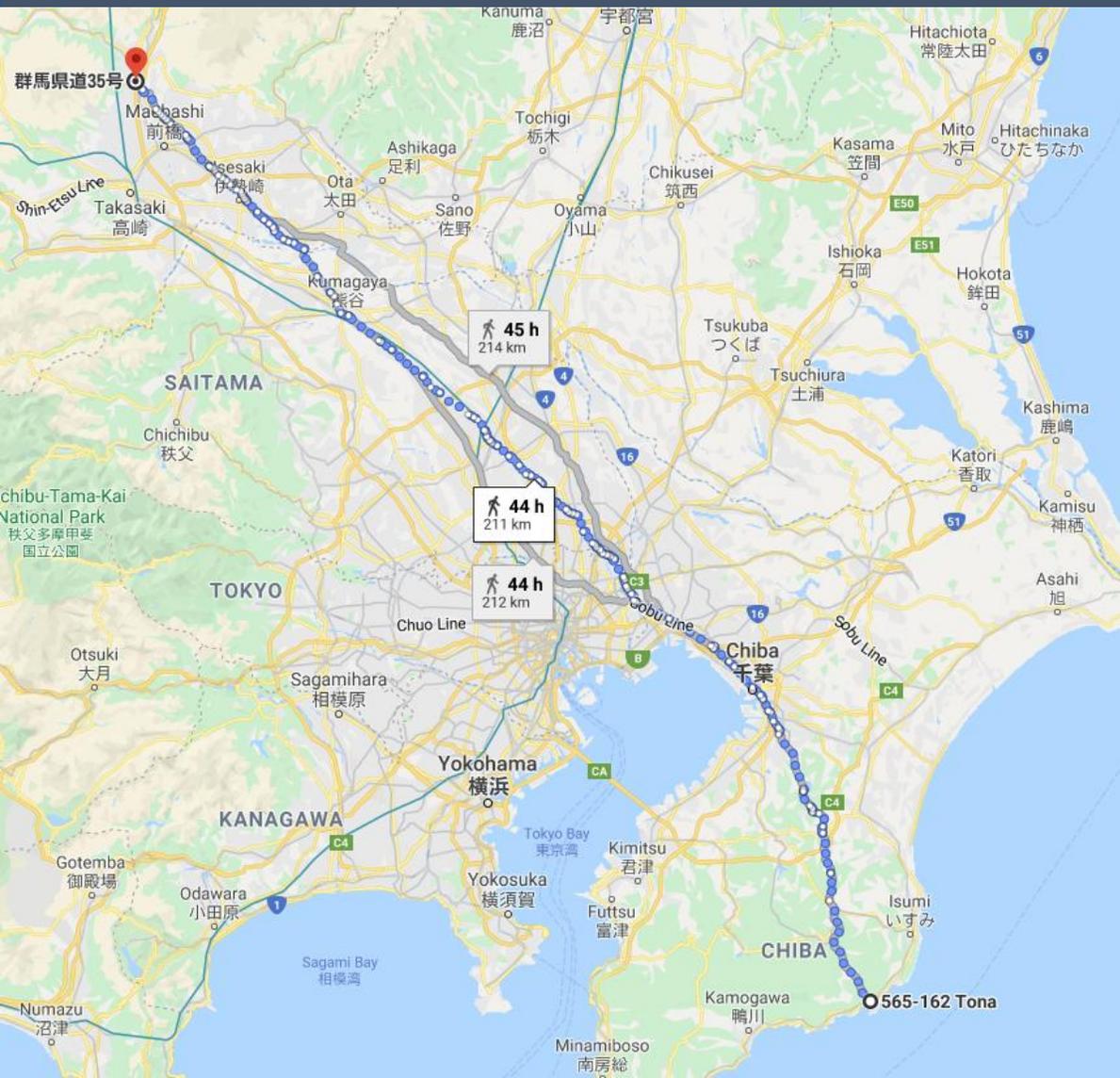
Toyota
豊田

Okazaki
岡崎

Tsu
津

Ise
伊勢

O tamanho do desafio

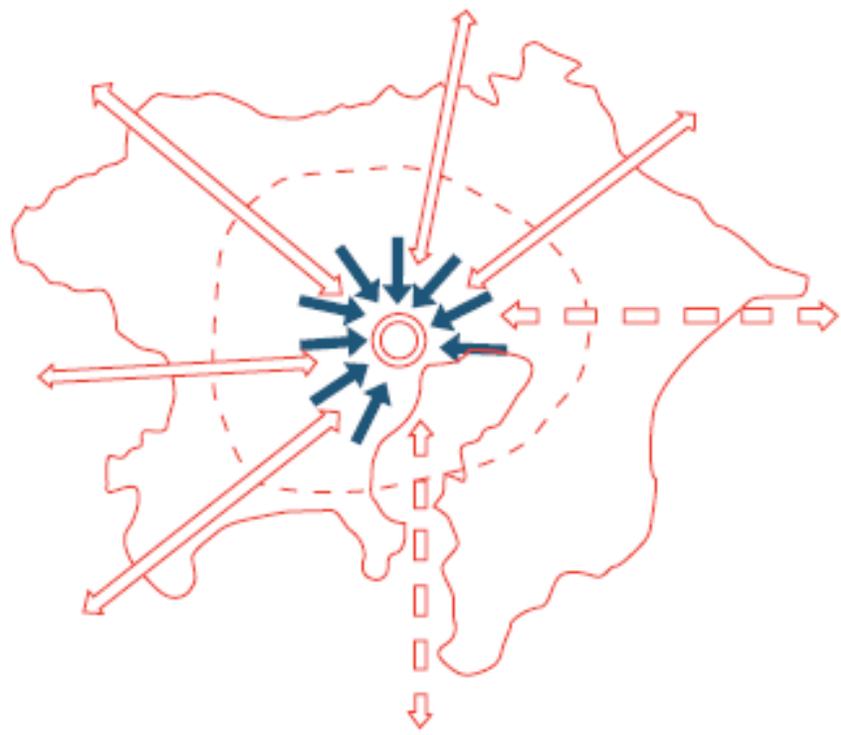


Estrutura Urbana e Mobilidade

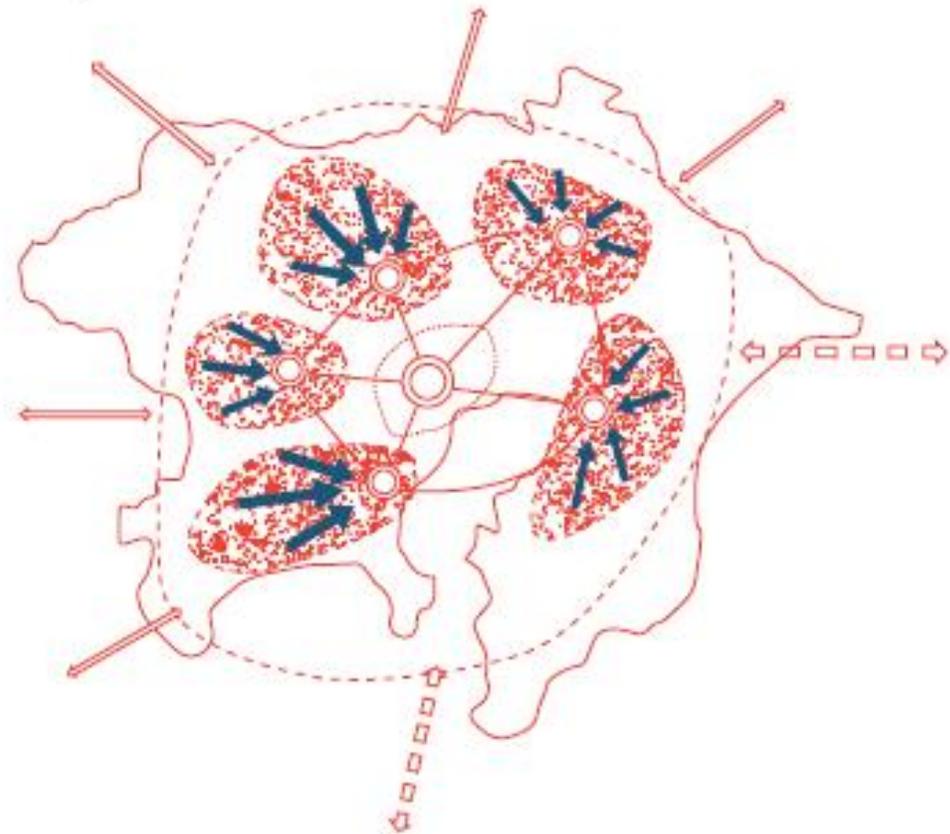


Figure 7 Status and future concept of the Greater Tokyo area (the Capital Reform Plan)

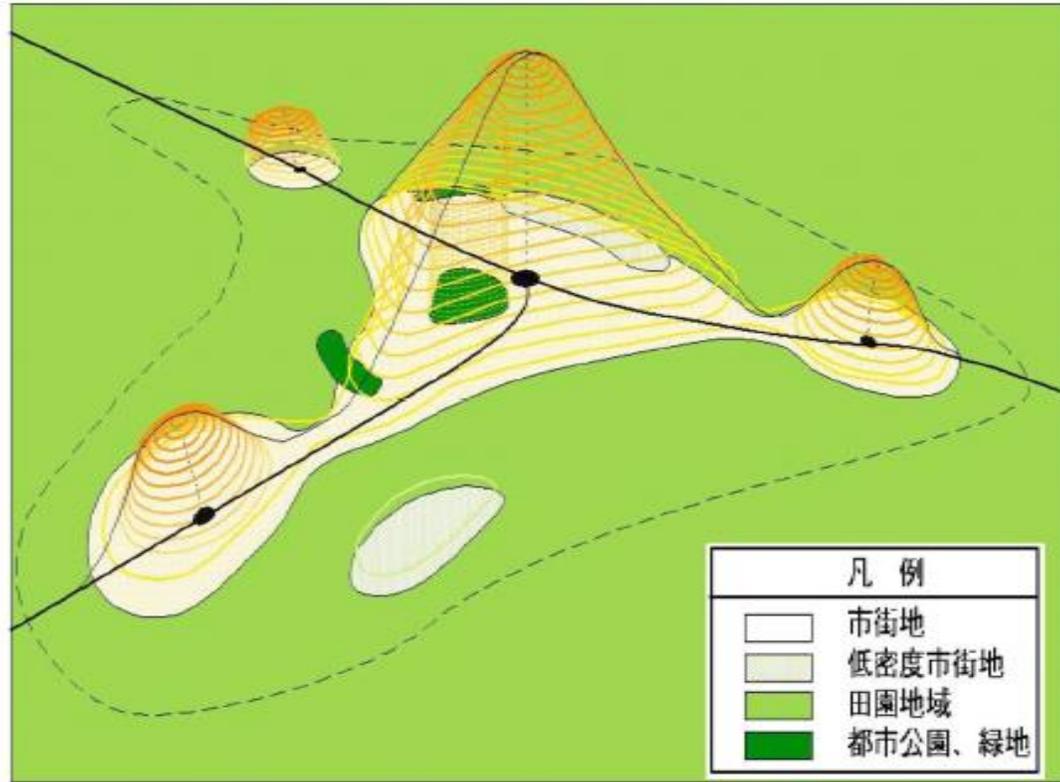
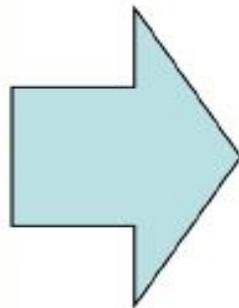
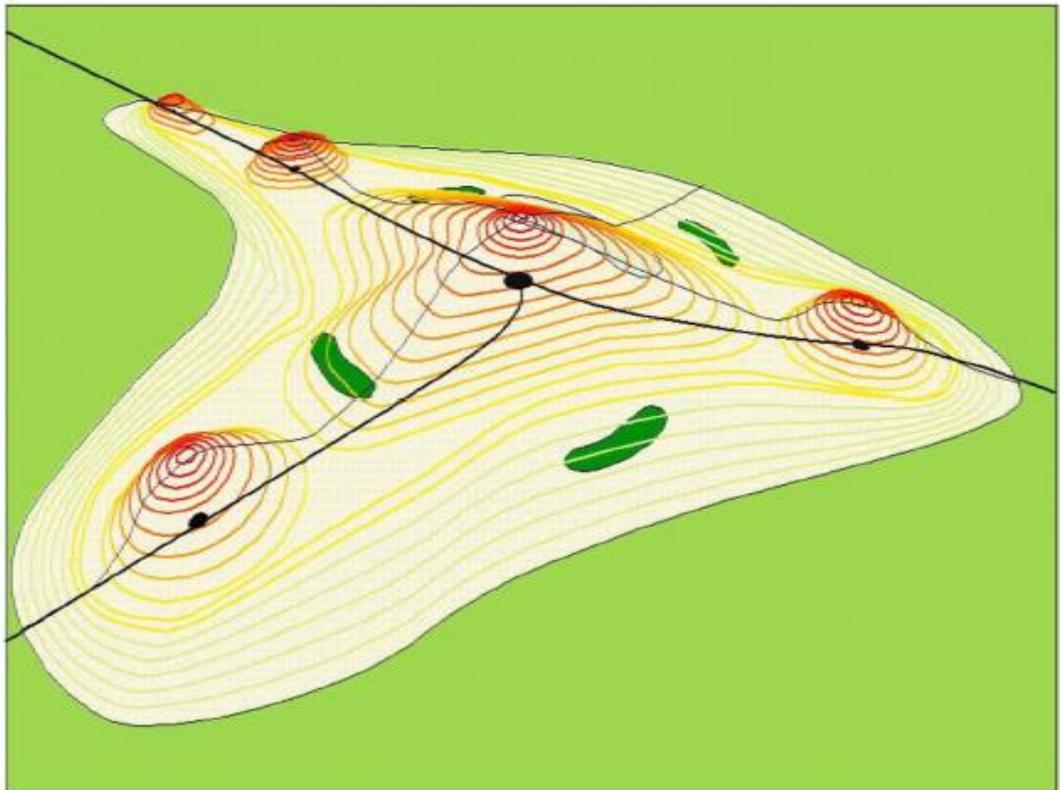
(a) Overconcentration into the center of Tokyo



(b) Concept of a combined urban area

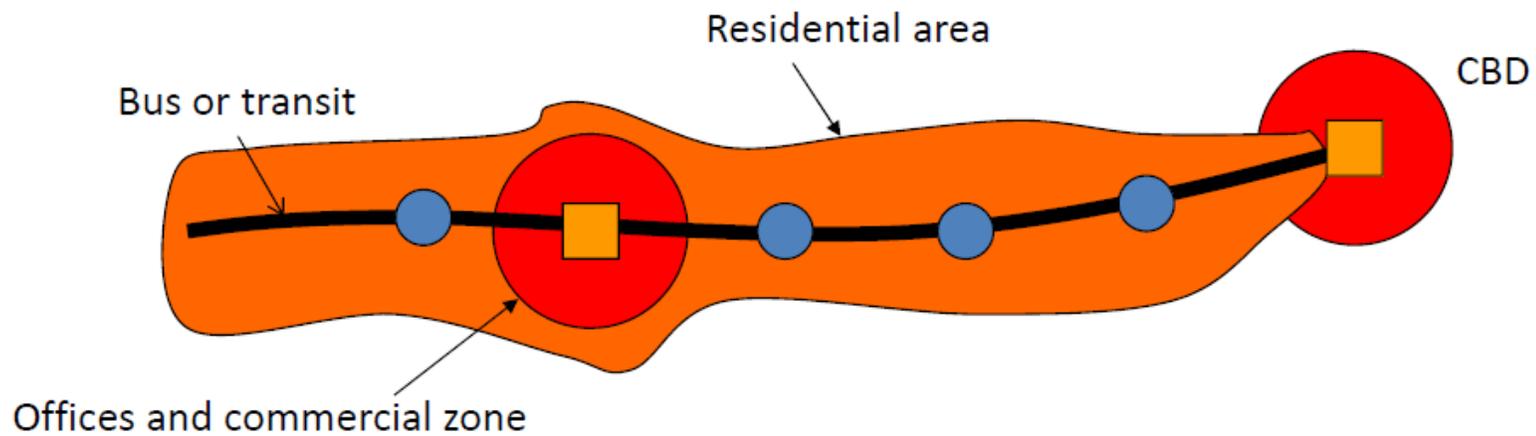


Source: National Land Agency



TOD

Desenvolvimento
Orientado ao
Transporte Público



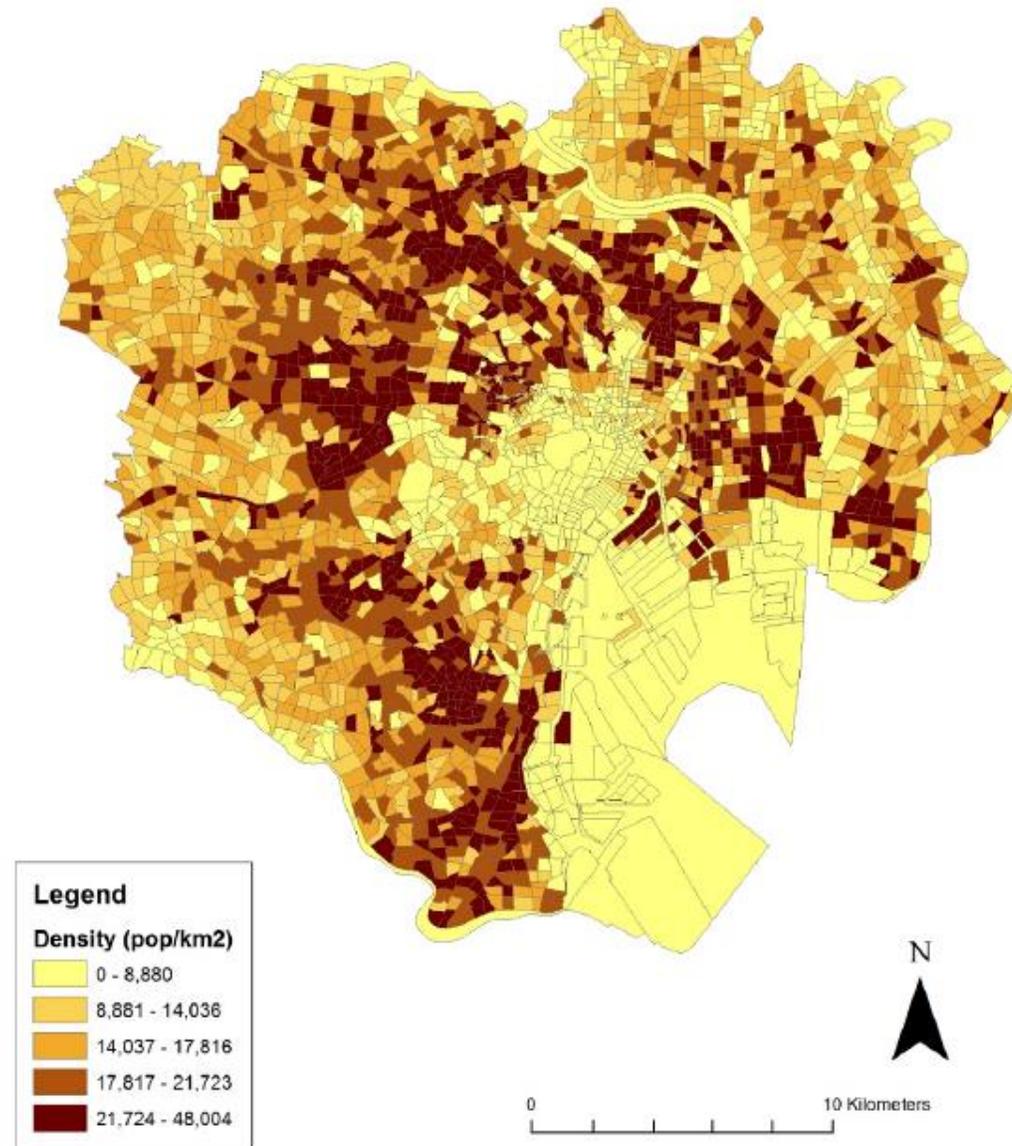


Figure 1: Population density in Central Tokyo. Map showing the density in each of the census tracts in the 23 wards of Central Tokyo. Source: Nakamura (2010); data from Official Statistics of Japan

