Highway Economic Effects Research and City Logistics in Japan

Table of contents

1. Effects of Road Improvements

(1) Classification of the effects of road improvements

- There are various effects produced by road improvements.

- The effects of road improvements are classified by the following methods:

  - Method of classifying into direct effects generated by the use of roads, and indirect effects enjoyed by the public in general including those who do not use roads directly

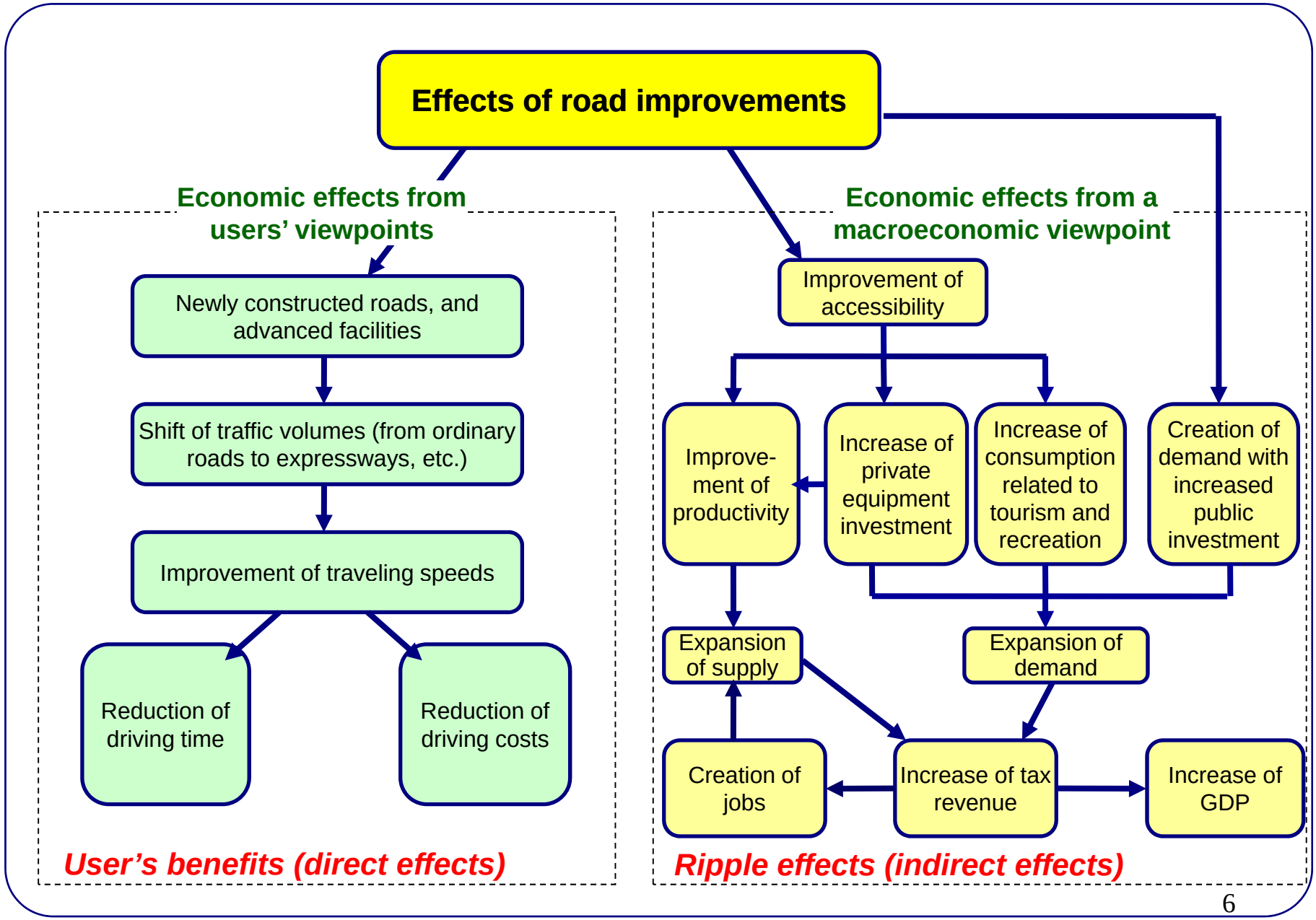
  - Method of classifying into flow effects **(the effects of demand creation)**, which bring about an increase of GDP because government expenditures for road improvements create effective demand, and stock effects **(the effects of productivity)**, which are generated from the original functions of roads after roads are constructed

- When the effects of road improvements are classified into direct and indirect effects, the direct effects correspond roughly with benefits measured by cost-benefit analyses*.

* Cost-benefit analyses: Cost-benefit analyses should be conducted based on the Cost-benefit Manual (issued by the City and Regional Development Bureau, the Road Bureau of the Ministry of Land, Infrastructure and Transport in August 2003)

Example of Classification

Stock effects	Effects in response to traffic functions	Direct effects	① Reduction of driving time ② Saving of driving costs and fuels ③ Reduction of traffic accidents ④ Others (ensured punctuality, drivers' reduced fatigue, increased comfortable driving, etc.) and other effects
		Indirect effects	① Reduction of transportation costs (reduction of commodity prices) ② Effects of increasing productivity ③ Increased tax revenues due to increased productivity ④ Increased income and employment due to increased productivity ⑤ Shift to regional development including the construction of factories, and residential development ⑥ Promotion of the use of land in roadside areas ⑦ Increased opportunities in daily lives due to expanded areas for commuting, schooling and shopping ⑧ Increased convenience of public facilities, and promotion of advanced medical care ⑨ Reduction of environmental burdens ⑩ Settlement and increase of the population ⑪ Reinforced exchanges and cooperation among people in each area and other effects
	Effects in response to spatial functions		① Formation of social, public spaces ② Improved amenities ③ Improved function of disaster prevention ④ Accommodation of public facilities and other effects
Flow effects	Effects of expenditures for programs		① Effects of creating demand for investments in roads ② Domestic demand expansion and increased imports


Effects of road improvements
Economic effects from users' viewpoints
Economic effects from a macroeconomic viewpoint
Newly constructed roads, and advanced facilities
Shift of traffic volumes (from ordinary roads to expressways, etc.)
Improvement of traveling speeds
Reduction of driving time
Reduction of driving costs
User's benefits (direct effects)
Improvement of accessibility
Improve-ment of productivity
Increase of private equipment investment
Increase of consumption related to tourism and recreation
Creation of demand with increased public investment
Expansion of supply
Expansion of demand
Creation of jobs
Increase of tax revenue
Increase of GDP
Ripple effects (indirect effects)

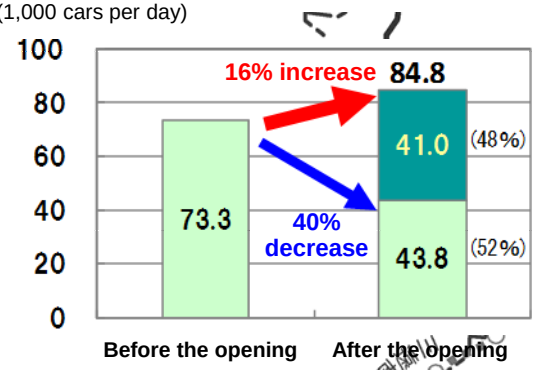
(2) Cases of the Direct Effects of Road Improvement ①

The traffic conditions and improvement effects in the six months after the opening of the Shin Tomei Expressway between the Gotemba JCT and the Mikkabi JCT

■ The change of average traffic volume (all days)

- The average traffic volume for the six months after the opening of the Shin Tomei Expressway were 41,000 vehicles per day on all days, 38,000 vehicles per day on weekdays and 47,000 vehicles per day on holidays.
- The total amount of traffic on the Shin Tomei and the Tomei Expressways within Shizuoka Prefecture increased on both weekdays and holidays, by 15% and 17% respectively.