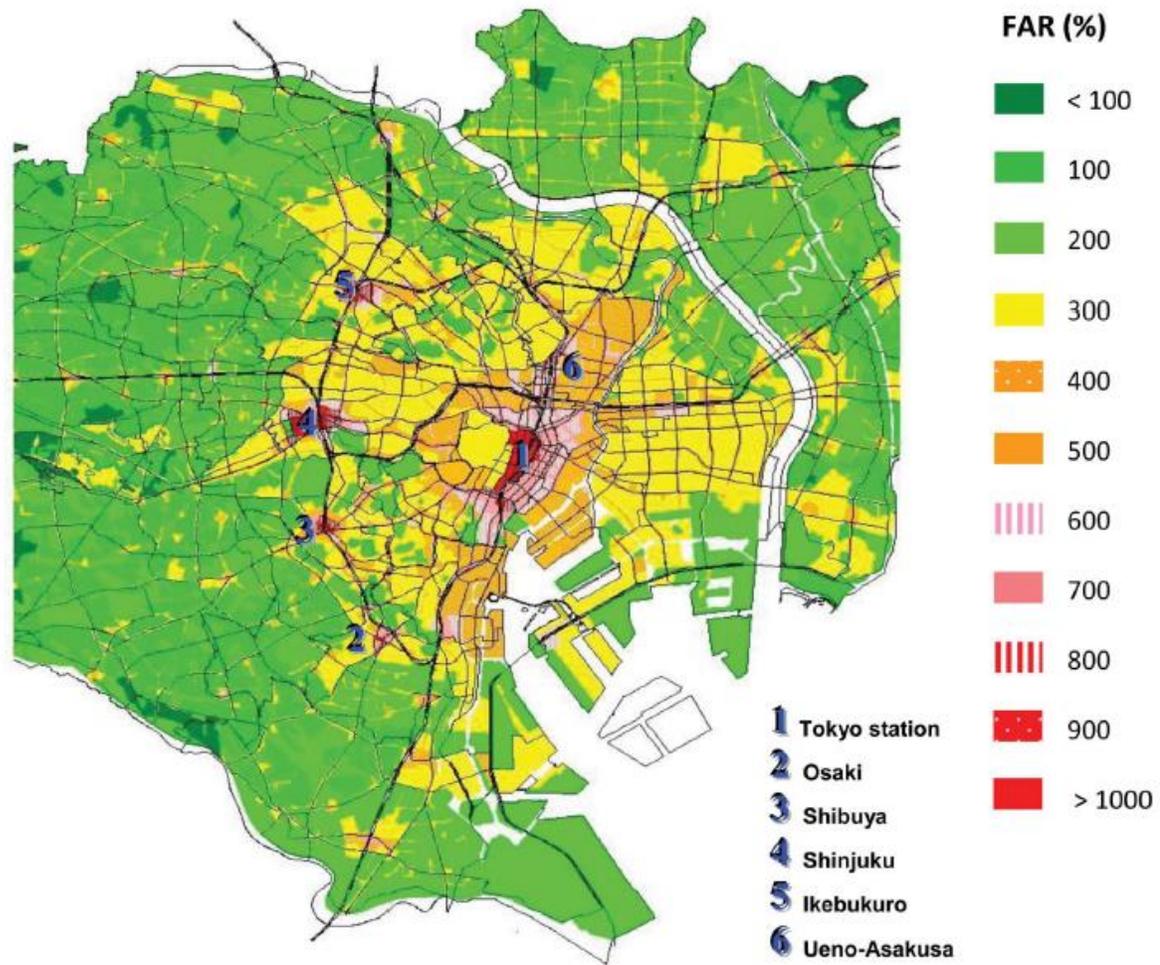


Figure 1. Floor area ratio map of central Tokyo. Source: A copy of this map was personally received from the Tokyo Metropolitan Government.



Pedestres



2500 pessoas por
tempo de verde
do semáforo

**Cruzamento
de Shibuya**















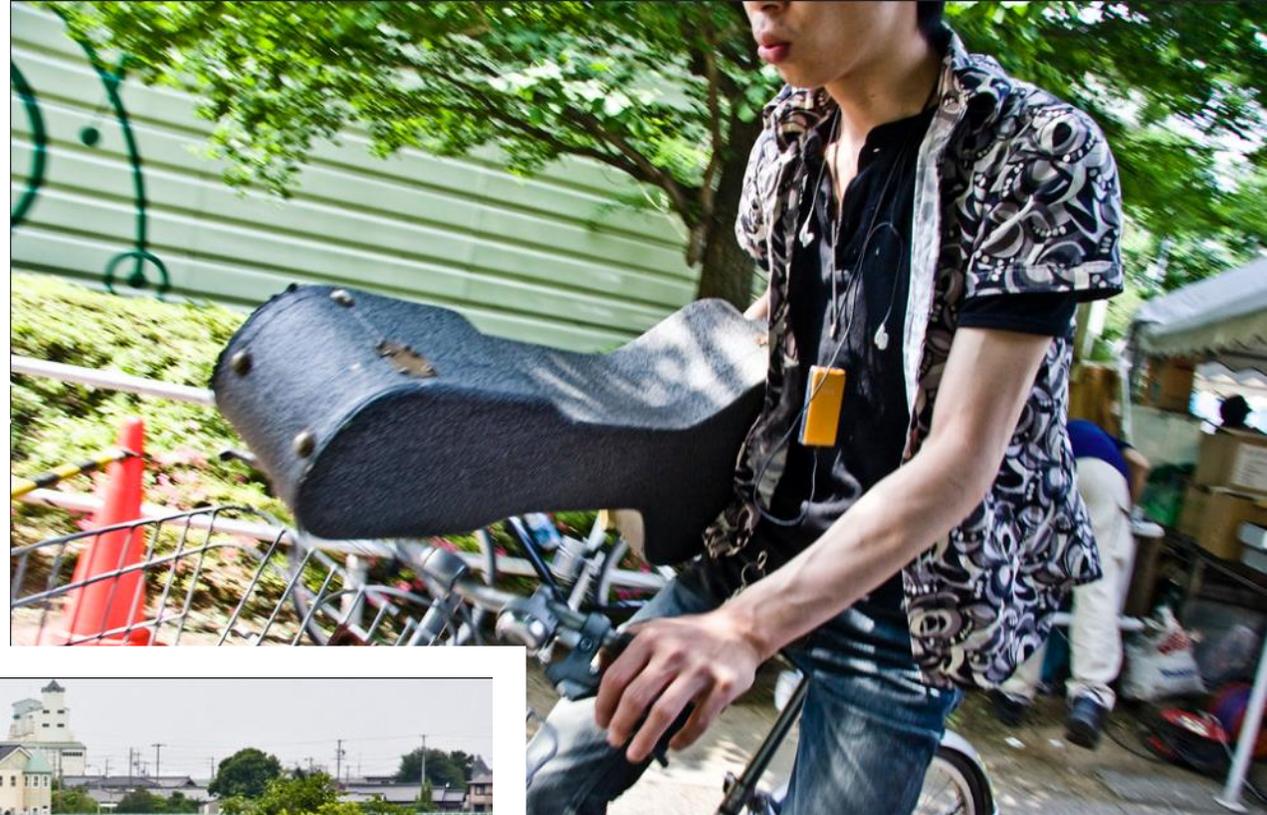




Ciclistas





















利用時間

24時間

(一時利用の場合、1回72時間以内)

- ・事前登録制
- ・幼児用座席付きの自転車は夜間等係員の居ない時間帯は入庫できません

受付時間

10:00-21:00

定期料金

| 定期料金 | 区民一般 | 区民学生 | 区外 |
|------|--------|--------|--------|
| 1か月 | 1,500円 | 1,000円 | 2,000円 |
| 3か月 | 4,000円 | 2,500円 | 5,500円 |

一時利用料金

最初の2時間無料、以降8時間毎に100円
(事前登録料1,000円)

■駐輪場管理室 03(6274)6125
■受付時間外 03(3572)3900

中央区立銀座六丁目地下駐輪場 利用案内(抜粋)

- ・当駐輪場は、短時間駐輪するためのスペースを提供することを目的とするものであり、自転車をお預りするものではありません。
- ・当駐輪場における駐輪時間は継続して最長72時間までとします。72時間を超えた場合は放置車両とみなし、保管場所へ搬去します。返還には別途搬去保管手数料が必要です。
- ・当駐輪場に駐輪することができる自転車は、付属装物及び積載物等を含めて下記の基準に該当するものとし、三輪車、サイドカゴ、アクセサリ等は入庫不可とします。



Funcionamento 24h

Atendimento 10h – 21h

Preço Avulso até 2 horas: grátis
a cada 8 horas: 1 USD

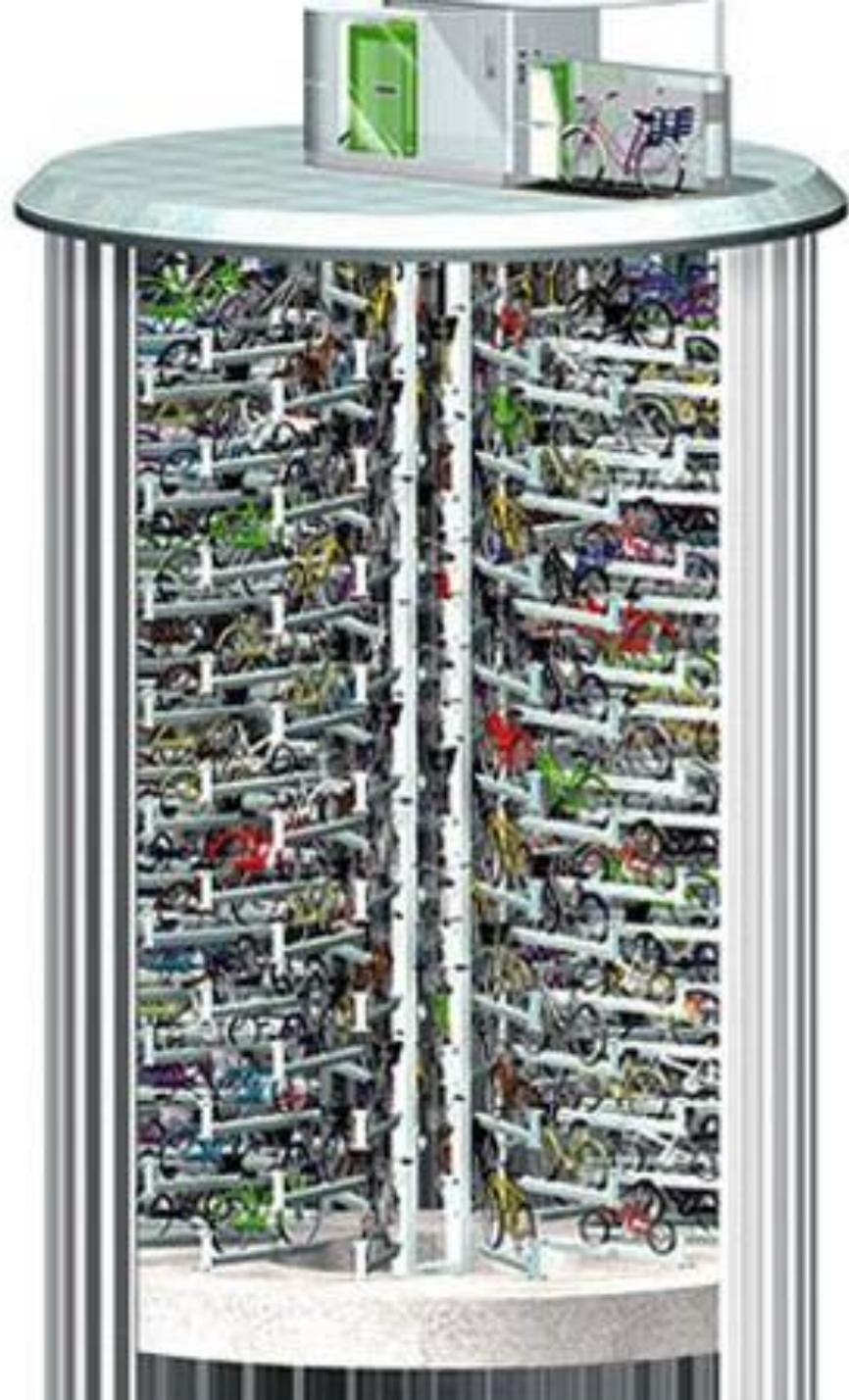
Pré-registro 10 USD

Morador do bairro Estudante Não morador

Preço Mensal 15 USD 10 USD 20 USD

Preço Trimestral 40 USD 25 USD 55 USD





“自転車文化”を育み、機能的で快適な街づくりに貢献する可搬式駐輪システム

モバイルエコサイクルの特長

1 設置・撤去が容易な可搬システム

徹底した分割組み立て方式のため、シンプルな手順で急速設置が可能です。設置は1日～2日、撤去の際は1日で作業が完了します。



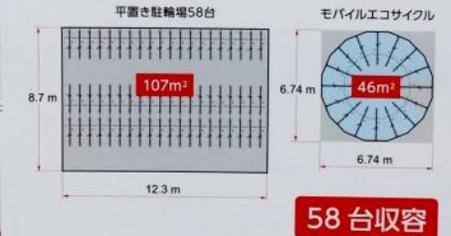
2 簡単・高速な入出庫 (出庫時間 最短 8.0 秒)

入出庫はICタグ・ICカードによる簡単操作。平均出庫時間も9.7秒で、ラッシュ時でも利用者を待たせません。



3 省スペース、高収容

46m²の敷地に、58台の自転車を収容可能。平置き駐輪場と比べると、約2.3倍の収容効率です。



4 雨濡れ・悪戯の心配もなく安心

自転車は覆われた空間に収容されるため、雨に濡れたり、悪戯される心配もありません。

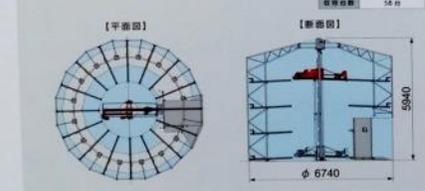


5 外表面を文化的・商業的に利用可能

外表面は自由に印刷ができるため、景観に合ったデザインにすることが可能です。また、注目を集める新しいメディアとして、企業広告、観光案内としても活用できます。



モバイルエコサイクル仕様

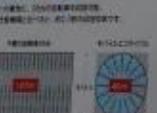


機能的で快適な
可搬式駐輪システム

特長



省スペース、高収容



58台収容



Transporte Individual Motorizado

カーラオケ歌広場

docomo

初台 首都高
Hatsudai SHUTOKO
新宿駅西口
Shinjuku Sta.
20
414

広告募集中
03-3543-7771
www.hit-ad.co.jp

広告募集中
03-3543-7771
www.hit-ad.co.jp

ニ

SPRINT
スポーツ

美和ロップ
Think Next Security
MIWA

THEグローバル社
ウィルローズ マンションシリーズ

artist

エアリアル

アコム 6F

レク

First Kitchen

6F E C C

6F

タイ

タイ

パソコン

ICT

新宿

ビジ





The Bestselling Cars in Japan

Car models with most unit sales in Japan in 2019

■ Kei car ■ Full-sized car

| | |
|----------------|---------|
| Honda N-Box | 253,500 |
| Daihatsu Tanto | 175,292 |
| Suzuki Spacia | 166,389 |
| Nissan Days | 157,439 |
| Toyota Prius | 125,587 |
| Daihatsu Move | 122,835 |
| Nissan Note | 118,472 |
| Toyota Sienta | 110,880 |