(1,000 cars per day)



(Source) Press release of October 18, 2012 by the Shin Tomei (Shizuoka Prefecture) Impact Adjustment Commission (Chubu Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism, NEXCO Central Tokyo Branch Office, Shizuoka Prefecture, Shizuoka City, Hamamatsu City)

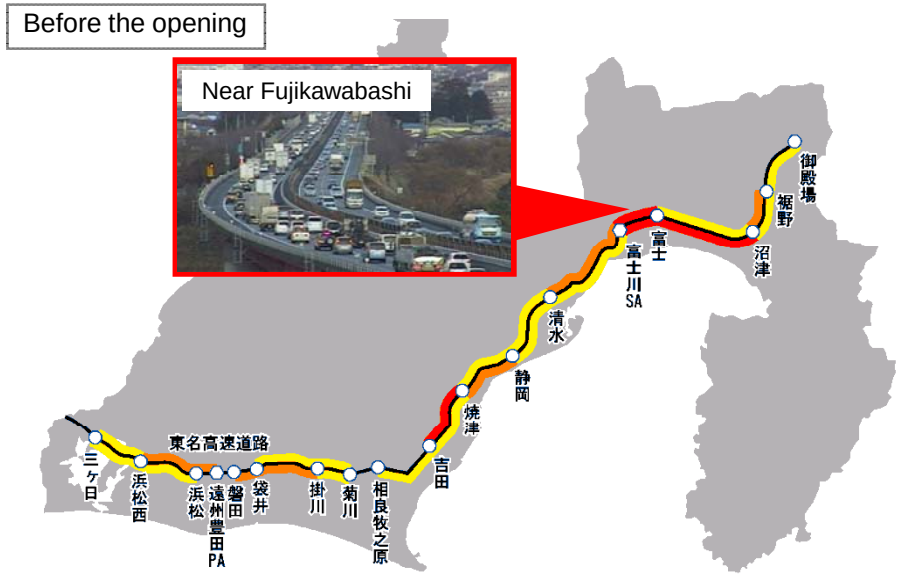
(2) Cases of the Direct Effects of Road Improvement ②

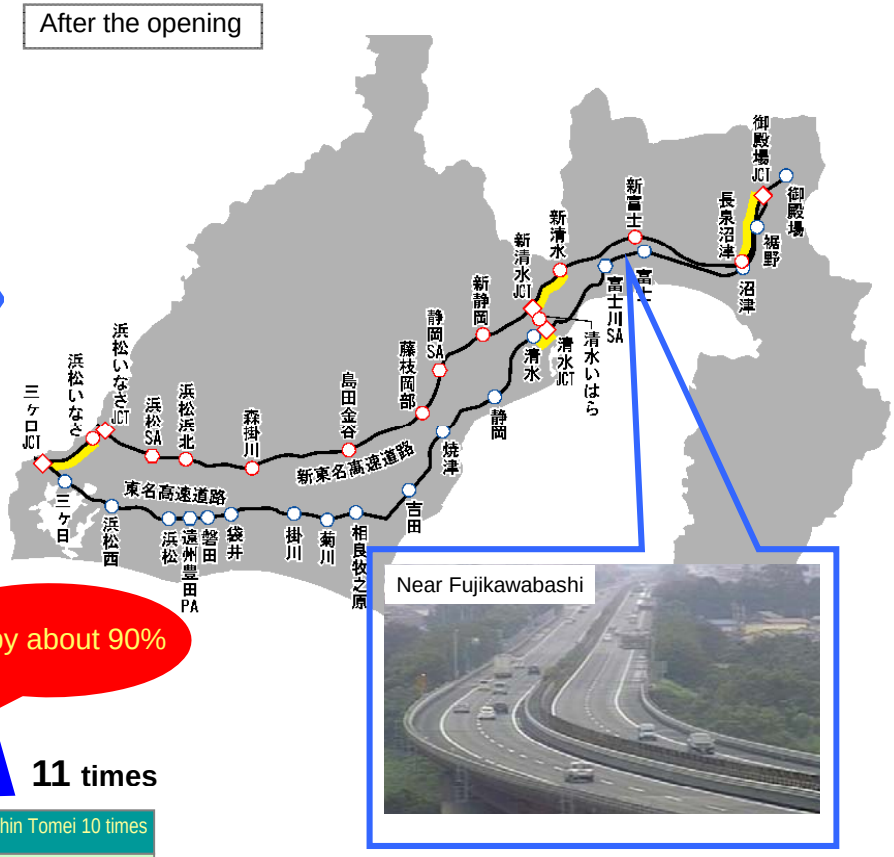
The traffic conditions and improvement effects in the six months after the opening of the Shin Tomei Expressway between the Gotemba JCT and the Mikkabi JCT

■ Changes in traffic congestion conditions in the 6 months after the opening of the Shin Tomei Expressway

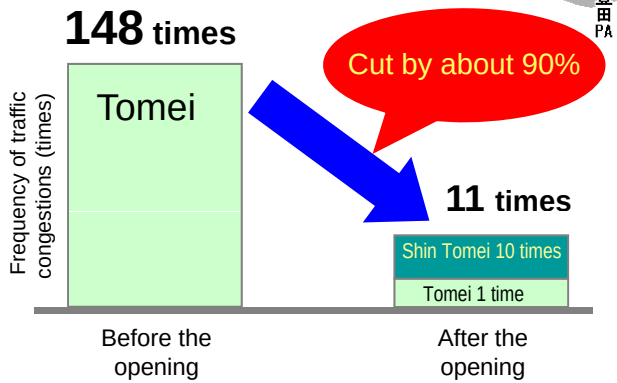
- The number of traffic congestion of more than 10 km length that occurred in Shizuoka Prefecture six months after the opening was 11 times.
- Compared to the number of traffic congestions that occurred on the Tomei Expressway in Shizuoka Prefecture in the same period of the previous year, this means a decrease of approximately 90%.

Before the opening





The number of traffic congestions
- 10 times or more
- 5 times or more
- Once or more
- None



(Source) Press release of October 18, 2012 by the Shin Tomei (Shizuoka Prefecture) Impact Adjustment Commission (Chubu Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism, NEXCO Central Tokyo Branch Office, Shizuoka Prefecture, Shizuoka City, Hamamatsu City)

(2) Cases of the Direct Effects of Road Improvement ③

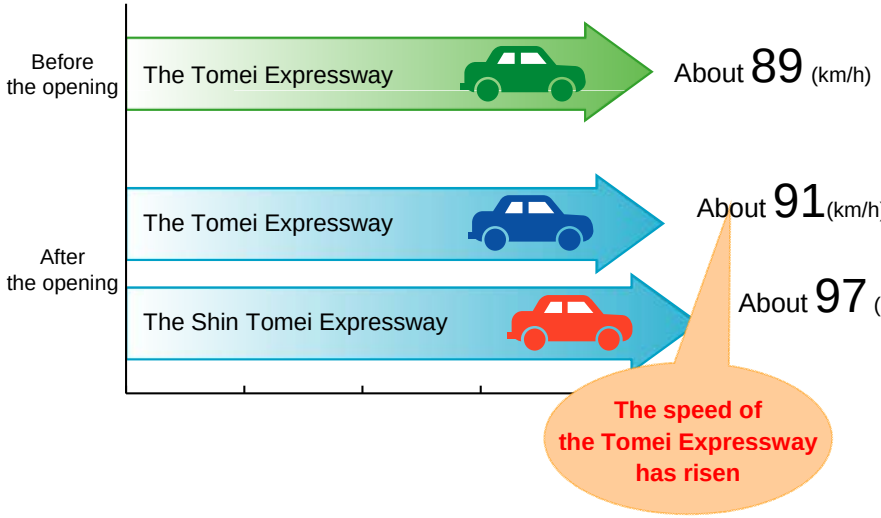
The traffic conditions and improvement effects in the three months after the opening of the Shin Tomei Expressway between the Gotemba JCT and the Mikkabi JCT

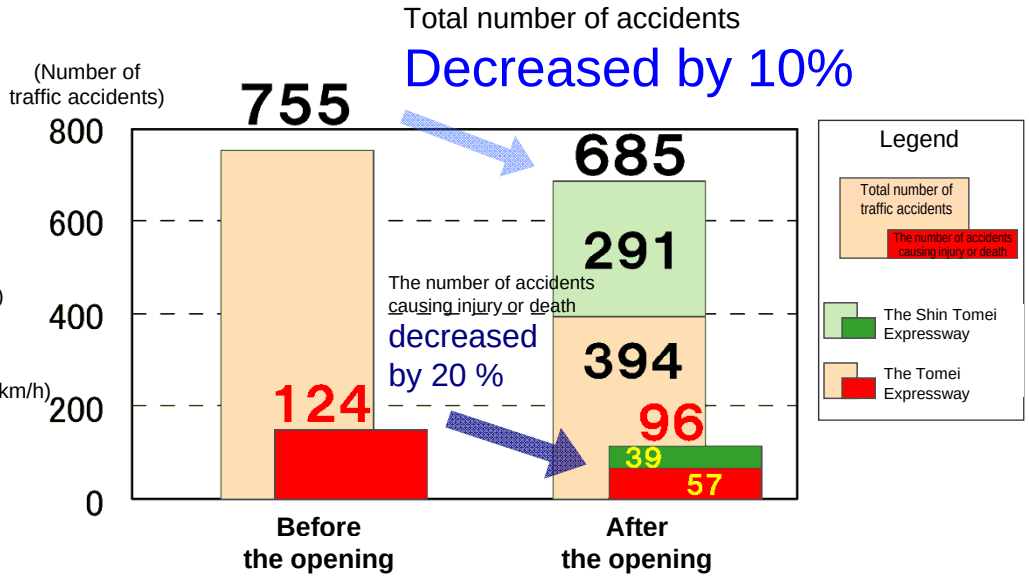
■ Changes in travel speed

- The average travel speed on the Tomei Expressway, rose by approximately 2 km/h after the opening of the Shin Tomei Expressway.