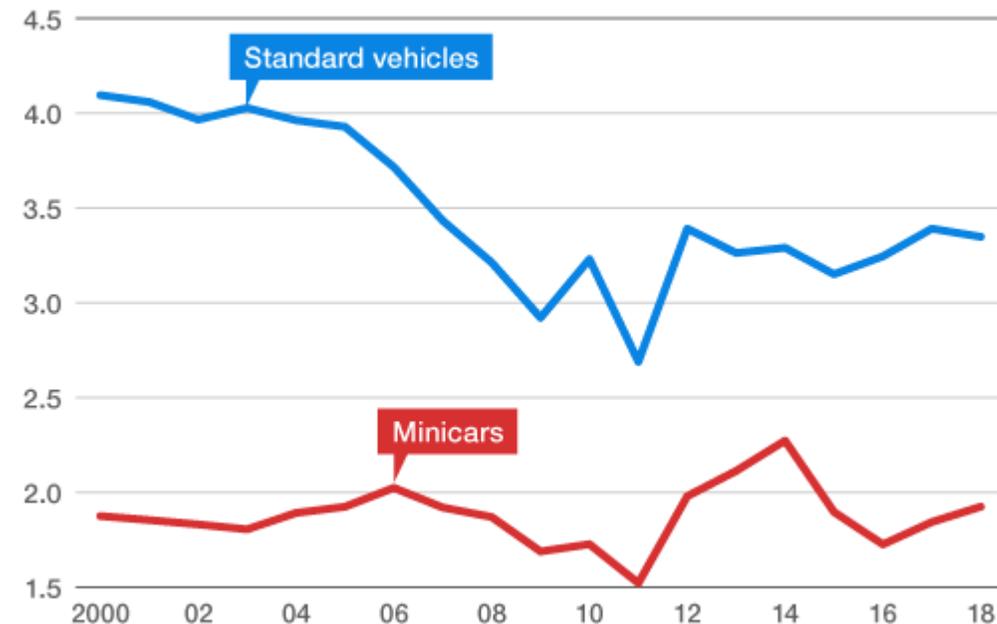


Image credit: Ceficefi/Wikimedia Commons
Source: Japanese Automobile Dealers Association



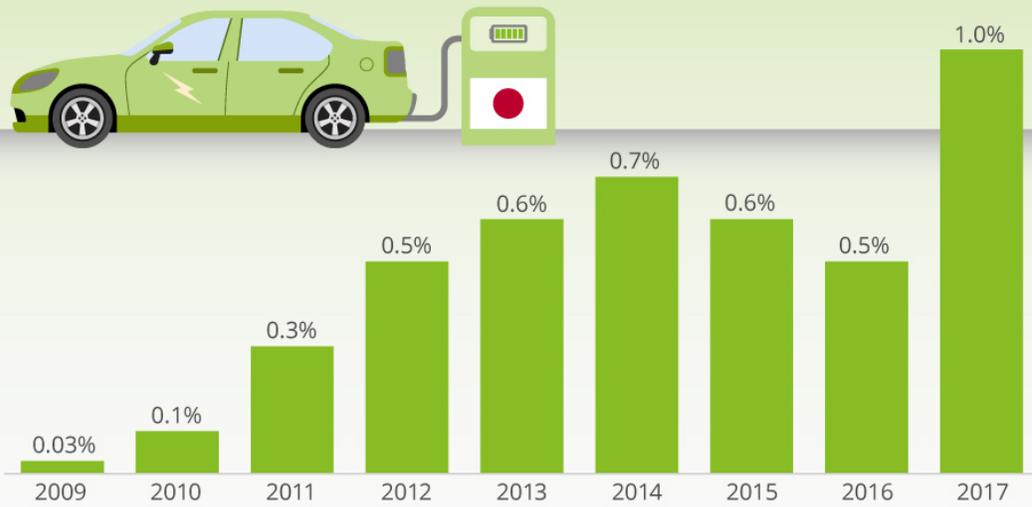
Sales of New Vehicles in Japan

(million vehicles)



Japan is catching up on battery-powered cars

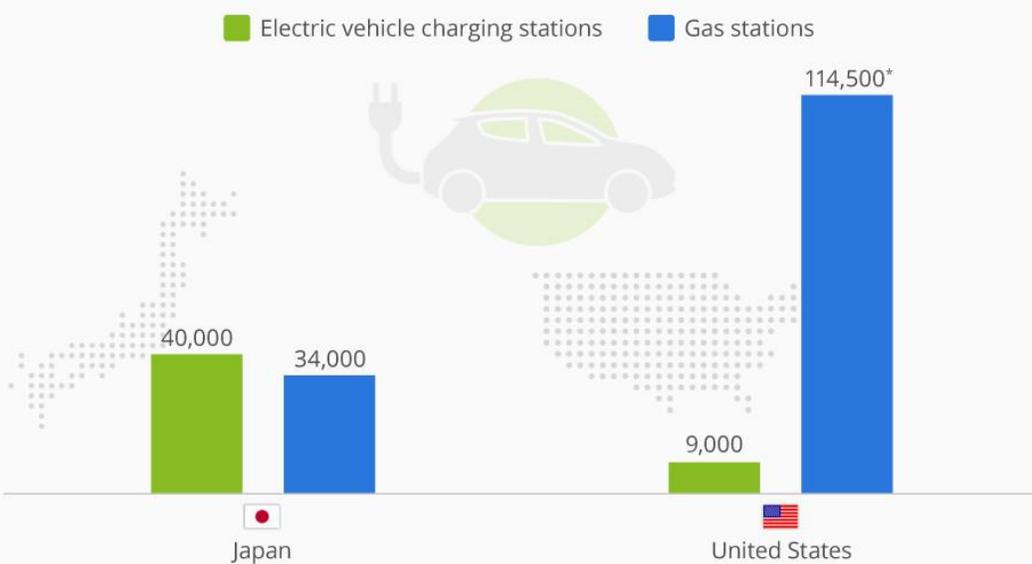
Market share of electric cars in Japan from 2009 to 2017



CC BY-SA **statista**

Japan Has More Car Charging Points Than Gas Stations

Estimated number of vehicle charging points & gas stations in Japan and the U.S. (2016)



30 min USD 0,33
60 min USD 1
5h USD 12

OnePark 片町1丁目
8:00-24:00
30分 300円 [5時間毎最大料金]
24:00-8:00
60分 100円 **1200円**
0120-963-964
駐車場専用駐車場中





Shuto Expressway
 Extensão 322 km
 Velocidade 50 – 80 km/h

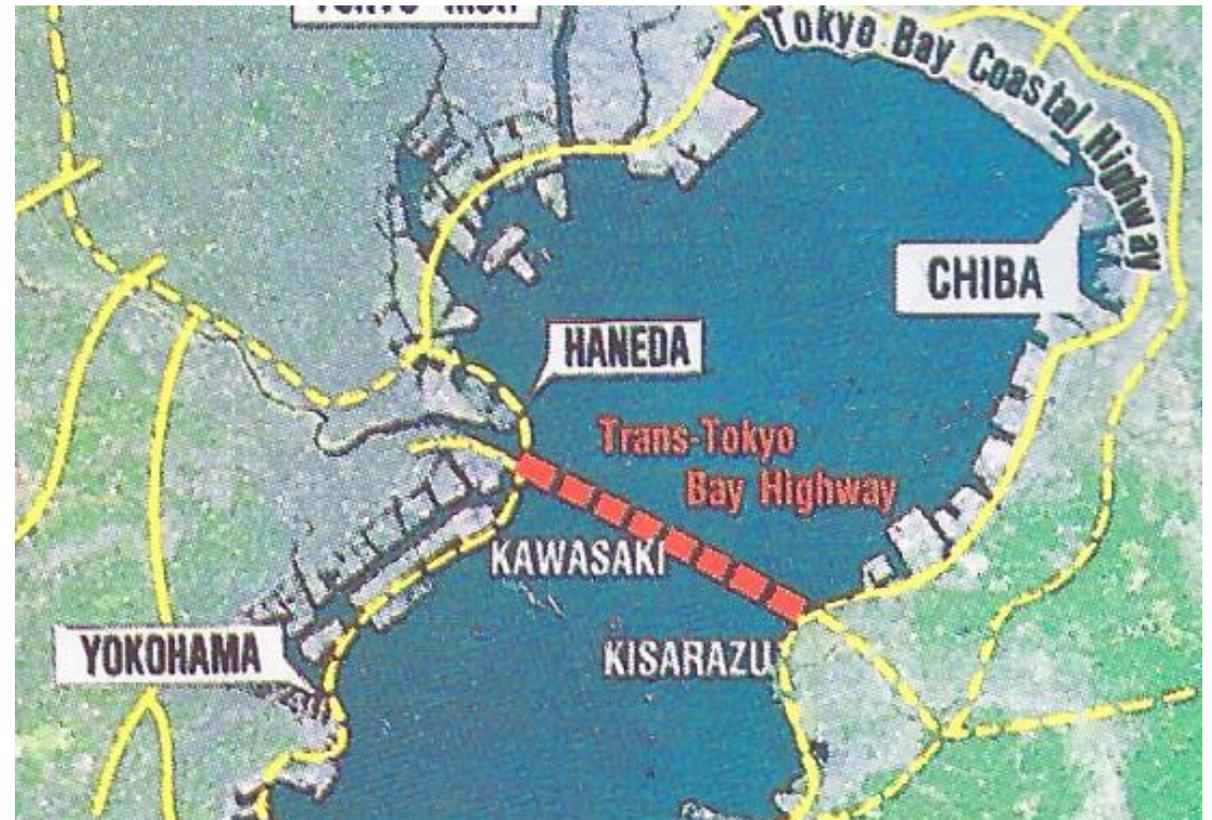
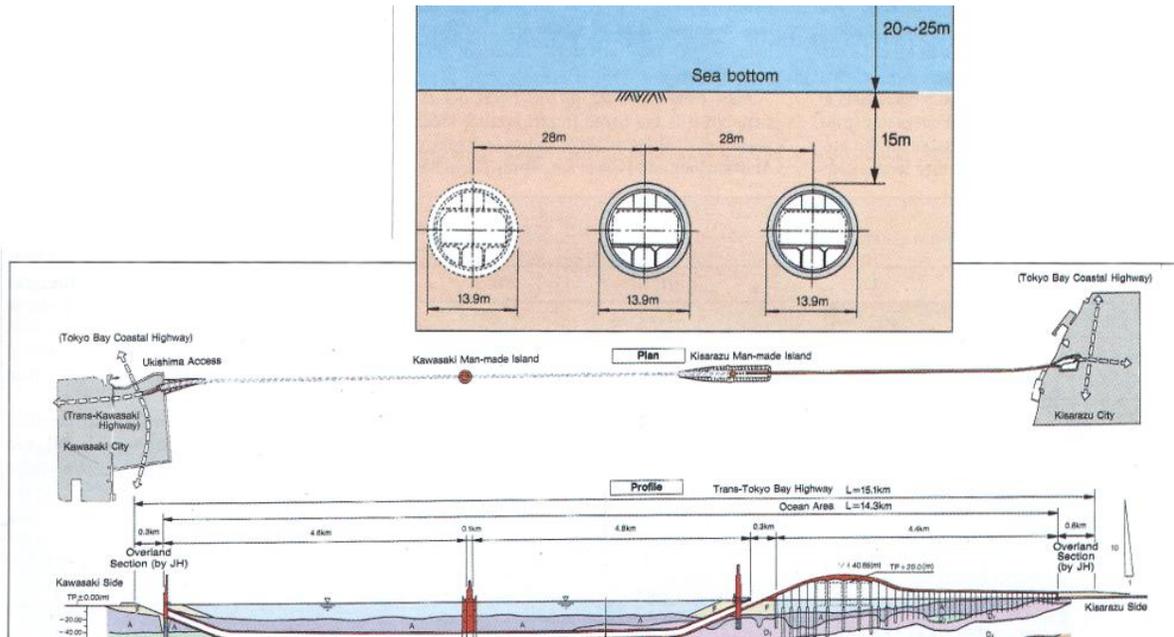












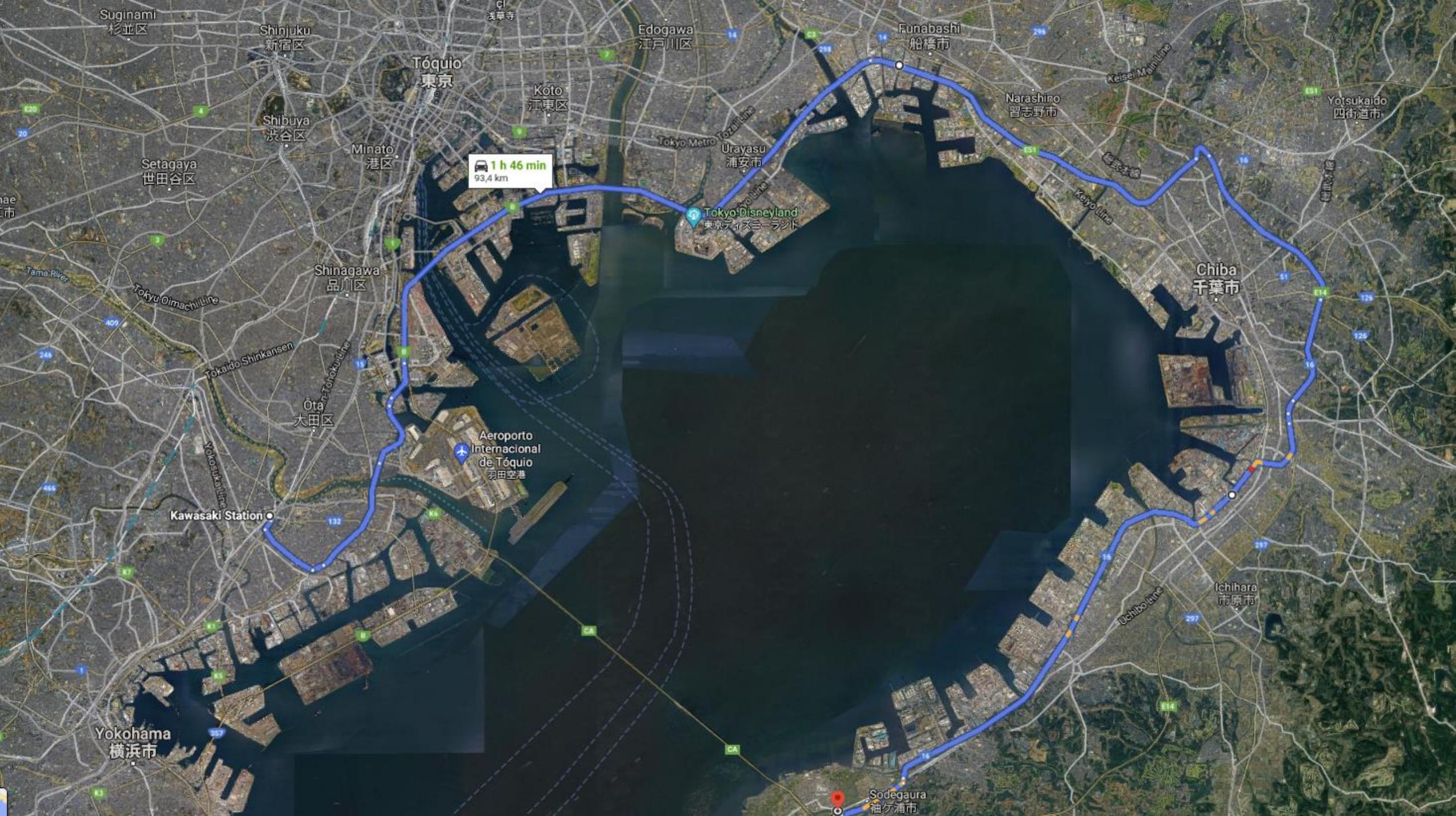
Toll table of Tokyo-bay Aqua Line
(Kawasaki-Ukishima Junction – Kisarazu-Kaneda Interchange)

| Type of car | Toll | ETC Aqua-Line Special discount | ETC Pilot Test discount (from July 2009) |
|--------------------------|----------|--------------------------------|--|
| Normal cars | 3,000JPY | 2,320JPY | 800JPY |
| Midsized cars | 3,600JPY | 2,780JPY | 960JPY |
| Large cars | 4,950JPY | 3,830JPY | 1,320JPY |
| Specific large cars | 8,250JPY | 6,380JPY | 2,200JPY |
| Kei-cars and motorcycles | 2,400JPY | 1,860JPY | 640JPY |



Google





1 h 46 min
93,4 km

Funabashi
船橋市

Tóquio
東京

Chiba
千葉市

Edogawa
江戸川区

Shinjuku
新宿区

Shibuya
渋谷区

Koto
江東区

Minato
港区

Urayasu
浦安市

Narashino
習志野市

Setagaya
世田谷区

Shinagawa
品川区

Tokyo Disneyland
東京ディズニーランド

Tama River

Tokaido Shinkansen

Ota
大田区

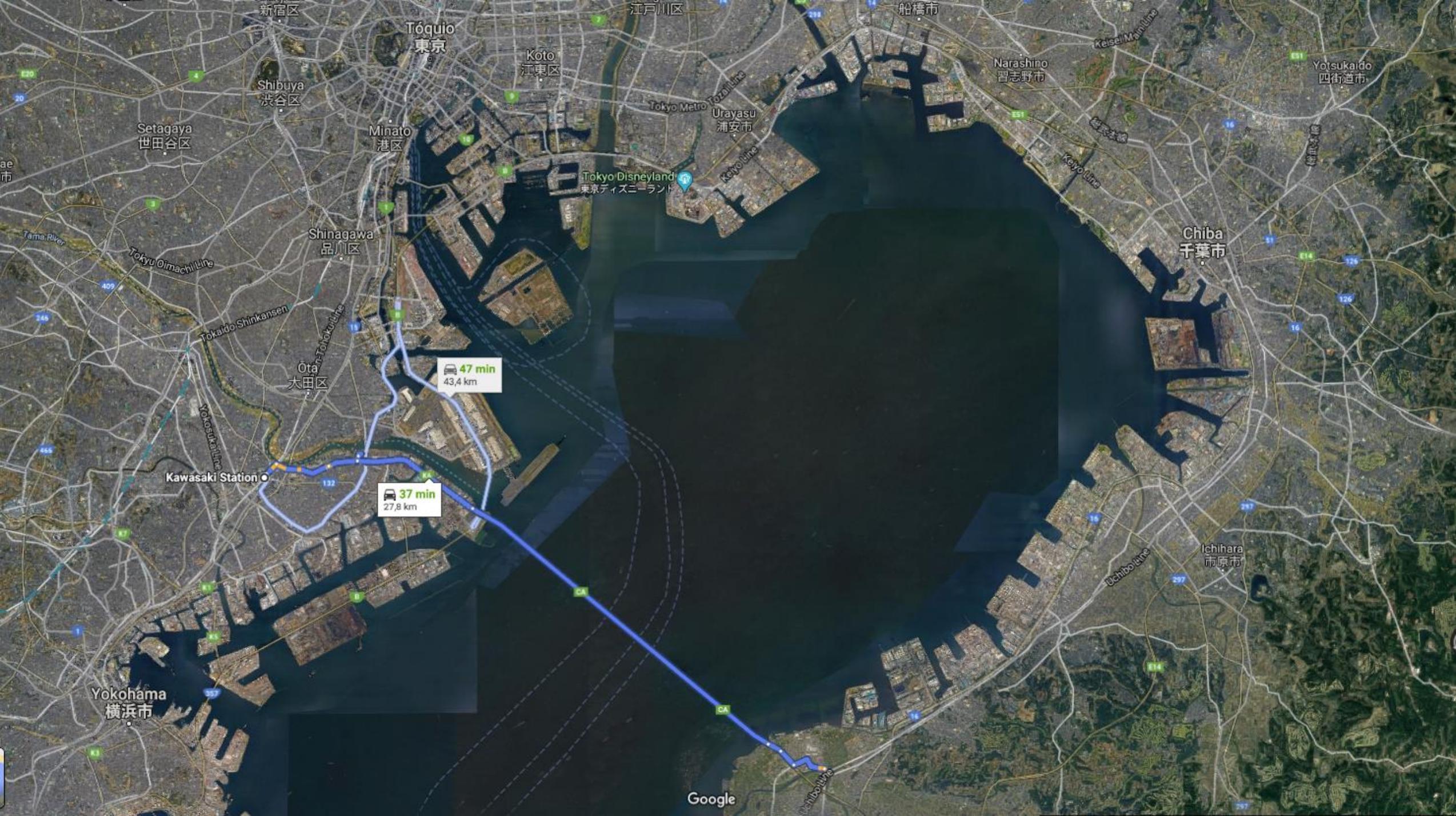
Aeroporto
Internacional
de Tóquio
羽田空港

Kawasaki Station

Yokohama
横浜市

Ichihara
市原市

Sodegaura
袖ヶ浦市



Tóquio
東京

Shibuya
渋谷区

Koto
江東区

Minato
港区

Urayasu
浦安市

Narashino
習志野市

Yotsukaido
四街道市

Setagaya
世田谷区

Shinagawa
品川区

Tokyo Disneyland
東京ディズニーランド

Chiba
千葉市

Ota
大田区

Kawasaki Station

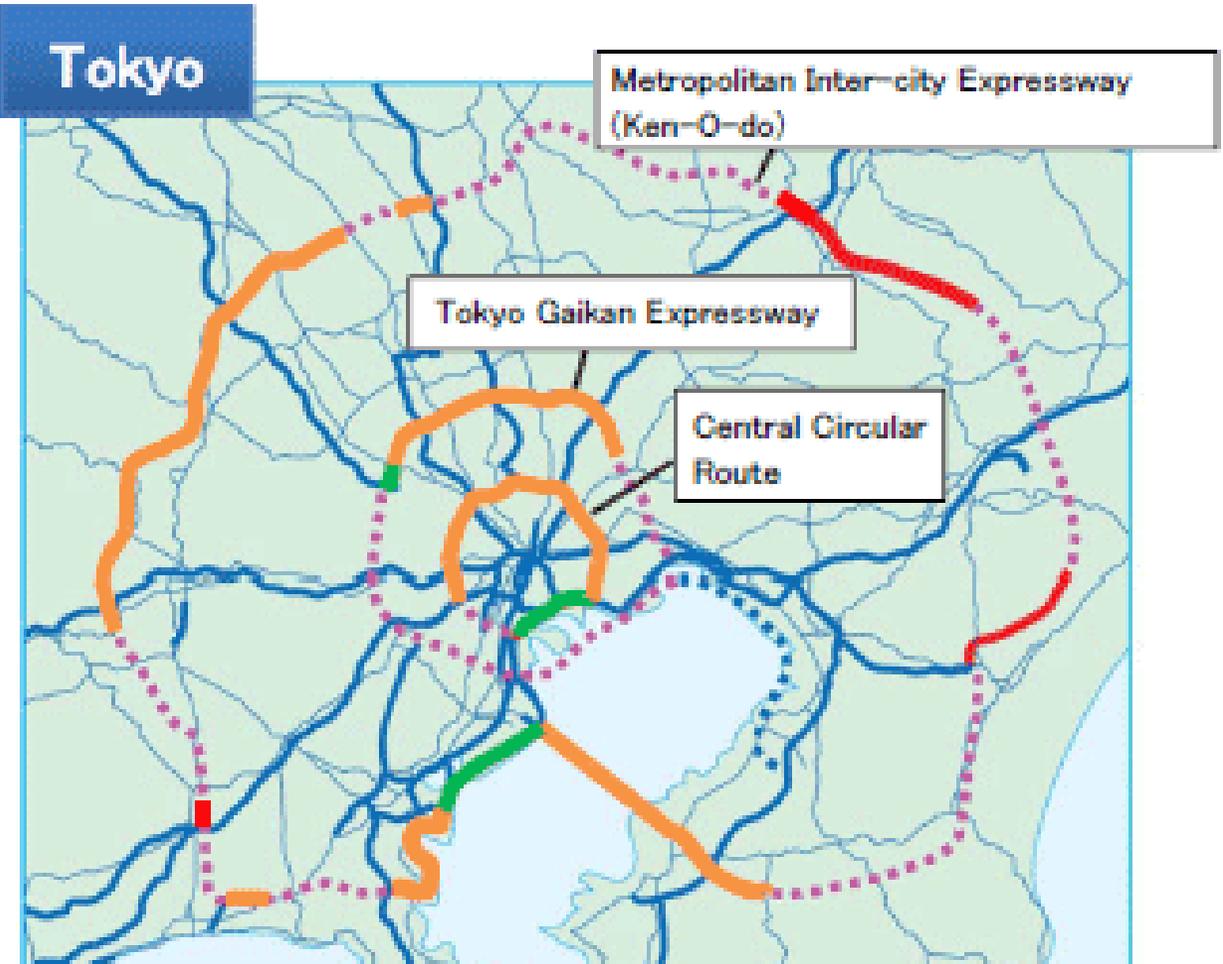
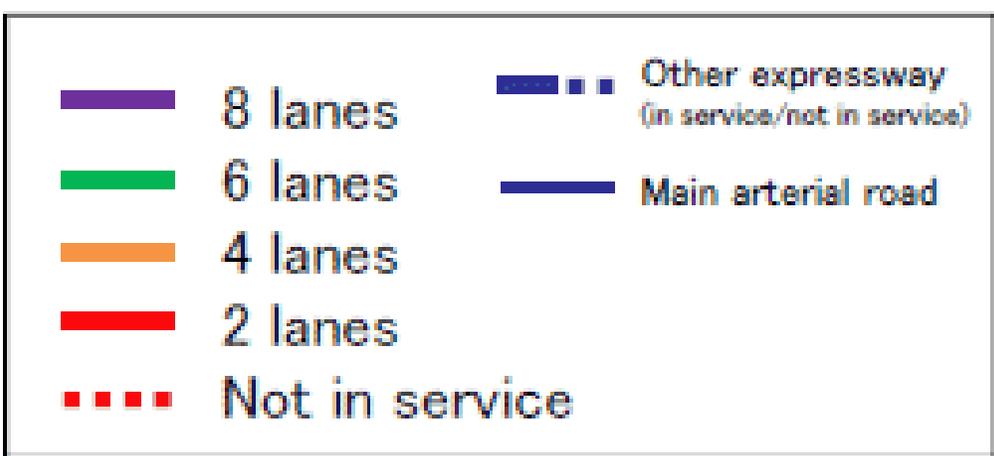
47 min
43,4 km

37 min
27,8 km

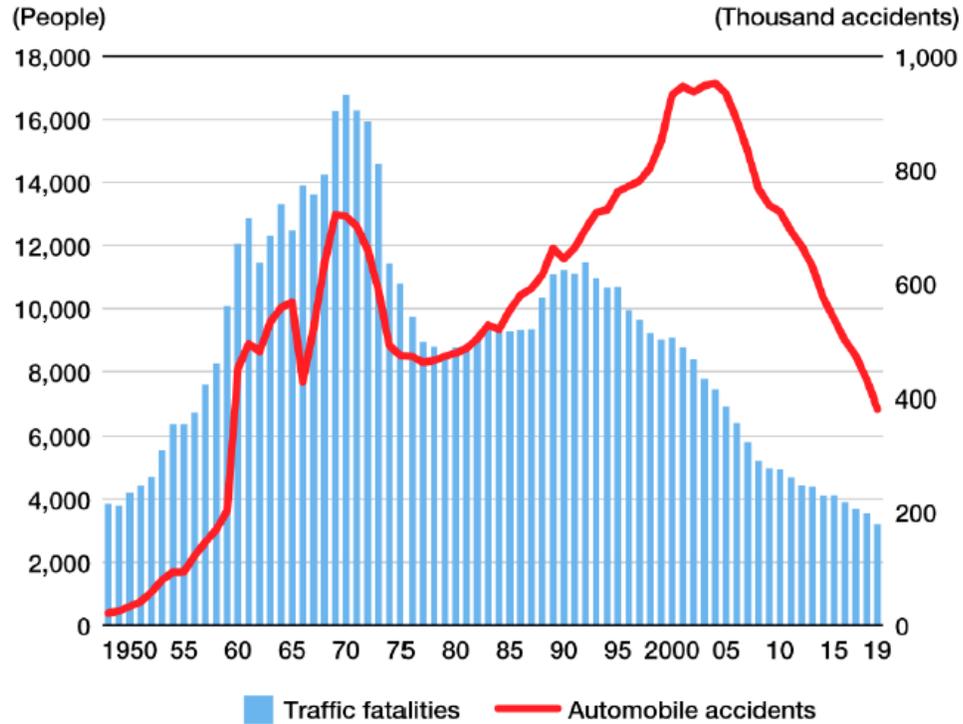
Yokohama
横浜市

Ichihara
市原市

Google

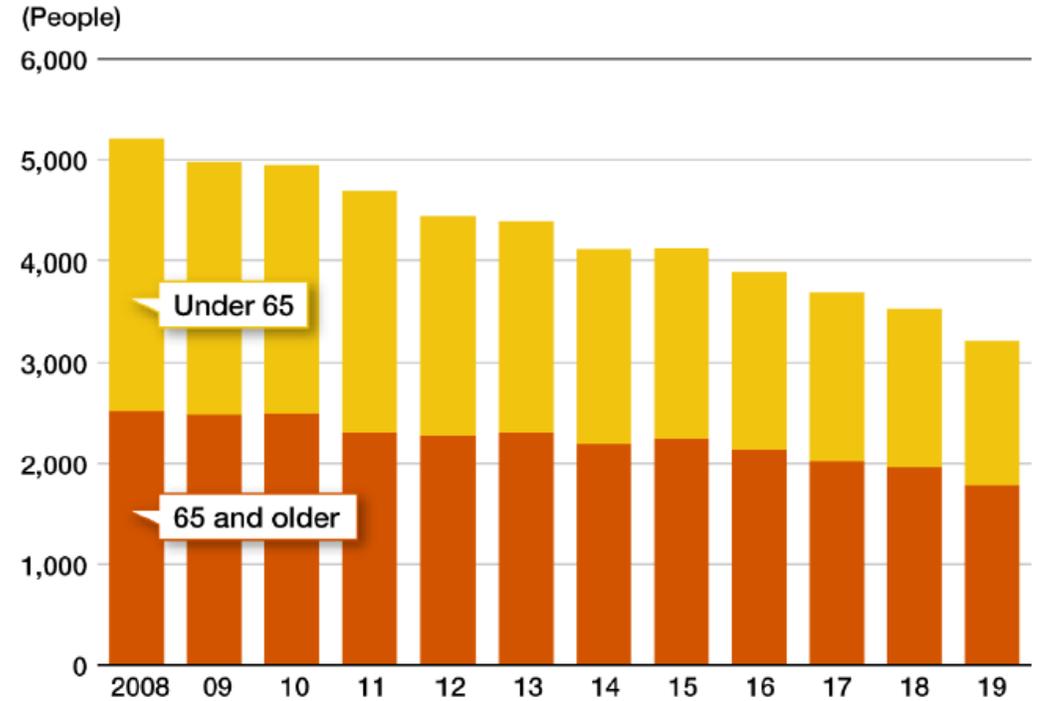


Number of Automobile Accidents and Traffic Fatalities in Japan



Created by *Nippon.com* based on data released by the National Police Agency

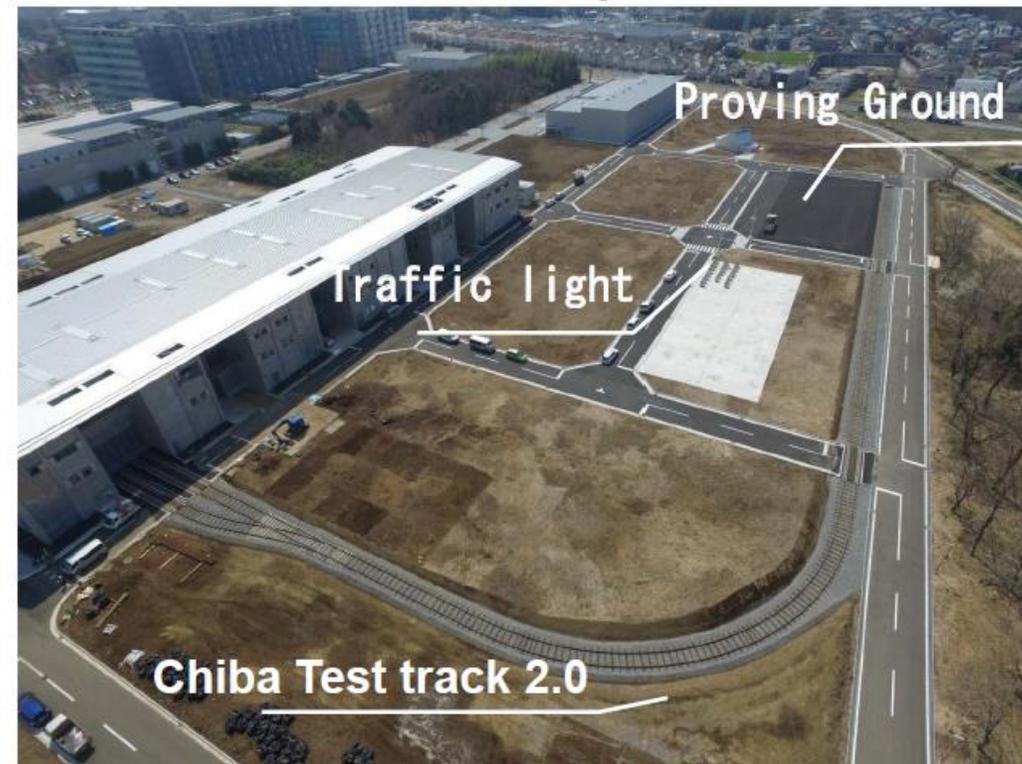
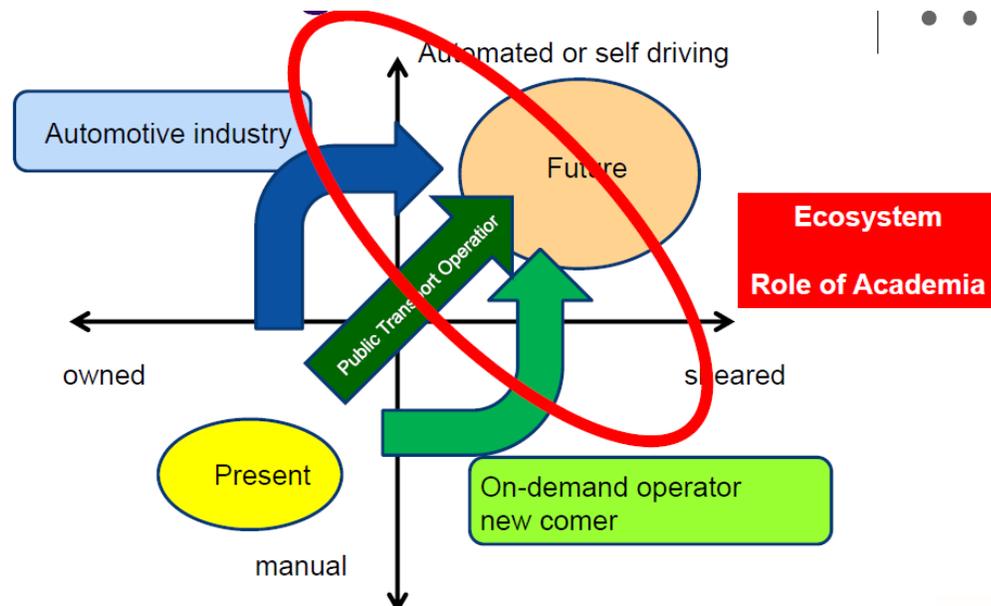
Traffic Fatalities Among Senior and Other Citizens in Japan



Created by *Nippon.com* based on data released by the National Police Agency

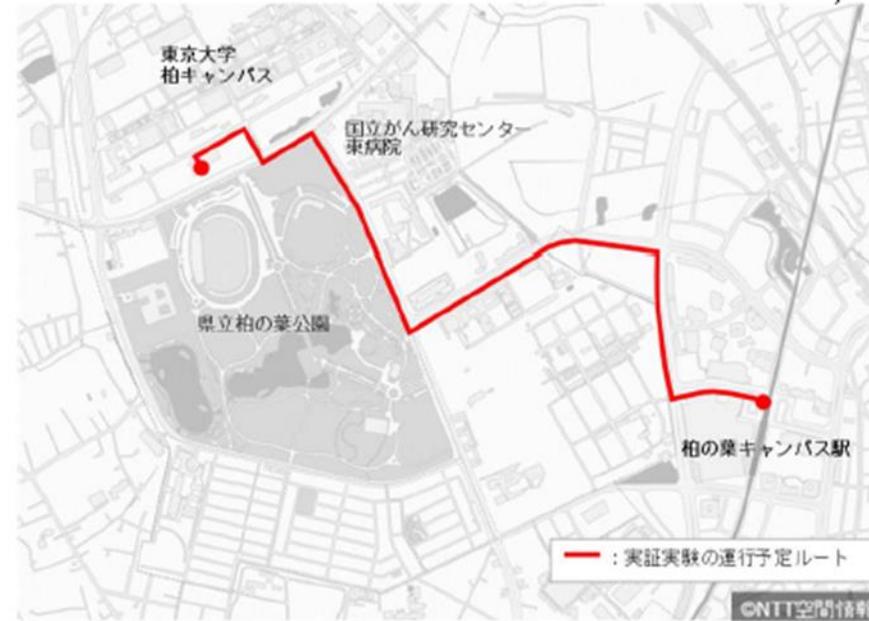


No Japão os **veículos autônomos** estão sendo desenvolvidos prioritariamente para **transporte coletivo** com operação dentro de estratégias de Mobility as a Service (MaaS).