■ Changes in traffic accidents

- The number of accidents resulting in injury or death on the Shin Tomei and Tomei Expressways decreased by approximately 20% compared to the number that occurred on the Tomei Expressway in same period of the previous year.





(Source) Press release of July 24, 2012 by the Shin Tomei (Shizuoka Prefecture) Impact Adjustment Commission (Chubu Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism, NEXCO Central Tokyo Branch Office, Shizuoka Prefecture, Shizuoka City, Hamamatsu City)

(2) Cases of the Direct Effects of Road Improvement ④

Reduction of Driving Time

・Due to the opening of the Tokai-Ring-Expressway and Ise-Bay-Expressway, travel time among cities along them was reduced

・The travel speed of the National Highway running parallel to the Tokai-Ring-Expressway was increased by reduction of traffic flow

●整備効果

●走行速度向上などの効果

【国道155号 豊田～瀬戸 間】
平均旅行速度 17.9km/h
↓
20.2km/h

【国道248号 瀬戸～関 間】
平均旅行速度 26.2km/h
↓
27.6km/h

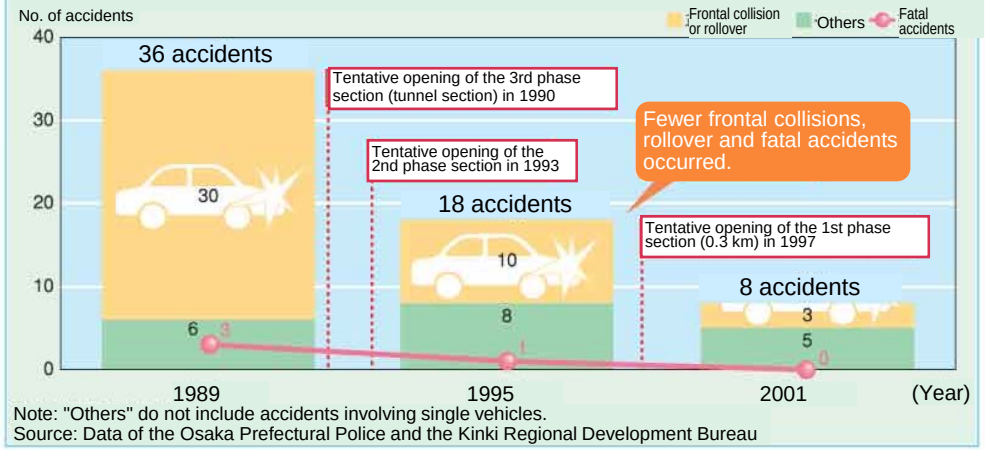
(2) Cases of the Direct Effects of Road Improvement ⑤

Reduction in the Number of Traffic Accidents

(1) Changes in the number of accidents on Kiyotaki-Ikoma Road

●The longer the length of open road, the fewer the number of accidents occurring

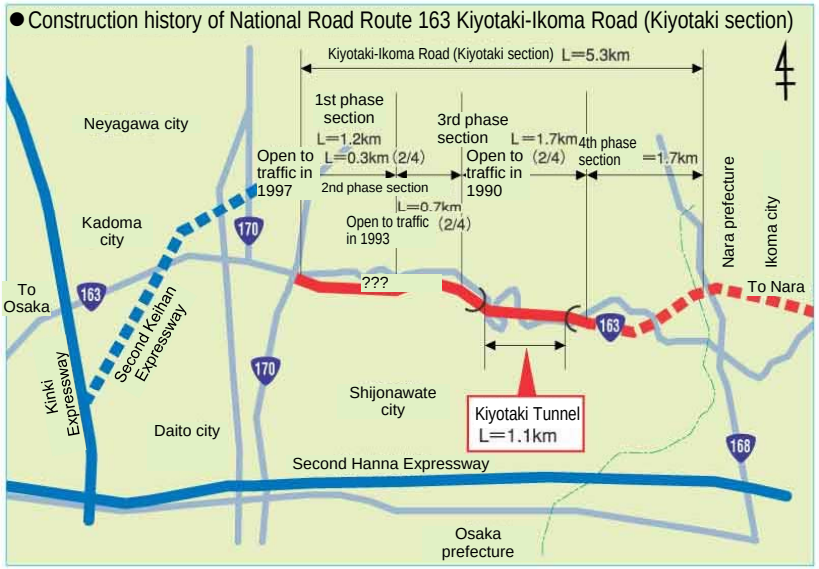
Changes in number of accidents occurring on Kiyotaki-Ikoma Road (Kiyotaki section)



Note: "Others" do not include accidents involving single vehicles.

Source: Data of the Osaka Prefectural Police and the Kinki Regional Development Bureau

(2) History of the road



(3) Conditions around Kiyotaki Pass

●Kiyotaki Pass, once a rough path

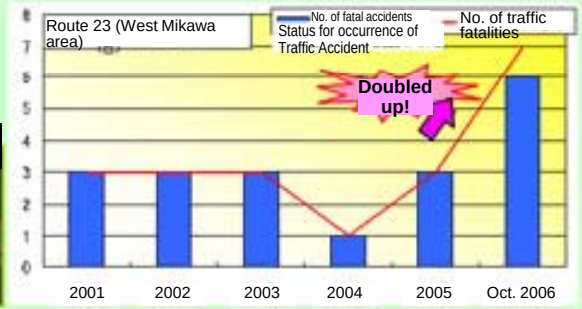
●Now safe traffic is ensured

(2) Cases of the Direct Effects of Road Improvement ⑥

Reduction in the Number of Traffic Accidents

●Layout map

●Before improvement



Source: Nagoya National Highway Office

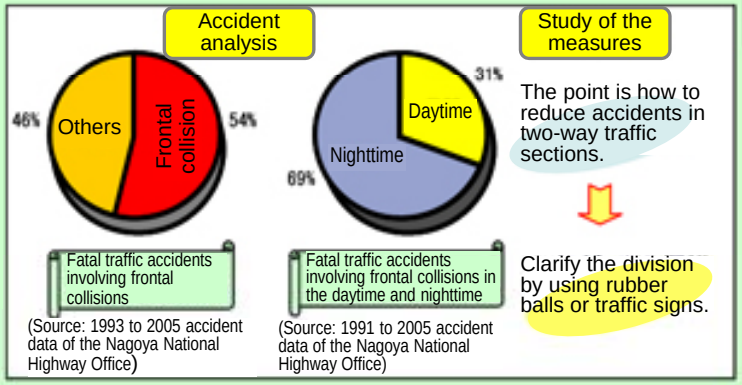
• Prior to road construction, the number of traffic fatalities in Aichi prefecture was the highest among all prefectures in Japan.

• A large number of frontal collision accidents occurred.

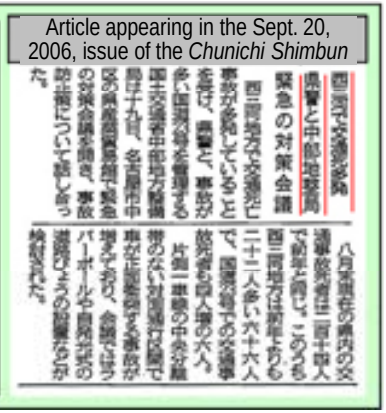
Many accidents occurred at merging road junctions.

●Accident analysis

The Conference for Prevention of Traffic Accidents on Route 23 in West Mikawa was held jointly with the Aichi Prefectural Police to study and develop measures to control speeding.



Article appearing in the Sept. 20, 2006, issue of the *Chunichi Shimbun*



●After road construction

Verification of the effects

The number of fatal traffic accidents one month after the road construction is zero.