Launched 5 months Automated bus business operation experiment on the public road in Nov. 1, 2019



- Between Kashiwanoha Campus Station of Tsukuba Express Railway and the University of Tokyo Kashiwa Campus
- Level 2



Veículos autônomos iniciaram testes em áreas pré-definidas de Tóquio em 2019.



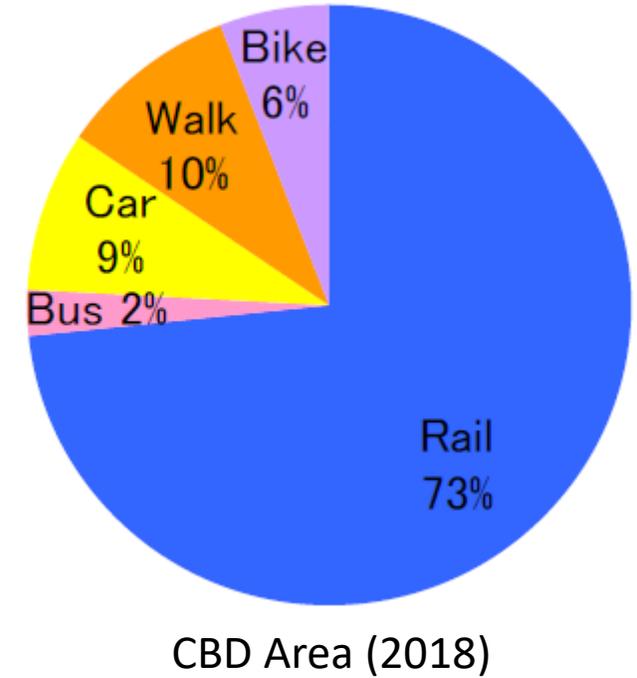
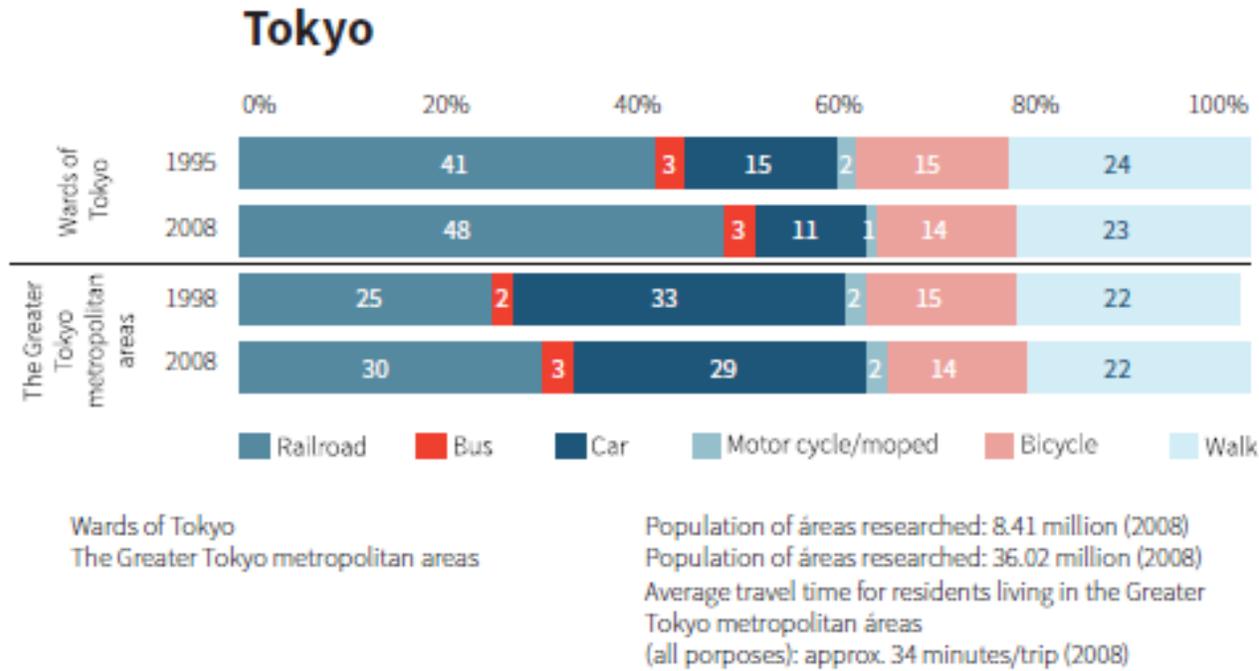
14 山手線
Yamanote Line
原宿・渋谷
品川方面
for Harajuku, Shibuya
& Shinagawa

新宿
代々木

13

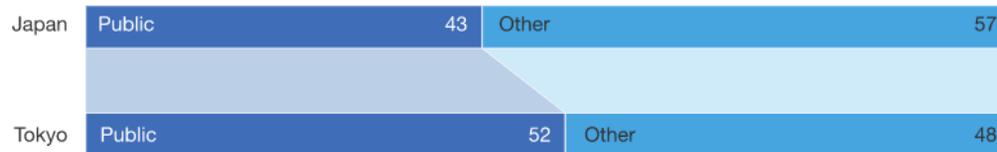
Transporte Público Coletivo

Figure 13 Transportation in Greater Tokyo Metropolitan Area



Travelers rely heavily on public transit in Japan, especially in megacities, such as Tokyo.

Share of passenger-kilometers by mobility mode, 2016, %



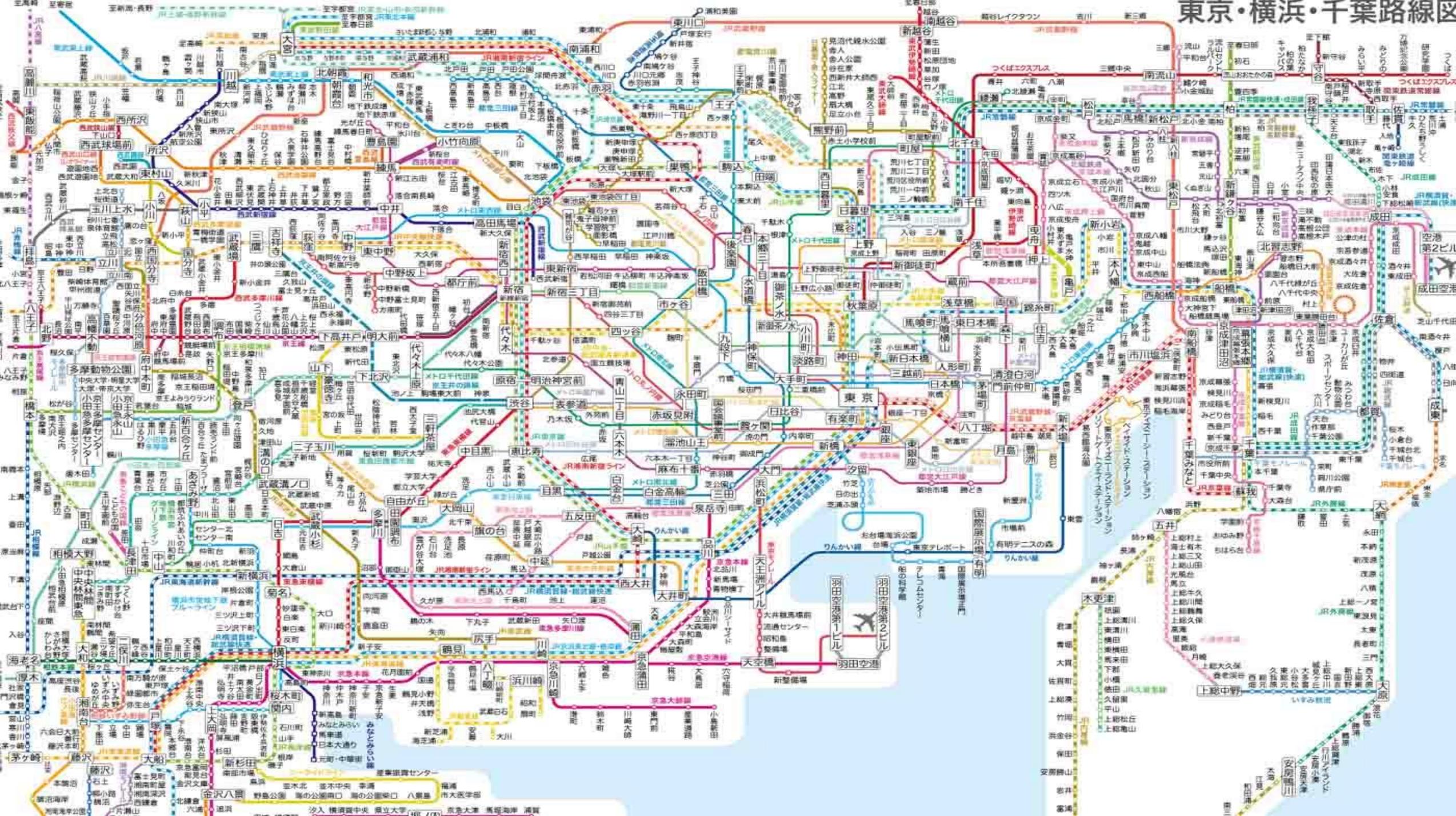
Source: Ministry of Land, Infrastructure, Transport and Tourism: annual report on changes in automotive distances traveled



Sem escala Not to scale
fevereiro/ 2014 february



東京・横浜・千葉路線図



Trilhos de Tóquio

133 linhas

1.684 estações

| Operator | Daily ridership | Annual ridership |
|----------------------------------|-------------------|-----------------------|
| East Japan Railway Company | 16,359,962 | 5,971,386,130 |
| Tokyo Metro | 7,422,095 | 2,709,064,675 |
| Tōkyū Corporation | 3,171,660 | 1,157,655,900 |
| Toei Subway | 3,128,718 | 1,141,982,070 |
| Tōbu Railway | 2,522,067 | 920,554,455 |
| Odakyū Electric Railway | 2,069,383 | 755,324,795 |
| Keio Corporation | 1,851,364 | 675,747,860 |
| Seibu Railway | 1,804,521 | 658,650,165 |
| Keihin Electric Railway (Keikyu) | 1,316,499 | 480,522,135 |
| Keisei Electric Railway | 786,063 | 286,912,995 |
| Sagami Railway | 634,899 | 231,738,135 |
| Total | 41,067,231 | 14,989,539,315 |









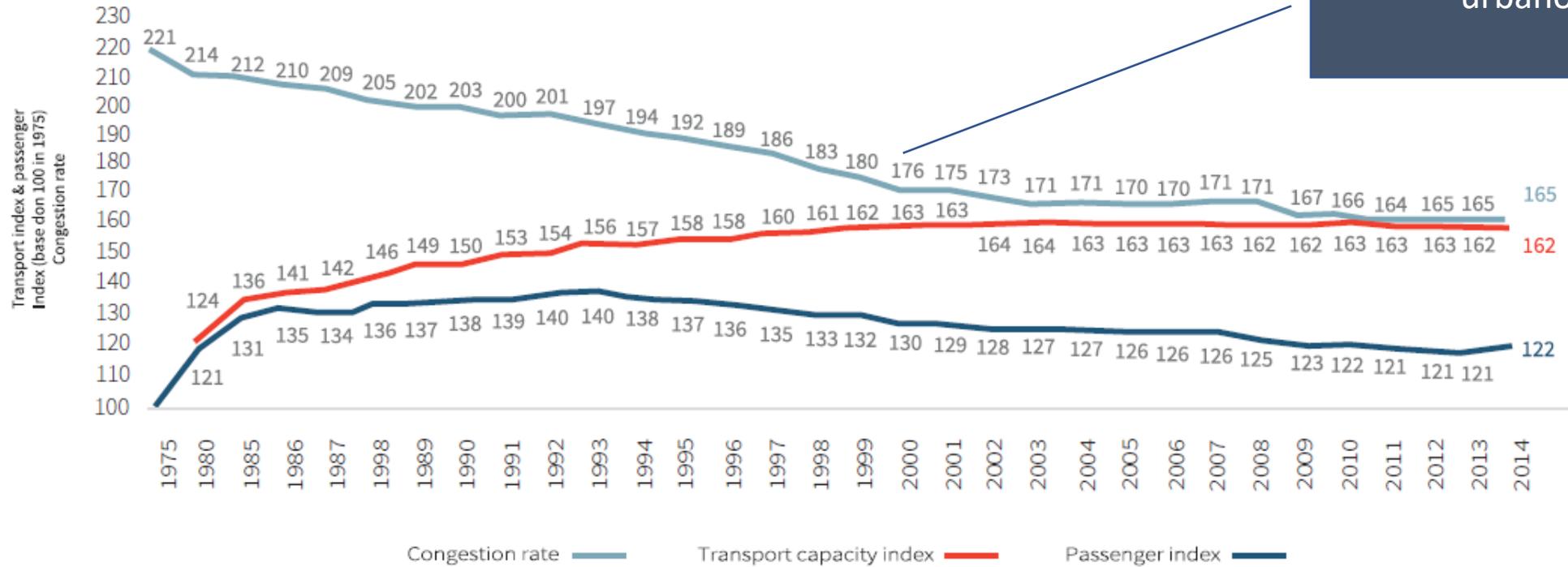
Peak



Off peak

Figure 11 Trends in average train congestion rate for major 31 track sections

Duplicação de trilhos urbanos



Source: MLIT



上26 上野公団行 2019年4月10日現在

| 車番 | 平日 | 土曜 | 休日 |
|----|---------|-------|-------|
| 1 | | | |
| 2 | 18 58 | 18 58 | 28 |
| 3 | 27 53 | 27 55 | 7 35 |
| 4 | 18 44 | 17 40 | 3 38 |
| 5 | 14 43 | 20 | 21 |
| 6 | 15 54 | 6 51 | 6 51 |
| 7 | 26 | 40 | 31 |
| 8 | 2 31 | 13 43 | 5 38 |
| 9 | 0 32 56 | 8 35 | 8 38 |
| 10 | 24 56 | 7 44 | 16 48 |
| 11 | 28 57 | 30 | 23 57 |
| 12 | 28 | 15 54 | 33 |
| 13 | 10 56 | 48 | 23 |
| 14 | 5 | 38 | 45 |
| 15 | 8 52 | 48 | 47 |
| 16 | 41 | 41 | 41 |
| 17 | 29 | 23 | 29 |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |
| 26 | | | |

Japan Train Station Daily Entry and Exit





JR 新宿駅

LUMINE

新宿駅 Shinjuku Station

Fukushima

UNIQLO

DUTY FREE





JR 新宿駅
JR東日本 Shinjuku Station

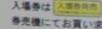
南口
South Entrance
南入口 남쪽 입구

防犯カメラ作動中

！ 入場券のご案内

駅構内をご利用の際は
(店舗利用・通り抜け等)
入場券が必要です

入場券は  マークがついた
券売機にてお買い求めいただけます
新宿駅長

防犯カメラ作動中

| | | | |
|---------------|-------|-------|----|
| 線路 | 11号 | 14:30 | 由井 |
| 特急成田エクスプレス31号 | 13:40 | 成田空港 | |
| 特急成田エクスプレス33号 | 14:10 | 成田空港 | |
| 中央本線 (特急・臨時) | | | |
| 特急あずさ | 19号 | 14:00 | 松本 |
| 特急かいじ | 11号 | 14:30 | 甲府 |

| | |
|--------|------------|
| 中央線 快速 | 中野・立川・高尾方面 |
| 13:44 | OTSUKI 12 |
| 13:46 | HACHOJI 12 |

| | |
|--------|--------------|
| 中央・総武線 | 水戸橋・秋葉原・千原方面 |
| 13:44 | TSUDANUMA 13 |
| 13:49 | CHIBA 13 |

| | |
|--------|-------------|
| 中央・総武線 | 東中野・中野・三鷹方面 |
| 13:44 | 中野 16 |
| 13:49 | 三鷹 16 |