Source: Fatal accident data of the Nagoya National Highway Office
Period: March 1, 2007, to April 23, 2007

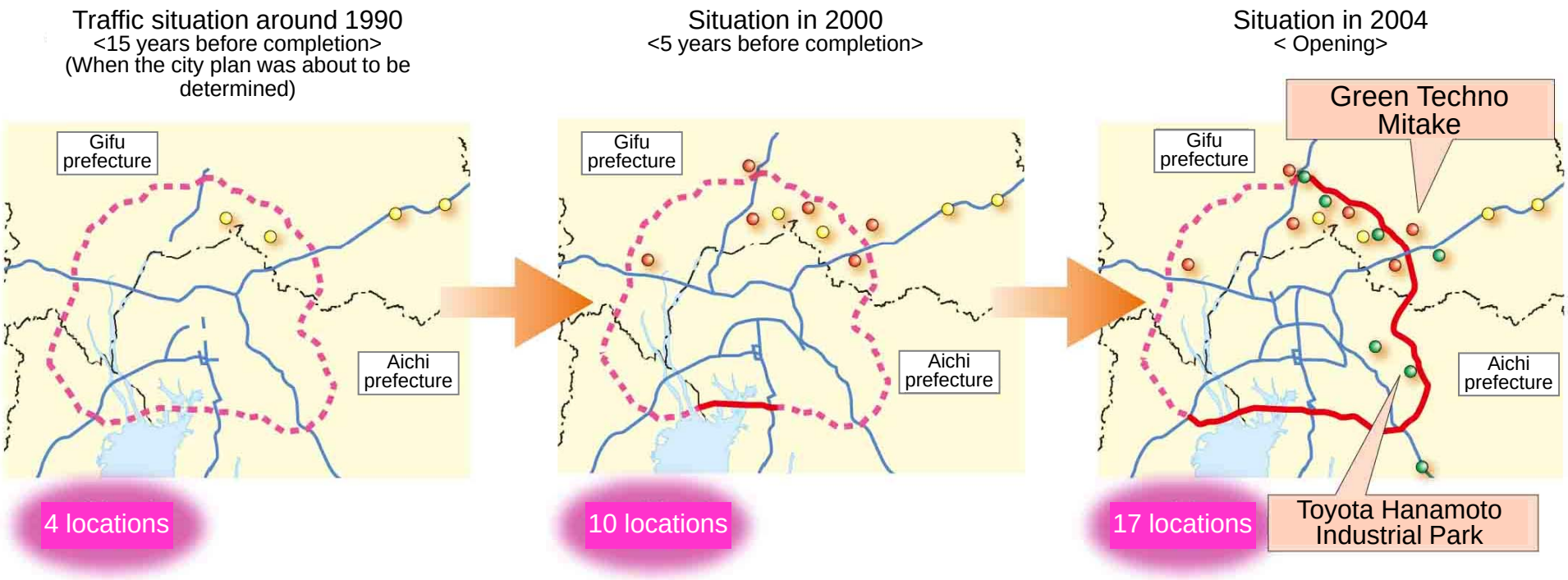
●Actions taken (From December 2006 to February 2007)

• The number of fatal traffic accidents dropped to zero one month after the road construction.

(3) Cases of the Indirect Effects of Road Improvement ①

Promotion of Establishment of Production and Distribution Bases ①

- Changes in industrial parks before and after opening of the Tokai-Kanjo Expressway

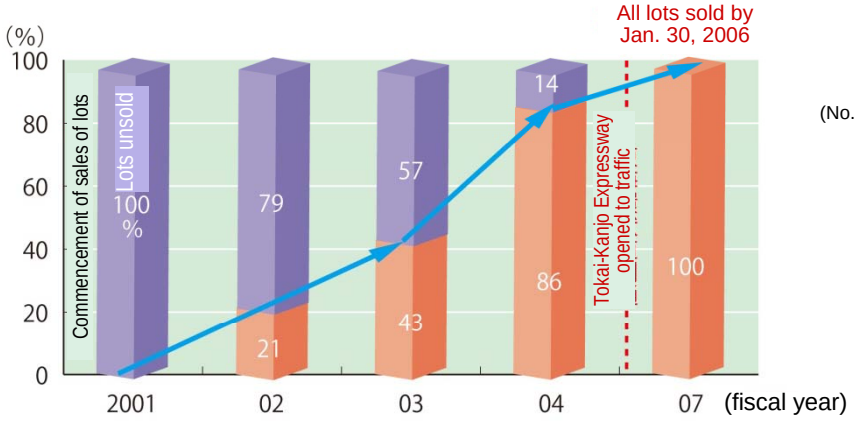


Source: Questionnaire surveys to local governments along the Tokai-Kanjo Expressway

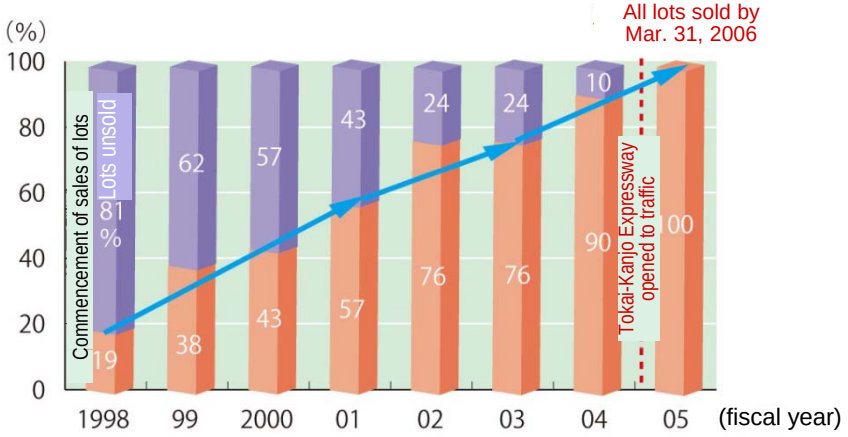
(3) Cases of the Indirect Effects of Road Improvement ②

Promotion of Establishment of Production and Distribution Bases ②

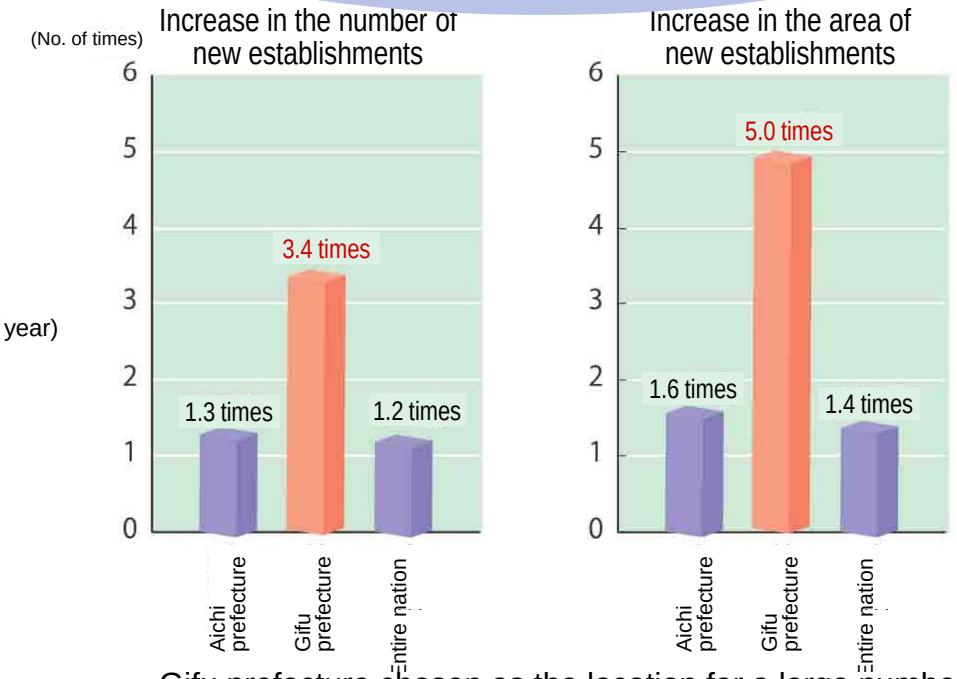
- Sales of lots in Toyoda Hanamoto Industrial Park



- Sales of lots in Green Techno Mitake



Increase in the number and area of new establishments (2005/2004)