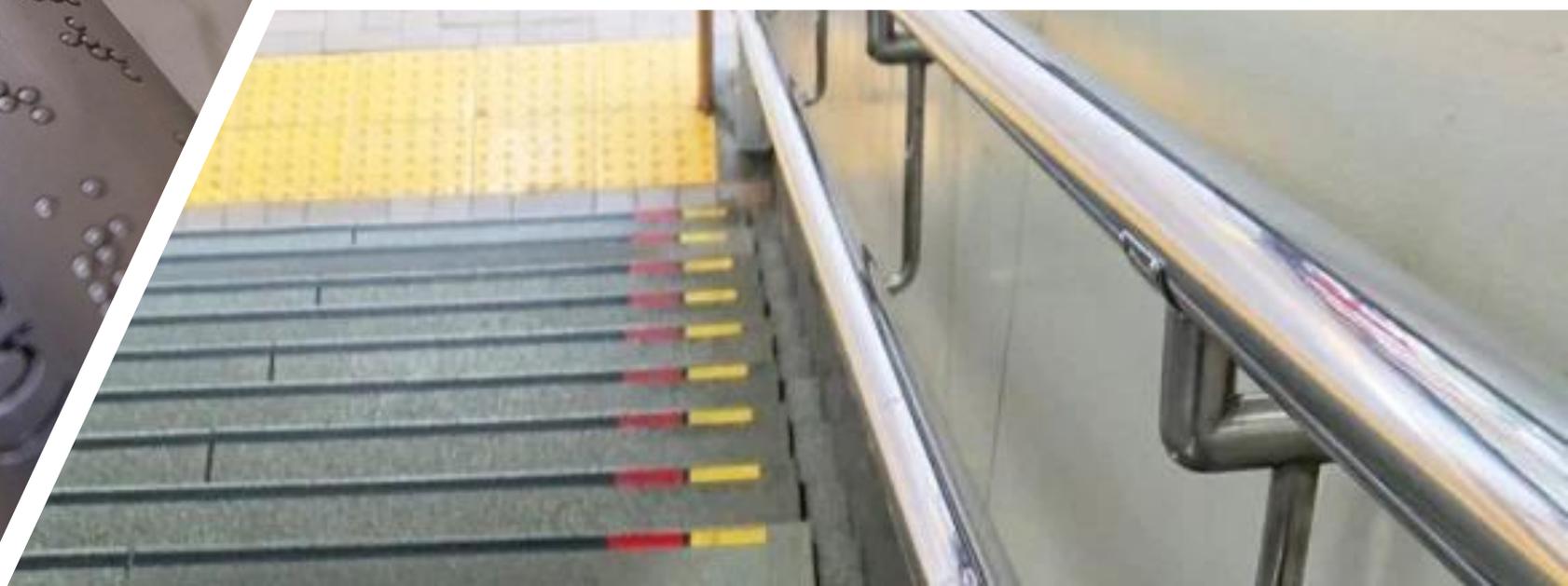
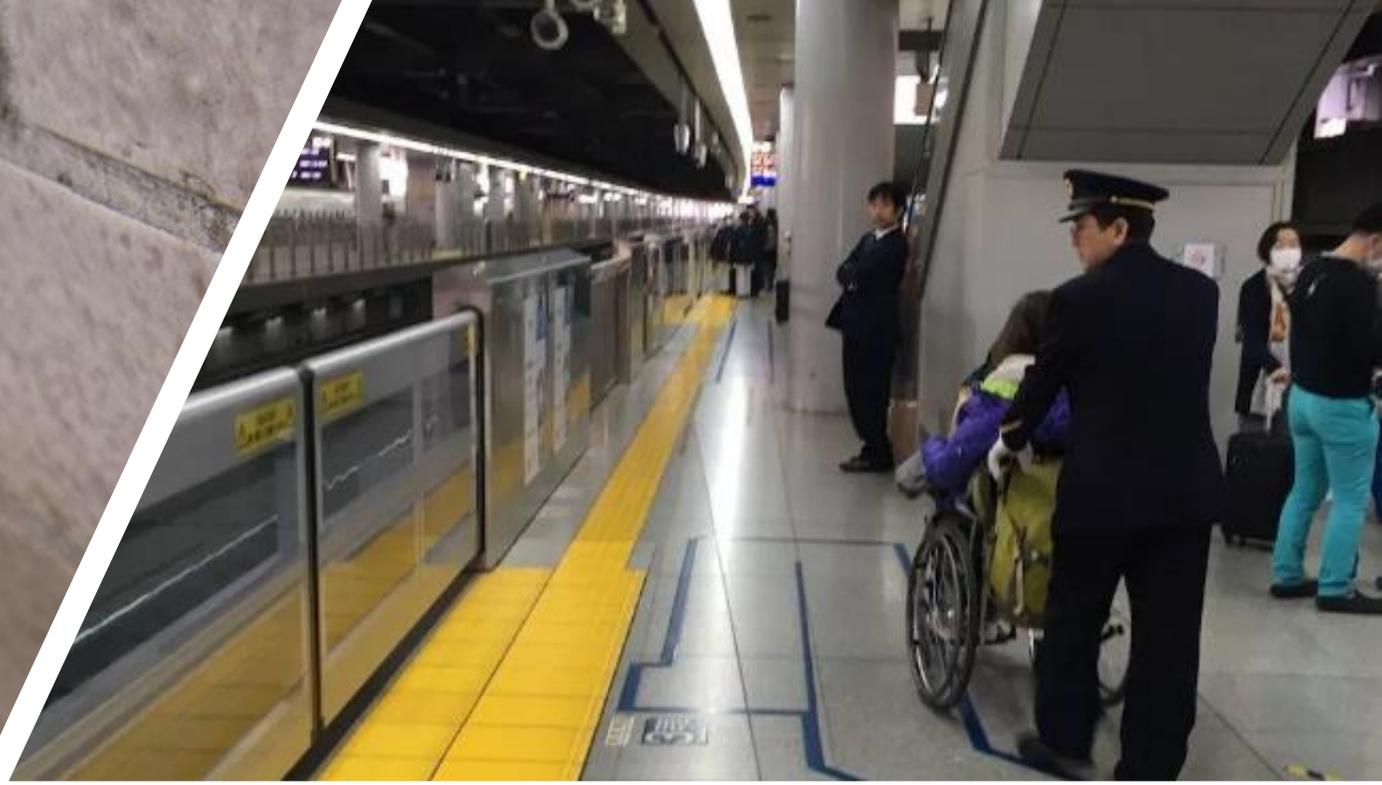


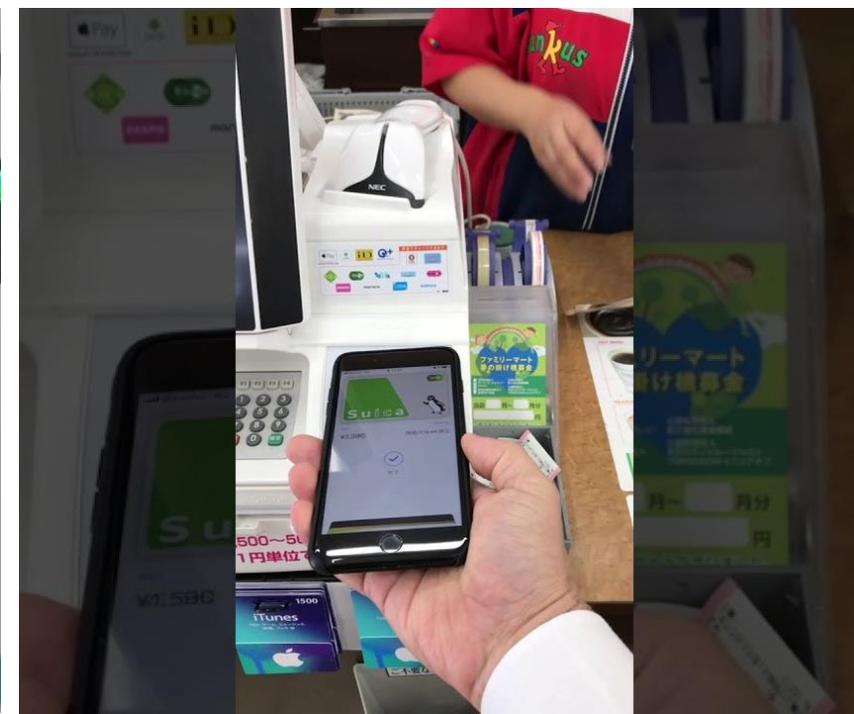
KIOSK
NewDays

は、KIOSK
NewDays











Não há **subsídio** público
para o transporte
público em Tokyo!

Tokyo-area Private Railways



Length of developed rail network in the Tokyo Metropolitan Area after 2000

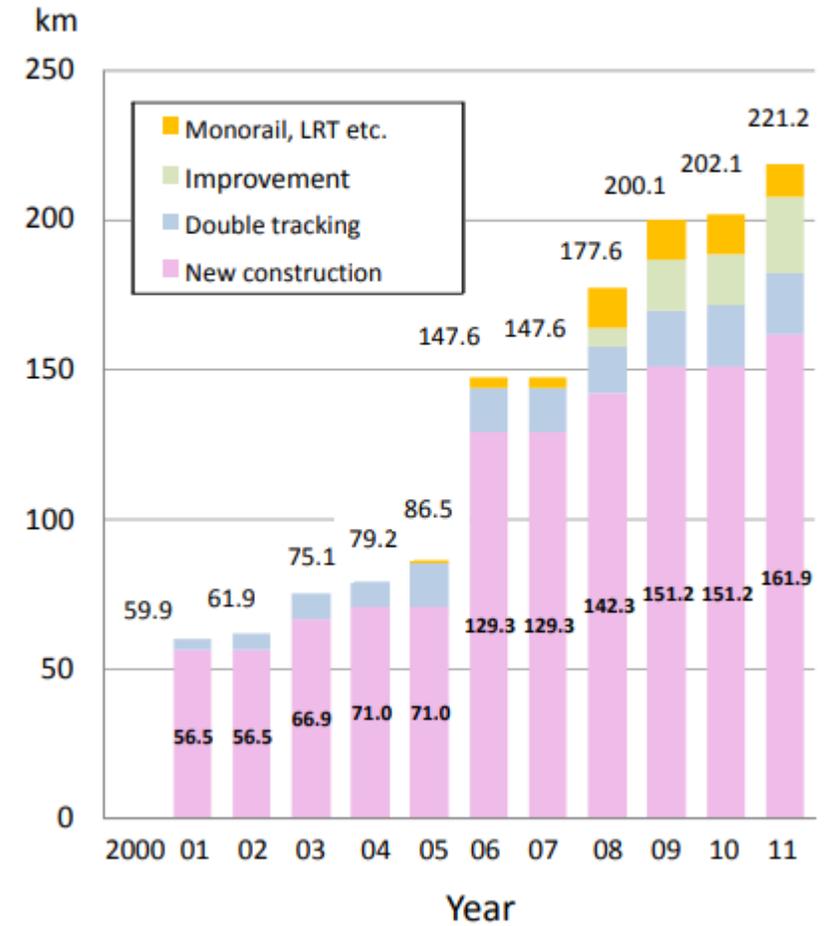


Table 1-4 Consolidated Operating Income of Kintetsu Group Holding
(JPY millions)

| Segment information | 2014/3 | 2018/3 |
|---|------------------|------------------|
| Operating income | 54,623 | 64,643 |
| Transportation | 30,371 | 29,206 |
| Real estate | 12,201 | 16,297 |
| Merchandise sales | 4,829 | 7,080 |
| Hotel and leisure | 5,799 | 9,627 |
| Others | 1,058 | 1,611 |
| Operating revenue | 1,246,360 | 1,222,779 |
| Transportation | 222,577 | 228,186 |
| Railways | 158,308 | 158,089 |
| Bus services | 34,326 | 34,677 |
| Taxi services | 11,554 | 11,497 |
| Others | 18,389 | 23,923 |
| Real estate | 159,311 | 149,565 |
| Real estate sales | 100,327 | 68,308 |
| Building Business | 22,250 | 45,849 |
| Building management | 42,630 | 40,966 |
| Merchandise sales | 382,037 | 395,817 |
| Department stores | 275,630 | 281,817 |
| Stores and restaurants | 108,102 | 115,286 |
| Hotel and leisure | 500,475 | 478,669 |
| Hotels | 48,931 | 61,183 |
| Travel Agents | 436,883 | 405,172 |
| Cinema | 3,216 | 3,544 |
| Aquarium | – | 9,015 |
| Japanese-style hotel and leisure facility | 11,593 | – |

Source: Kintetsu Group Holding, Fact Book 2018

Table 1-6 Operating Income of the Tokyu Corporation
JPY millions

| Consolidated Segment information | 2008/3 | 2018/3 |
|---|----------------|----------------|
| Operating income | 86,734 | 82,917 |
| Transportation | 33,907 | 29,002 |
| Real Estate | 24,945 | 32,357 |
| Life Services | 14,903 | 15,999 |
| Hotel and Resort | 6,893 | 5,103 |
| Business support | 6,035 | 0 |
| Others | 51 | 456 |
| Non-Consolidated Segment information | | |
| Operating income | 59,042 | 55,980 |
| Railway operation | 32,207 | 24,609 |
| Real estate | 26,835 | 26,799 |
| Real estate sales | 12,387 | 7,011 |
| Real estate leasing | 14,447 | 19,787 |
| Other business | 0 | 4,572 |
| Operating revenue | 256,167 | 269,564 |
| Railway operation | 145,938 | 154,870 |
| Real estate | 110,229 | 95,593 |
| Real estate sales | 56,595 | 20,286 |
| Real estate leasing | 53,633 | 75,066 |
| Other business | 0 | 19,101 |

Source: Tokyu Fact Book 2018.

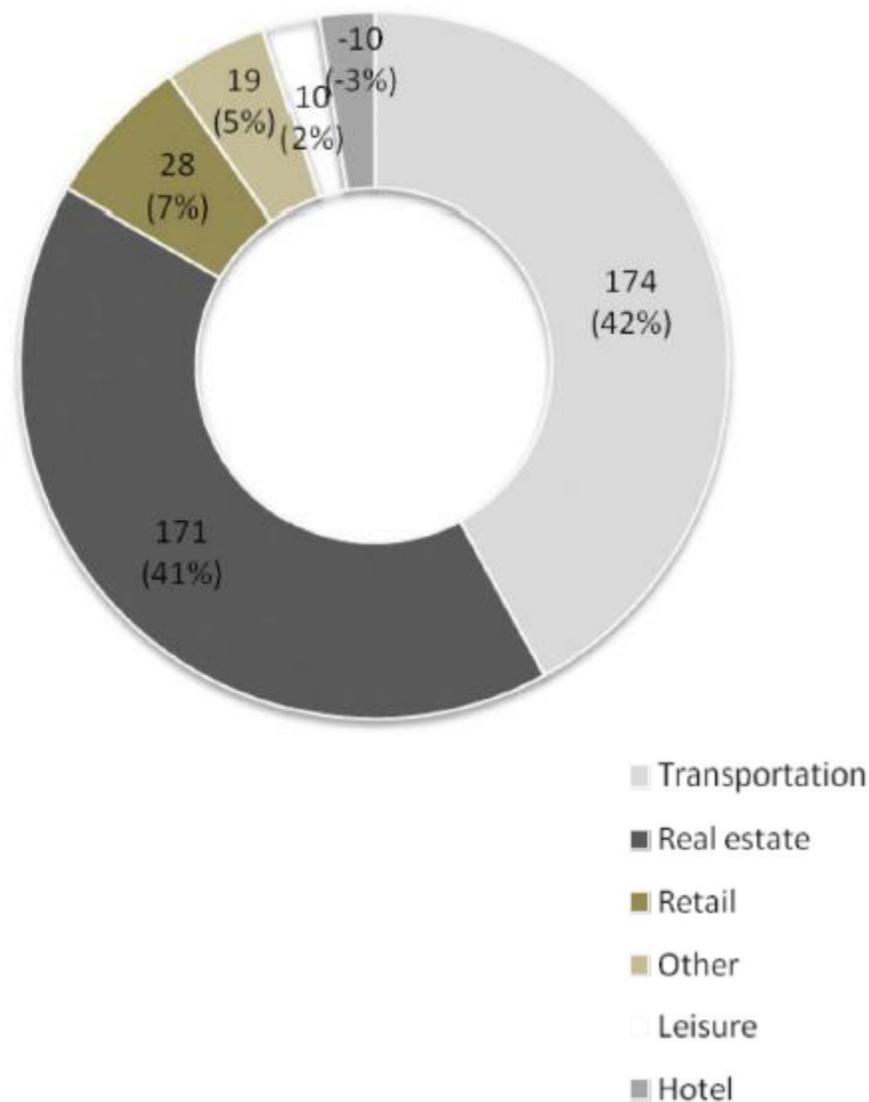


Table 1-5 Major Office Properties of the Tokyu Corporation (March 2018)

| Project name | Planned | Total floor | | Basement |
|---|--|-------------|-----------------|----------|
| | completion date | area (m2) | Building height | levels |
| 1 Queen's Square Yokohama | Jul. 1997 | 496,596 | 36 | 5 |
| 2 SHIBUYA SCRAMBLE SQUARE (Shibuya Station Block) | FY2019, (East building) FY2027 (Central, West building) | 276,000 | 47 | 7 |
| 3 Futako Tamagawa Rise (Phases I) | Nov. 2010 | 106,750 | 16 | 2 |
| 4 (Phases II) | June. 2015 | 157,016 | 30 | 2 |
| 5 Shibuya Hikarie | Apr. 2012 | 144,546 | 34 | 4 |
| 6 Shibuya Mark City | Feb. 2000 | 138,620 | 23 | 1 |
| 7 SHIBUYA STREAM (Shibuya Station) | 2018 Autumn | 116,700 | 35 | 4 |
| 8 Cerulean Tower | Mar. 2001 | 105,950 | 41 | 6 |
| 9 Setagaya Business Square | Sep. 1993 | 94,374 | 28 | 2 |
| 10 Tokyu Capitol Tower | Jul. 2010 | 87,428 | 29 | 4 |
| 11 Carrot Tower | Nov. 1996 | 77,365 | 27 | 5 |
| 12 JR Tokyu Meguro Building | Mar. 2002 | 52,221 | 17 | 4 |
| 13 SHIBUYA CAST.(Miyashitacho Plan) | Apr. 2017 | 34,981 | 16 | 2 |
| 14 Aoyama Oval Building | Oct. 1988 | 29,296 | 16 | 2 |
| 15 Yaesu Center Building | Sep. 1992 | 17,243 | 14 | 3 |
| 16 Shibuya Higashiguchi Building | Oct. 1980 | 17,037 | 11 | 3 |
| 17 Shin Mizonokuchi Building | Jan. 1988 | 16,784 | 5 | 1 |
| 18 Tokyu Bancho Building | Sep. 2011 | 16,756 | 11 | 0 |
| 19 Gotanda Fujikura Building | Oct. 1977 | 12,858 | 9 | 1 |

Source: Tokyu Fact Book 2018.

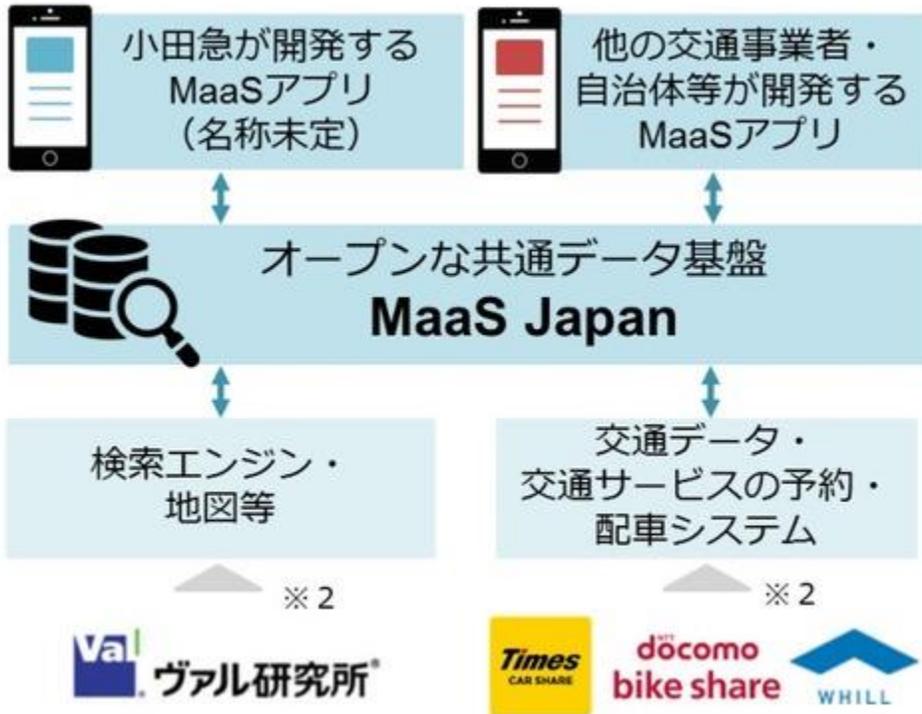
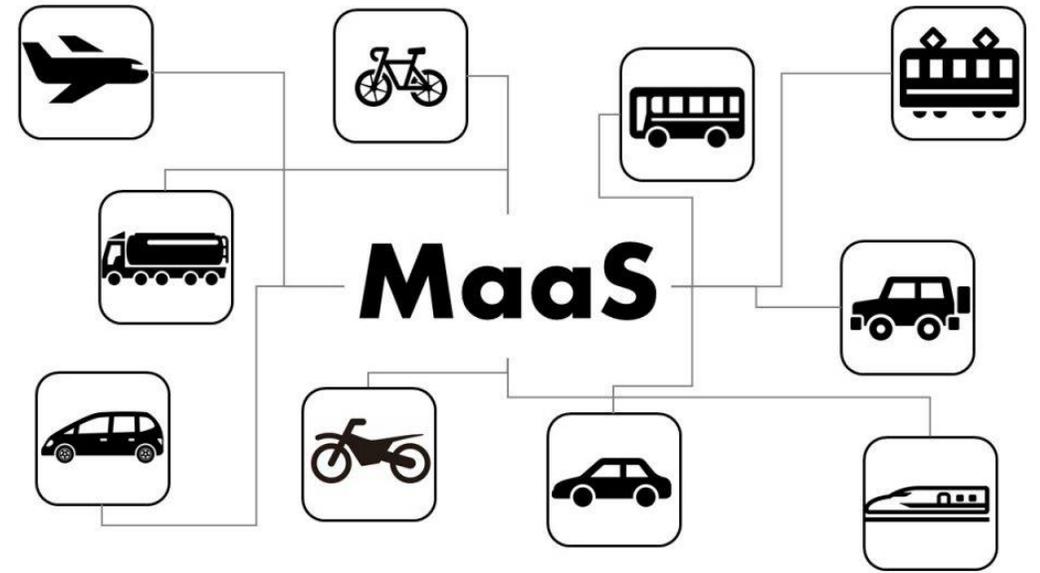
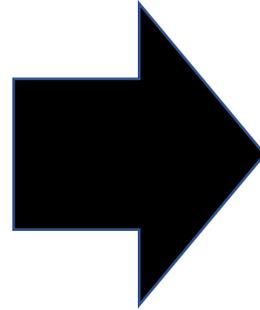
Table 1-3 Performance by the Major 16 Railway Operators in Japan in FY2017

| | Number of passengers per day (million) | Total railway operation km | Number of station | Operating revenue of transportation (billion yen) | Consolidated operating Revenue (billion yen) | Consolidated operating profits (billion yen) | |
|--------|--|----------------------------|-------------------|---|--|--|------|
| Tóquio | Tokyo Metro | 7.4 | 195 | 179 | 376 | 426 | 97 |
| | Tokyu | 3.2 | 105 | 97 | 155 | 1,139 | 83 |
| | Tobu | 2.5 | 463 | 204 | 163 | 570 | 67 |
| | Odakyu | 2.1 | 121 | 70 | 121 | 525 | 51 |
| | Keio | 1.8 | 85 | 69 | 86 | 435 | 39 |
| | Seibu | 1.8 | 177 | 92 | 103 | 531 | 64 |
| | Hankyu | 1.8 | 144 | 90 | 103 | 760 | 105 |
| | Kintetsu | 1.6 | 501 | 286 | 157 | 1,223 | 65 |
| | Keikyu | 1.3 | 87 | 73 | 85 | 316 | 29 |
| | Meitetsu | 1.1 | 444 | 275 | 93 | 605 | 47 |
| | Keihan | 0.8 | 91 | 89 | 56 | 322 | 31 |
| | Keisei | 0.8 | 152 | 69 | 67 | 255 | 30 |
| | Hansin | 0.7 | 49 | 51 | 36 | n.a. | n.a. |
| | Nankai | 0.7 | 155 | 100 | 61 | 228 | 34 |
| | Soutetsu | 0.6 | 36 | 25 | 33 | 261 | 31 |
| | Nishitetsu | 0.3 | 106 | 72 | 22 | 375 | 20 |

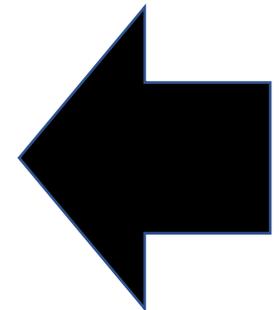
Source: Association of Japanese Private Railways (2018) Oote Mintetsu No Sugao (actual status of the major private railway companies)



Conceito



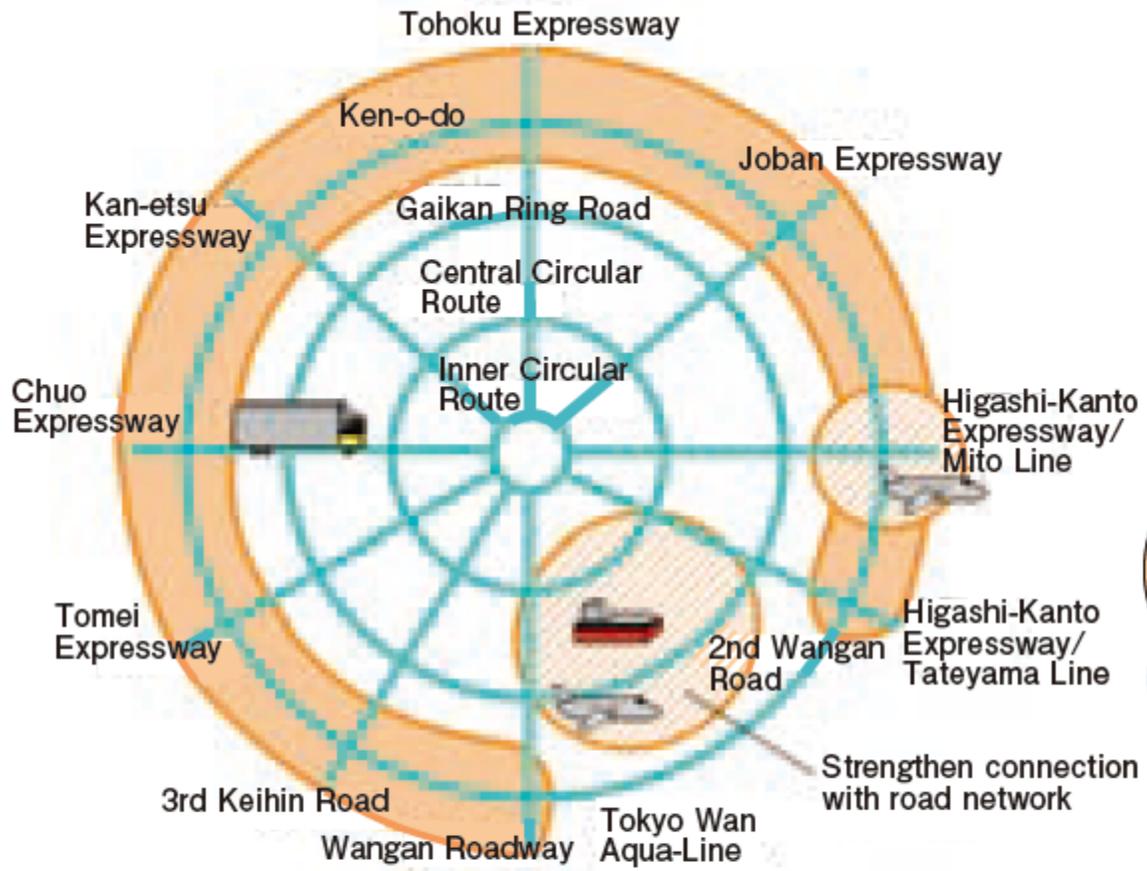
Aplicação





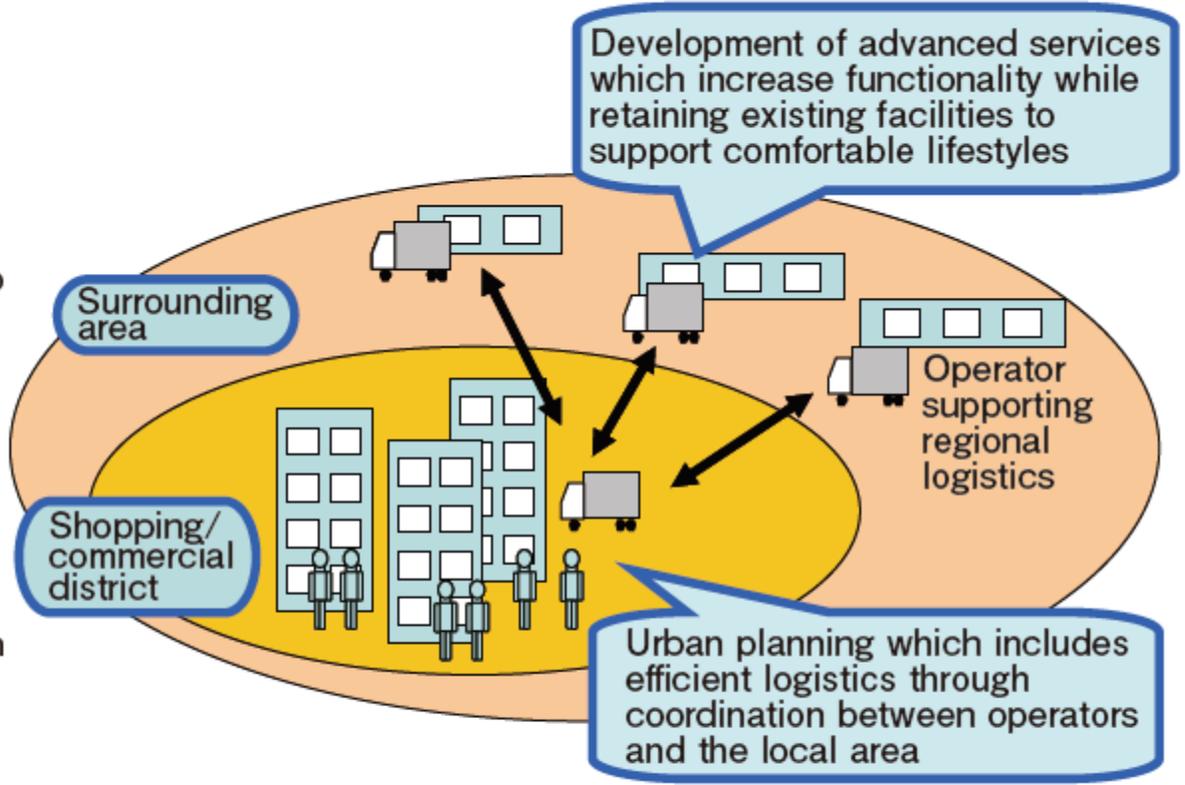
Transporte de Carga Urbana





 Logistics Hub (Around Ken-o-do)
  Logistics Hub (Around Ken-o-do)

Note: This is a schematic image of TMG's future vision/period for distribution based on policies such as the Ministry of Land, Infrastructure, Transport and Tourism's policy for development of the 3 ring expressways and 9 radial roads.



Efficient logistics supporting comfortable lifestyles

Development of a Regional Distribution Network of Land, Sea, and Air Transportation







PUDO
Pick Up & Drop Off station
by Packcity Japan



ご利用方法

- 1 タッチパネルの受け取りボタンにタッチし、受け取り用パスワードを入力してください。
- 2 タッチパネルに指でサインを記入してください。
- 3 該当するロッカーの扉が開くので、荷物をお受け取りください。
！ ロッカーの扉は確実に閉めてください。

Packcity
JAPAN

TOYOTA
豊田自動織機





BIG DATA





Door to Door Transportation and the “Right Now, Right Here and Just for Me” Information Service

From Station to Eki-naka (in-station) and further to Machi-naka (in-city)

JR East Mechatronics' cutting-edge technology will support your daily life and your home town.