Gifu prefecture chosen as the location for a large number of establishments

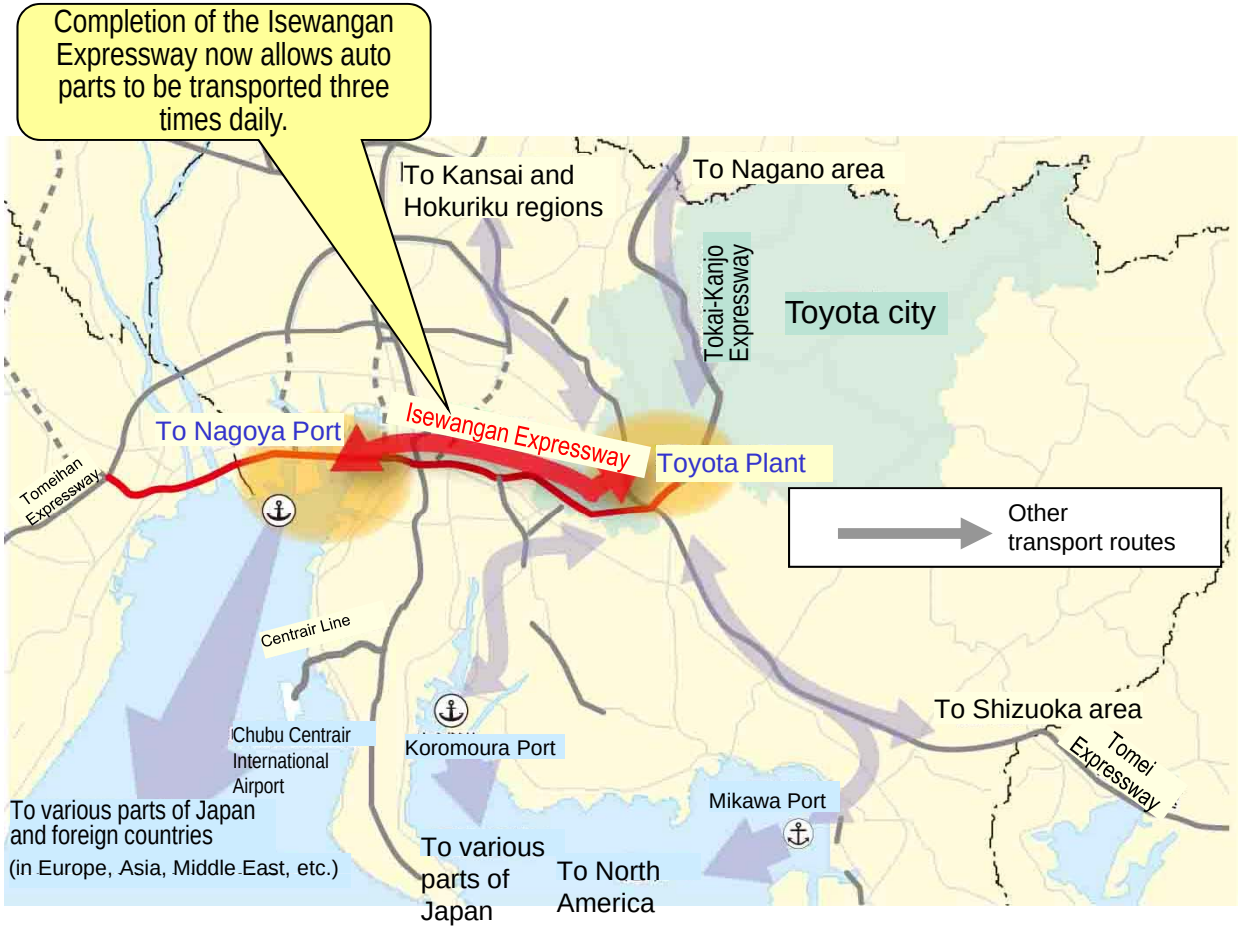
Comparing the number of establishments newly located in 2005 with that in 2004, there was a great increase in the number (from 12 to 41 for a 3.4-fold increase) and area of new establishments (from 13 ha to 65 ha for a fivefold increase).

Source: Data of the Chubu Bureau of Economy, Trade and Industry

(3) Cases of the Indirect Effects of Road Improvement ③

Increase in Transport Frequency

- Transport route of automotive parts from Toyota Plant to Nagoya Port



- Advantages of completing the Isewangan Expressway (automotive parts)

Nagoya Port ⇔ Toyota Plant
Transport conventionally twice a day

↓

Completion of the Isewangan Expressway now allows transport three times a day.

↓

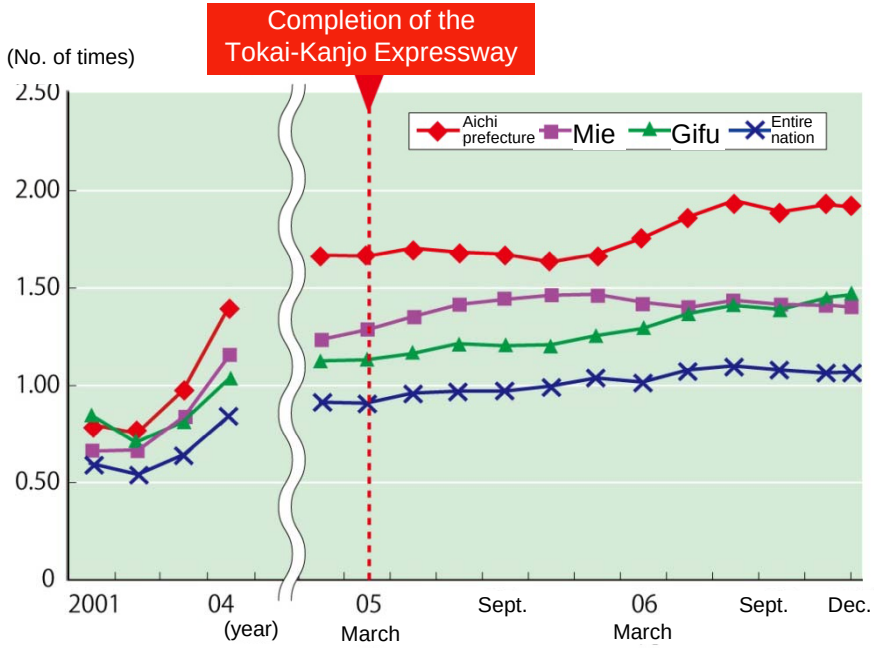
Distribution cost reduced

Prepared based on the data of Company D

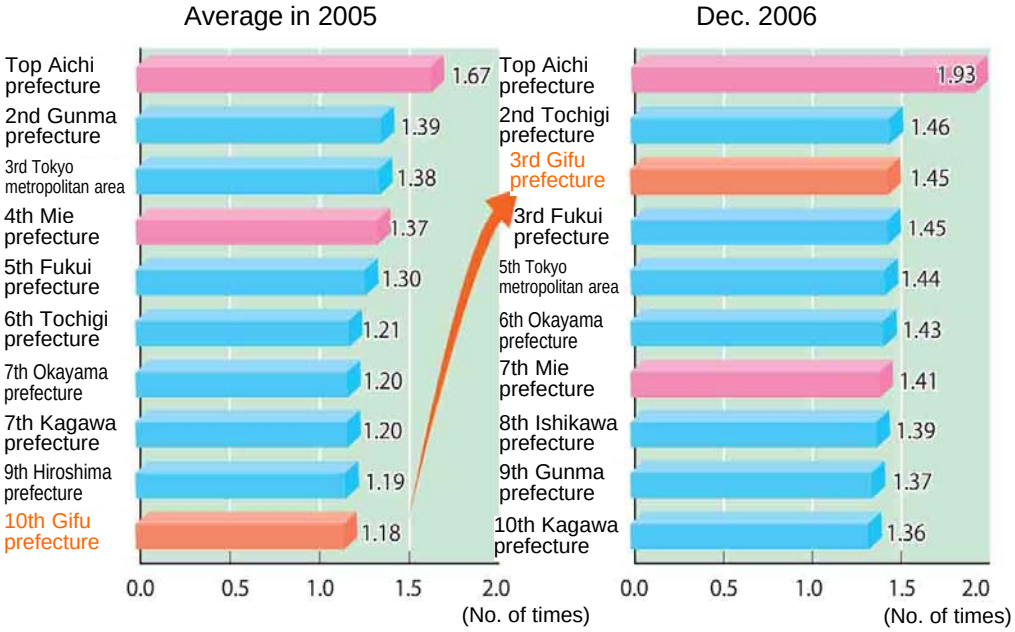
(3) Cases of the Indirect Effects of Road Improvement ④

Increase in Employment Opportunities

- Active job opening to applicant ratio in three prefectures along the Tokai-Kanjo Expressway



- Change in ranking of active job opening to applicant ratio by prefecture



Note: The monthly values are seasonally adjusted.
The annual averages are raw values.

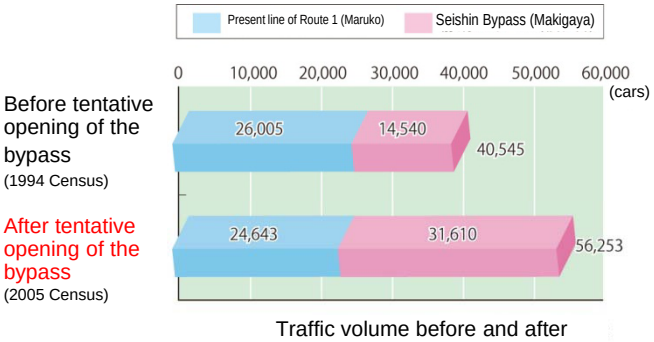
Source: Employment Service Statistics, Ministry of Health, Labour and Welfare

(3) Cases of the Indirect Effects of Road Improvement ⑤

Improvement of Delivery Efficiency and Reduction in Delivery Cost

- Bypass location and traffic volume observation stations

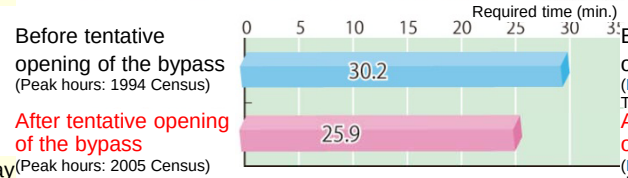
- Changes in traffic volume resulting from opening the bypass