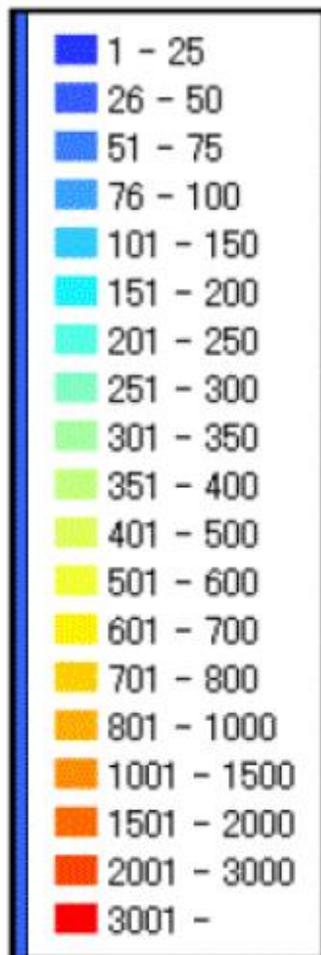


4th Open Data Challenge for Public Transportation in Tokyo

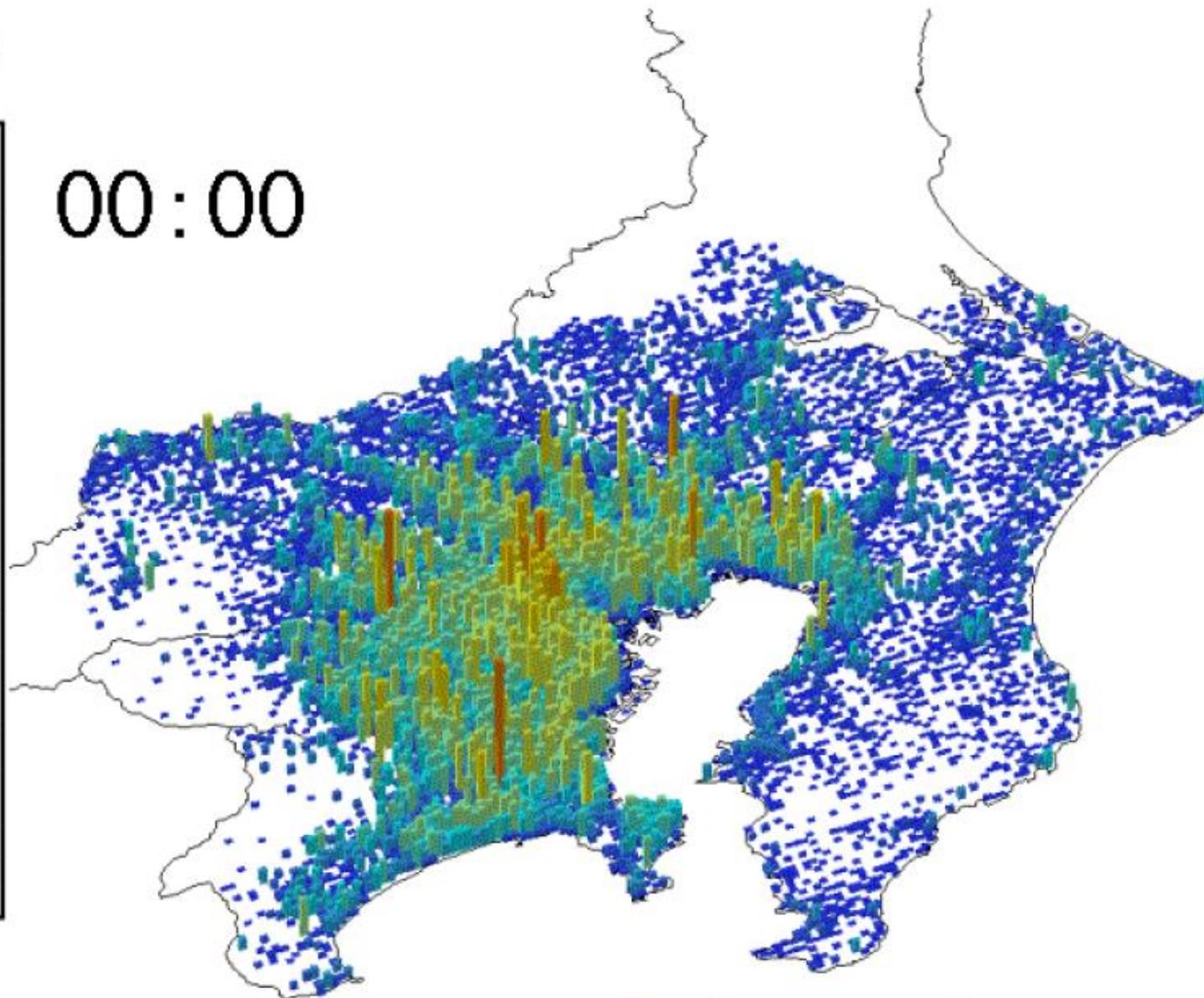
Total amount of prizes
3,000,000 JPY



人数 / 1km²

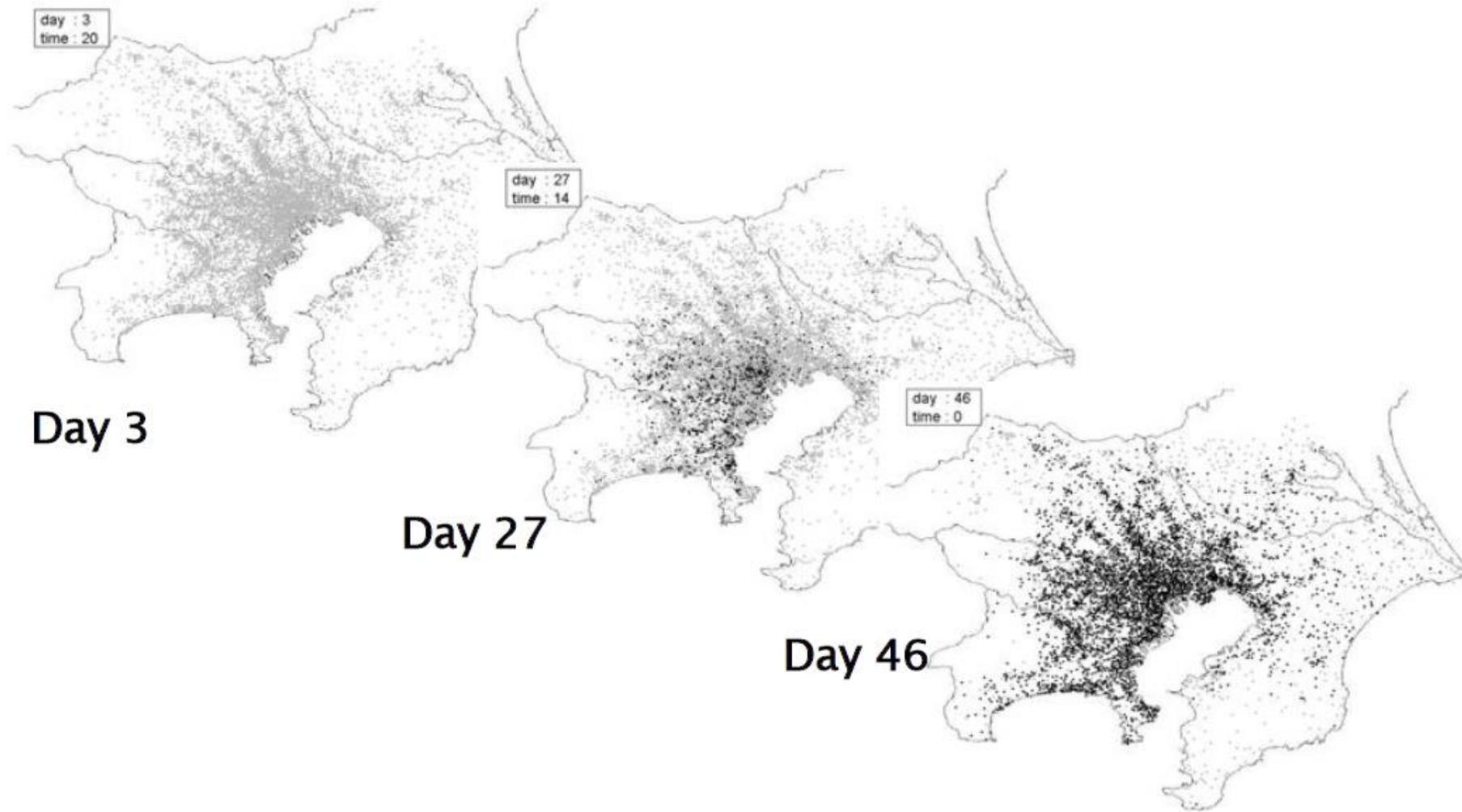


00:00



3D visualization with 1-km² mesh

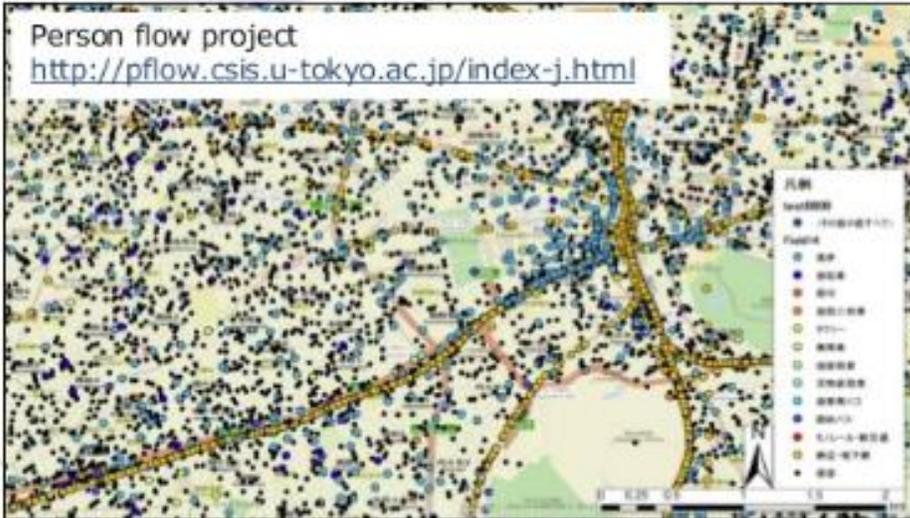
Pandemic simulation based on PFLOW



Aihara & Suzuki lab in IIS, Univ. of Tokyo

1. Available Japanese MGD for urban monitoring

MGD about person distributions and flows



Person flow data



Various mobile census



Pseudo person flow data based on SNS tweets with geo tags



Micro population census

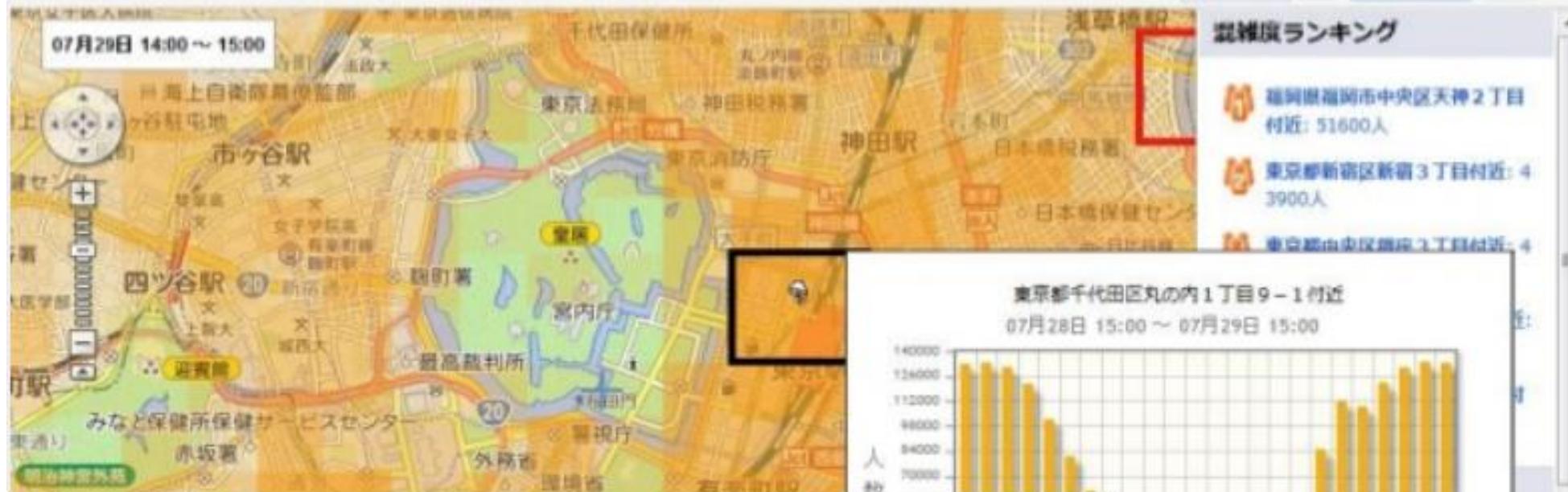
Congestion analysis (Zenrin Data Com Co., Ltd.)

いつもNAVI ラボ  混雑度マップ

混雑度マップ | 地図から住所検索 | ビルからテナント検索 | もっと見る

人気スポットの混雑状況: ディズニーランド USJ 東京駅 渋谷駅 梅田駅 歌舞伎町

いいね! 57 ツイートする 330



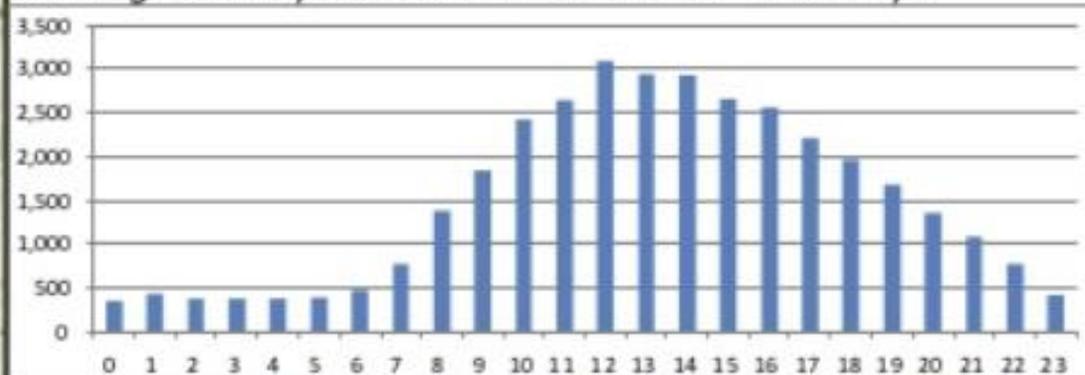
We can monitor estimate populations of every hours by 250m square grids (updated everyday).

- Real time data based on GPS logs by mobile phones
- It covers throughout Japan.

Application 1: Estimation of Dynamic population in commercial areas

35

Number of Shops : 198
Average number of daily visitors : 3,039
Average Hourly number of visitors in weekdays



Time-series numbers of visitor in each commercial area



人々が見える。
街が分かる。
社会を変える。

04:20 p.m.

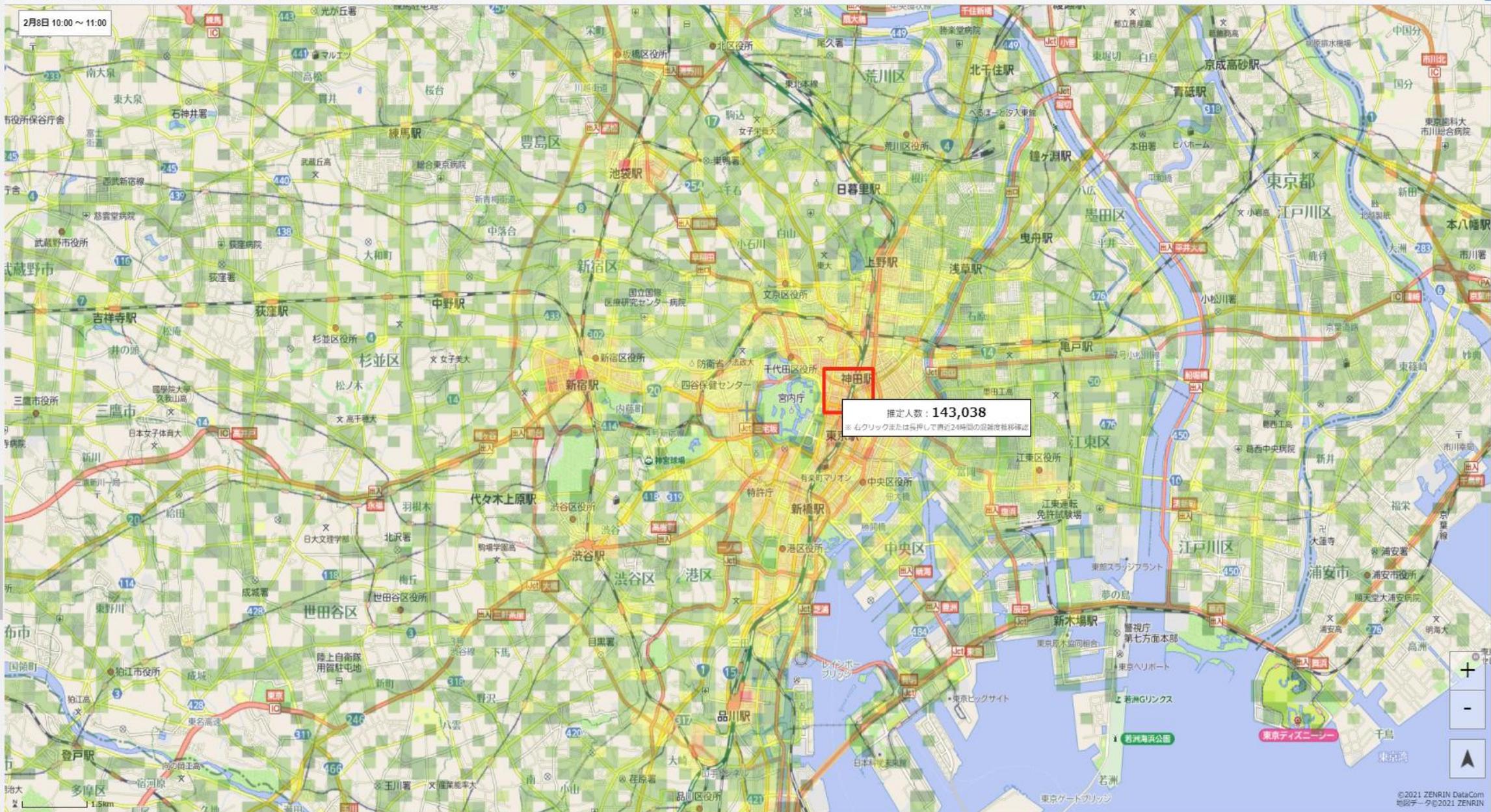
新型コロナウイルス感染症に関する情報はこちら



人気スポットの混雑状況: ディズニーランド USJ 東京駅 渋谷駅 梅田駅 歌舞伎町 東京スカイツリー

Like 251 ツイート

2月8日 10:00 ~ 11:00



推定人数: 143,038

混雑度マップとは

混雑統計紹介ページ
GPS対応携帯電話をお持ちの方から許諾を得て送信される位置情報の分布を、日本の総人口に当てはめてメッシュ化して地図上に重ね合わせたものです。また、集団の人数のみをあらわす人口統計情報であるため、混雑度マップからお客様個人を特定することはできません。

混雑状況

※推奨ブラウザ: Internet Explorer8以上、Firefox 3.5以上

- 15,000人以上
- 12,000~15,000人
- 9,000~12,000人
- 5,000~9,000人
- 3,000~5,000人
- 2,000~3,000人
- 1,000~2,000人
- 500~1,000人
- 100~500人

地図上を右クリックまたは長押しすると、直近24時間以内の混雑度の推移を確認できます。

※数値は推測人数です。
※縮尺が広域の場合、混雑状況の分布は表示されません。
※水深情報提供元: 海上保安庁 海洋情報部

詳しい使い方

混雑度ランキング

Obrigado pela
atenção!

Sideney Schreiner

sideney.schreiner@ews.eng.br

www.ews.eng.br