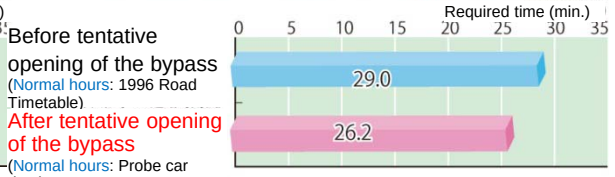
Traffic volume before and after tentative opening of the Seishin Bypass (March 1997)

- Changes in traveling time on Route 1

Change in traveling time on Route 1 during peak hours from the factory to the warehouse

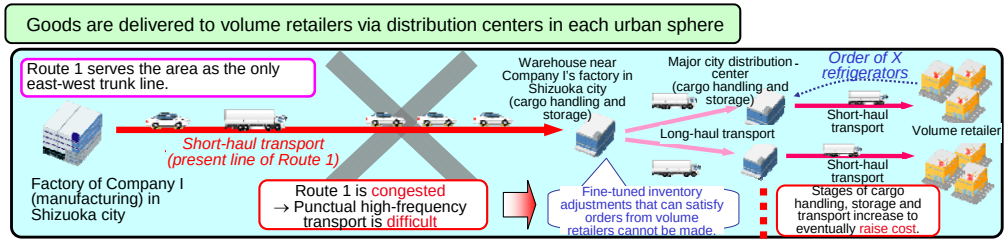


Change in traveling time on Route 1 during normal hours from the factory to the warehouse

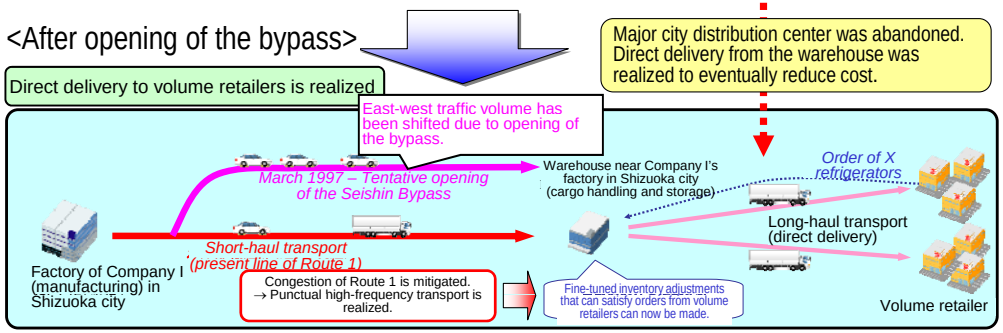


- Changes in method of delivery from the factory to shops

<Before opening of the bypass>



<After opening of the bypass>

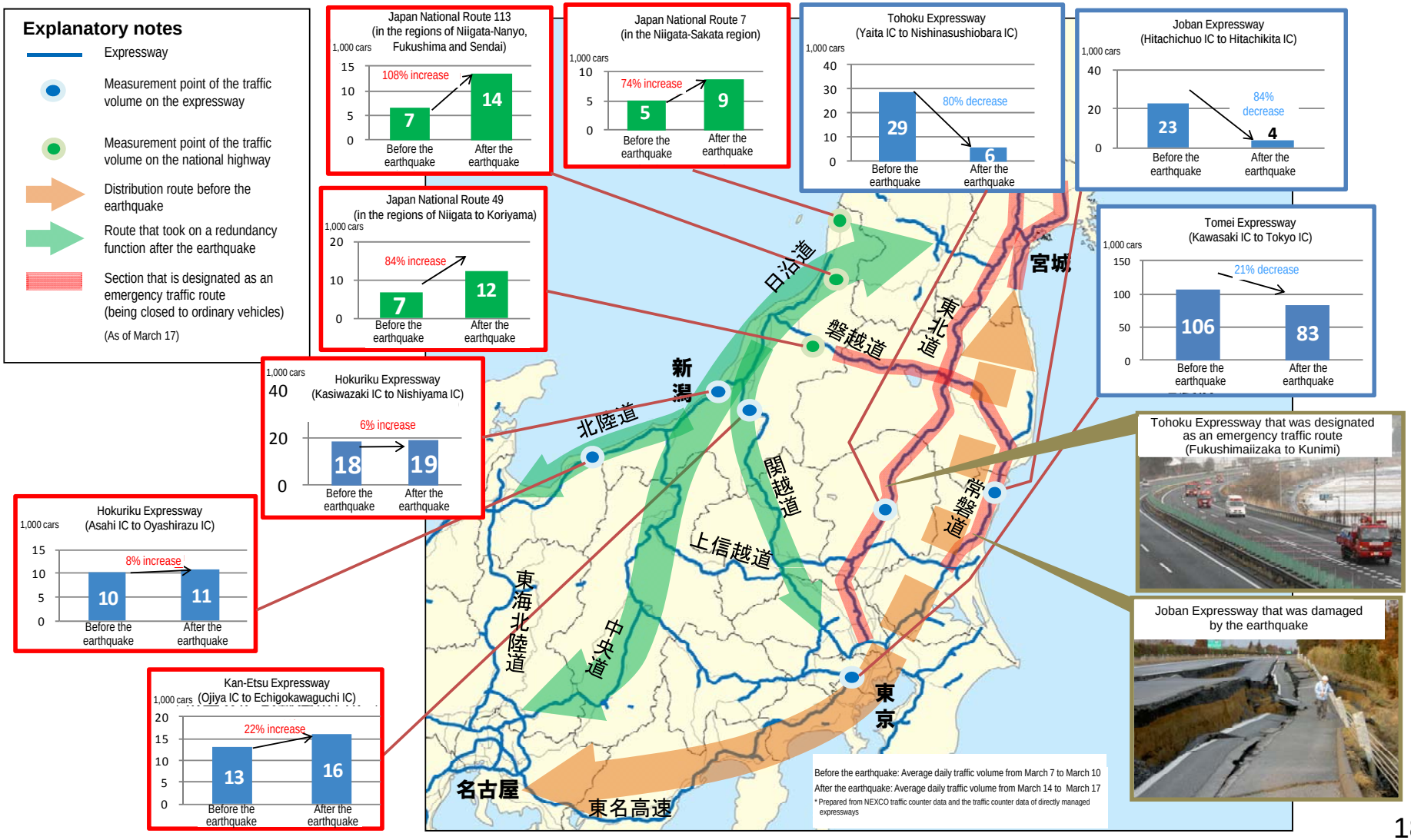


Prepared based on the interview survey

(3) Cases of the Indirect Effects of Road Improvement ⑥

Improvement of the disaster protection function

- While the functions of the road network between Tohoku and Kanto have been limited, the traffic volume has increased on the Hokuriku Expressway, Kan - Etsu Expressway and the national highways under the direct control of the national government on the Sea of Japan side.

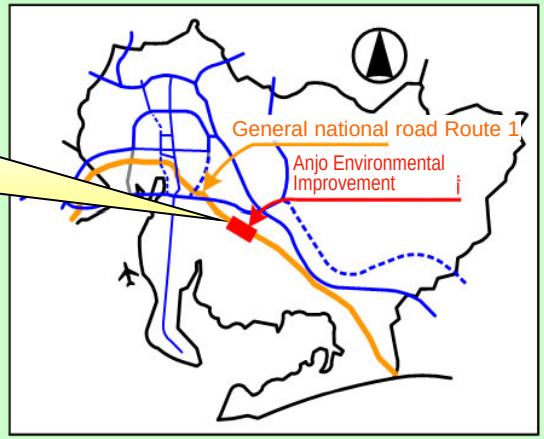


(3) Cases of the Indirect Effects of Road Improvement ⑦

Improvement of the Roadside Environment ①

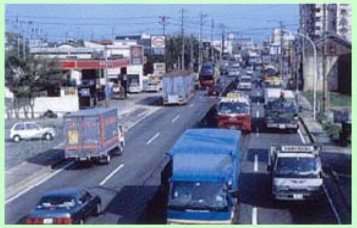
- Noise reduction
- Reduction of NOX and PM emissions

● Location map



● Photo of local site

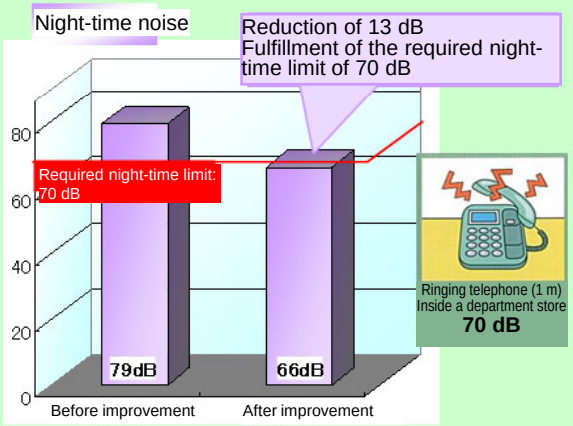
Before improvement



After improvement

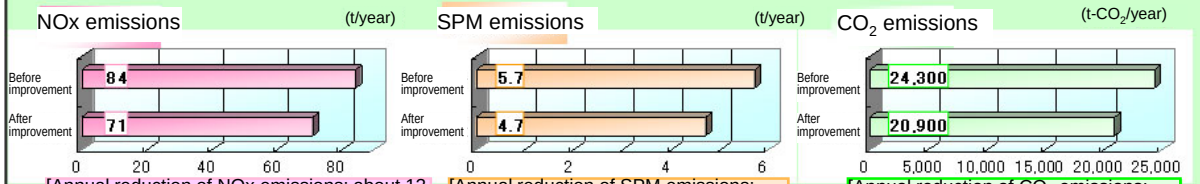
● Effect of improvement (1) Improvement of the roadside environment (noise)

Road traffic noise was reduced from 79 dB to 66 dB (down 13 dB) along the administrative-private boundary (road end) as a result of constructing low-level sound barriers and surfacing the road with low-noise paving.



● Effect of improvement (2) Improvement of the roadside environment (atmosphere)

Improvement measures including the construction of a right-turn lane will improve traveling speed to eventually reduce the air quality of car emissions to the following levels:



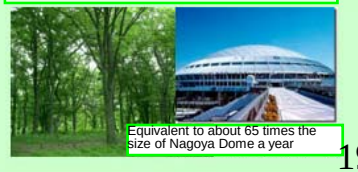
[Annual reduction of NOx emissions: about 13 tons]
This reduction is equivalent to eliminating about 3000 large trucks a day from traveling along the subject improvement section.

Equivalent to eliminating about 3,000 vehicles a day

[Annual reduction of SPM emissions: about 1 ton]
This reduction is equivalent to eliminating about 2,500 one-liter PET bottles.

Equivalent to about 2,500 bottles a day

[Annual reduction of CO_2 emissions: about 3,400 tons of CO_2]
This reduction is equivalent to the amount of CO_2 absorbed annually by an afforested area equal in size to about 65 Nagoya Domes.



Equivalent to about 65 times the size of Nagoya Dome a year

(3) Cases of the Indirect Effects of Road Improvement ⑧

Improvement of the Roadside Environment ②

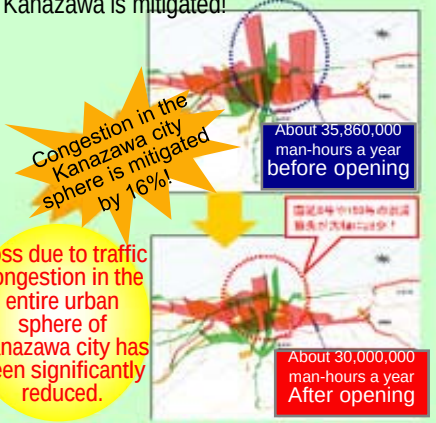
● Layout map

● Effect 1: Traffic passing through the center of the city is now diverted to the Yamagawa Kanjo Road

Fewer vehicles now pass through the center of the city!

- Asano River section → Reduction by about 6,400 vehicles (down 5%)
- Saigawa River section → Reduction by about 9,500 vehicles (down 6%)
- Yamagawa Kanjo Road → About 16,000 vehicles now use the road

● Effect 2: Congestion in the entire city area of Kanazawa is mitigated!



Loss due to traffic congestion in the entire urban sphere of Kanazawa city has been significantly reduced.

Congestion loss time of the entire urban sphere of Kanazawa city → Reduction of 5,830,000 man-hours/year

● Effect 3: The environment in the center of the city is improved

Mitigated congestion has reduced CO_2 emissions in the center of the city!

- Route 8 → About 5,000 tons of CO_2/year (down 5%)
- Route 157/Route 159 → About 2,500 tons of CO_2/year (down 7%)

Reduction by about 7,500 tons of CO_2/year !

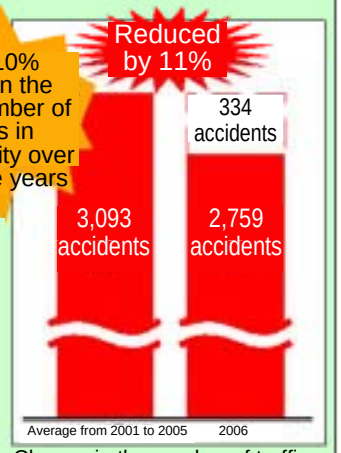
● Effect 4: Safety in Kanazawa city is improved!

Through traffic on residential roads has been reduced!

About a 10% reduction in the average number of accidents in Kanazawa city over the past five years

- Traffic congestion on Route 159 has been mitigated, thereby greatly reducing the number of vehicles using residential roads to avoid congestion.
- Traffic problems on Route 159 and residential roads have been solved to eventually improve the traffic environment.
- Traffic just passing through the area has been shifted to the Yamagawa Kanjo Road to eventually improve the traffic environment.

(Based on an interview with the president of the federation of neighborhood associations along the Yamagawa Kanjo Road)



Change in the number of traffic accidents in Kanazawa city (Comparison between 2006 data and 2001 – 2005 average data)

(4) Initiatives that contribute to the land transport of international maritime containers, etc.

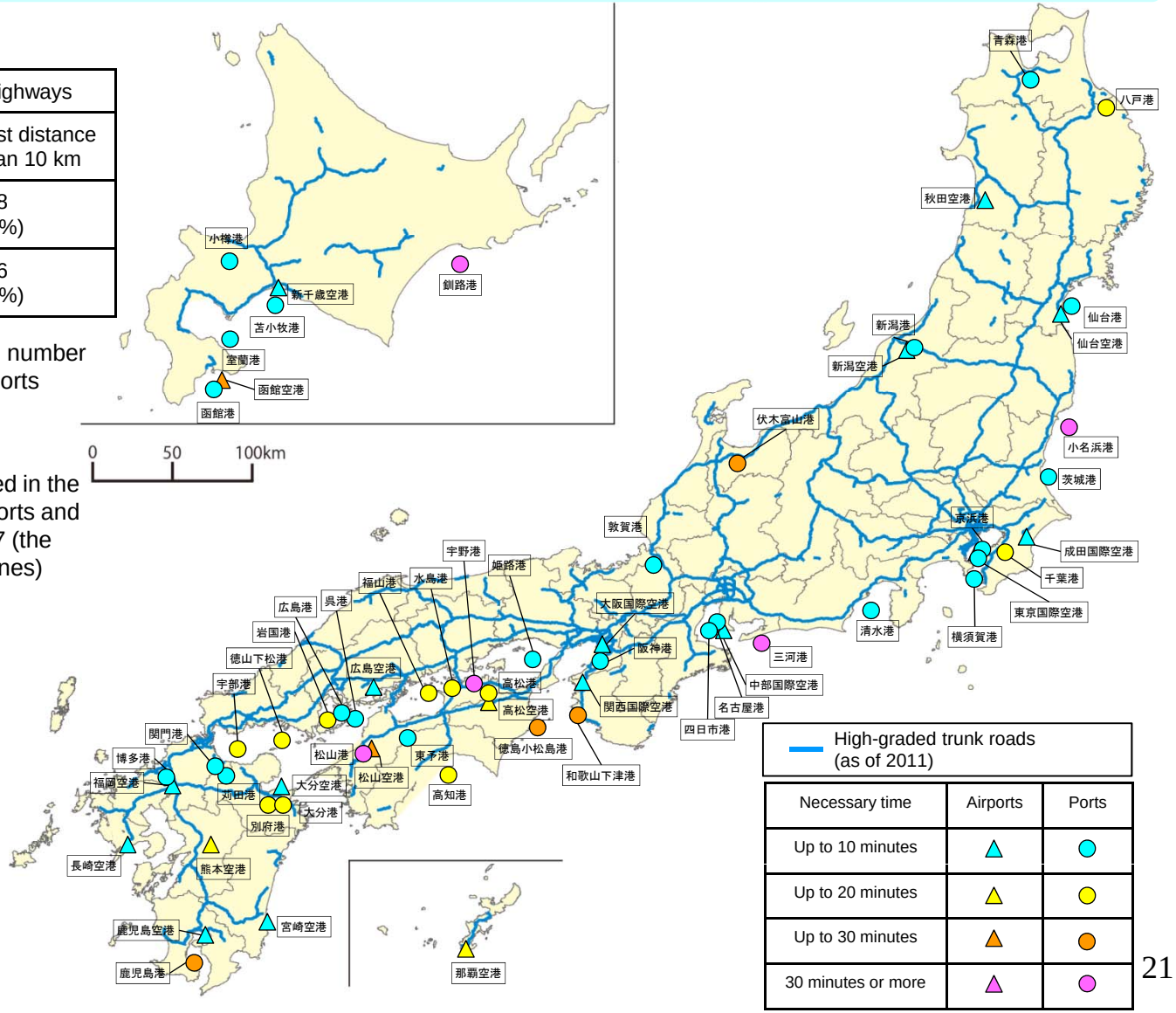
Conditions of access, such as highways, airports and ports

	Conditions of access, such as highways	
	The minimum time of within 30 minutes	The shortest distance of less than 10 km
Airports (20)	20 (100%)	18 (90%)
Ports (42)	37 (88%)	36 (86%)

* The number in the parenthese is the total number of the locations of targeted airports and ports

Note: Target airports and ports

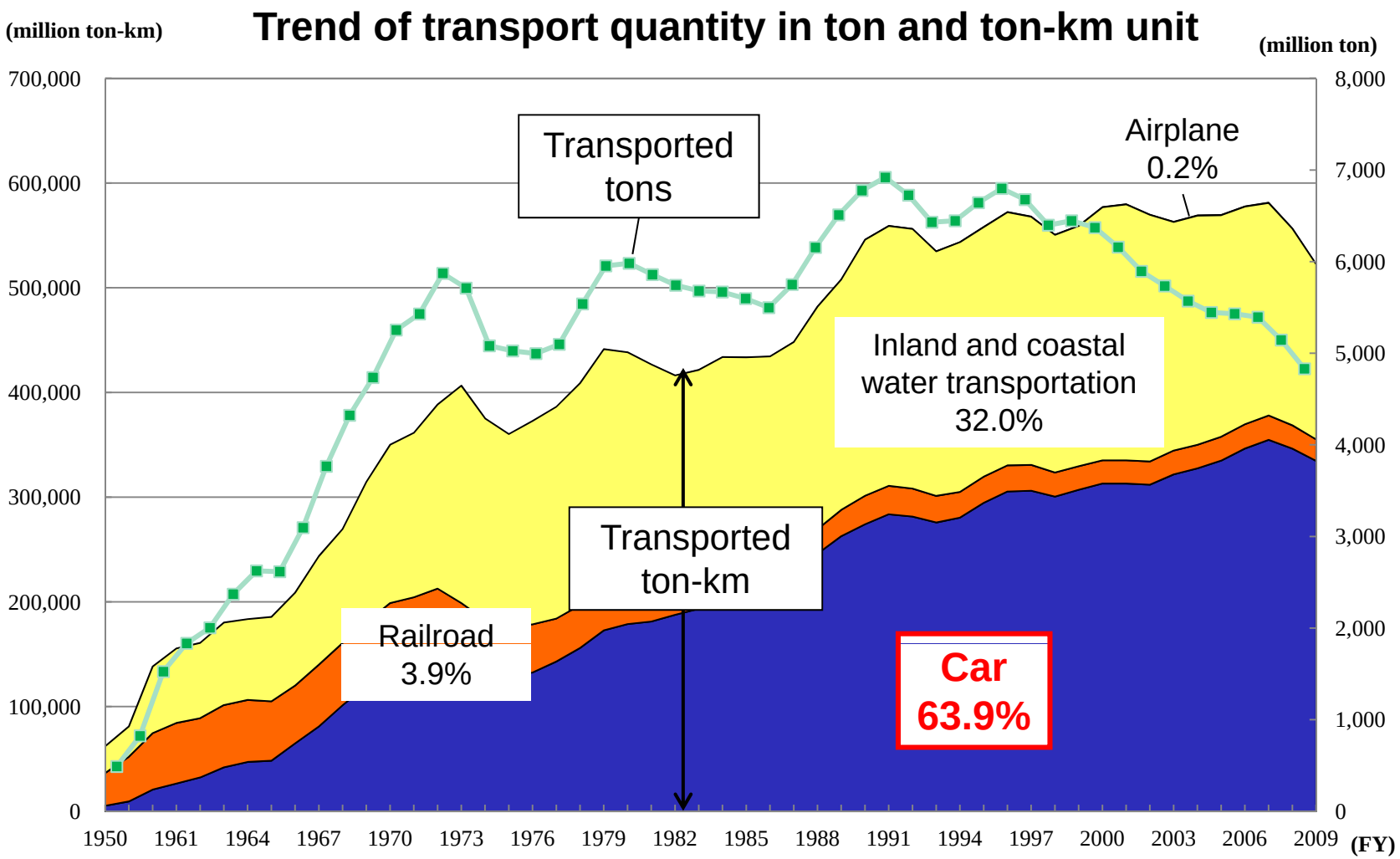
The airports and ports that were targeted in the "Percentage of road access to hub airports and ports" in the policy check-up of FY 2007 (the names of the targets are their current ones)



2. City Logistics from Road Policy Aspect

(1) Present Situation of Freight Transport in Japan

Trend of Domestic Freight Transport Quantity



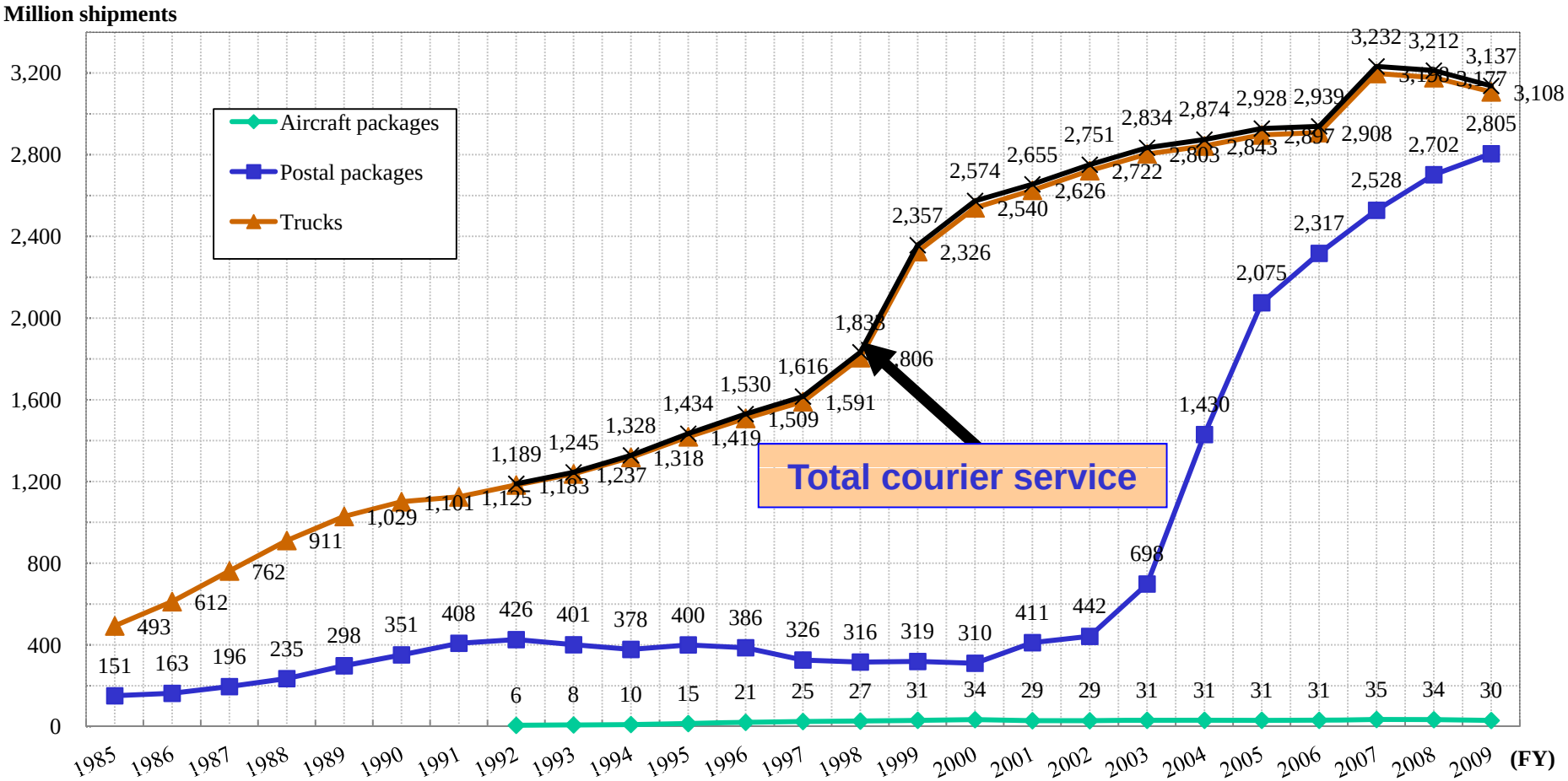
Source: Prepared based on Land Transport Statistical Handbook
Ministry of Land, Infrastructure, Transport and Tourism

(Distribution rate: 2009 years)

(1) Present Situation of Freight Transport in Japan

Trend of Door-to-Door Delivery Service (Courier Service)

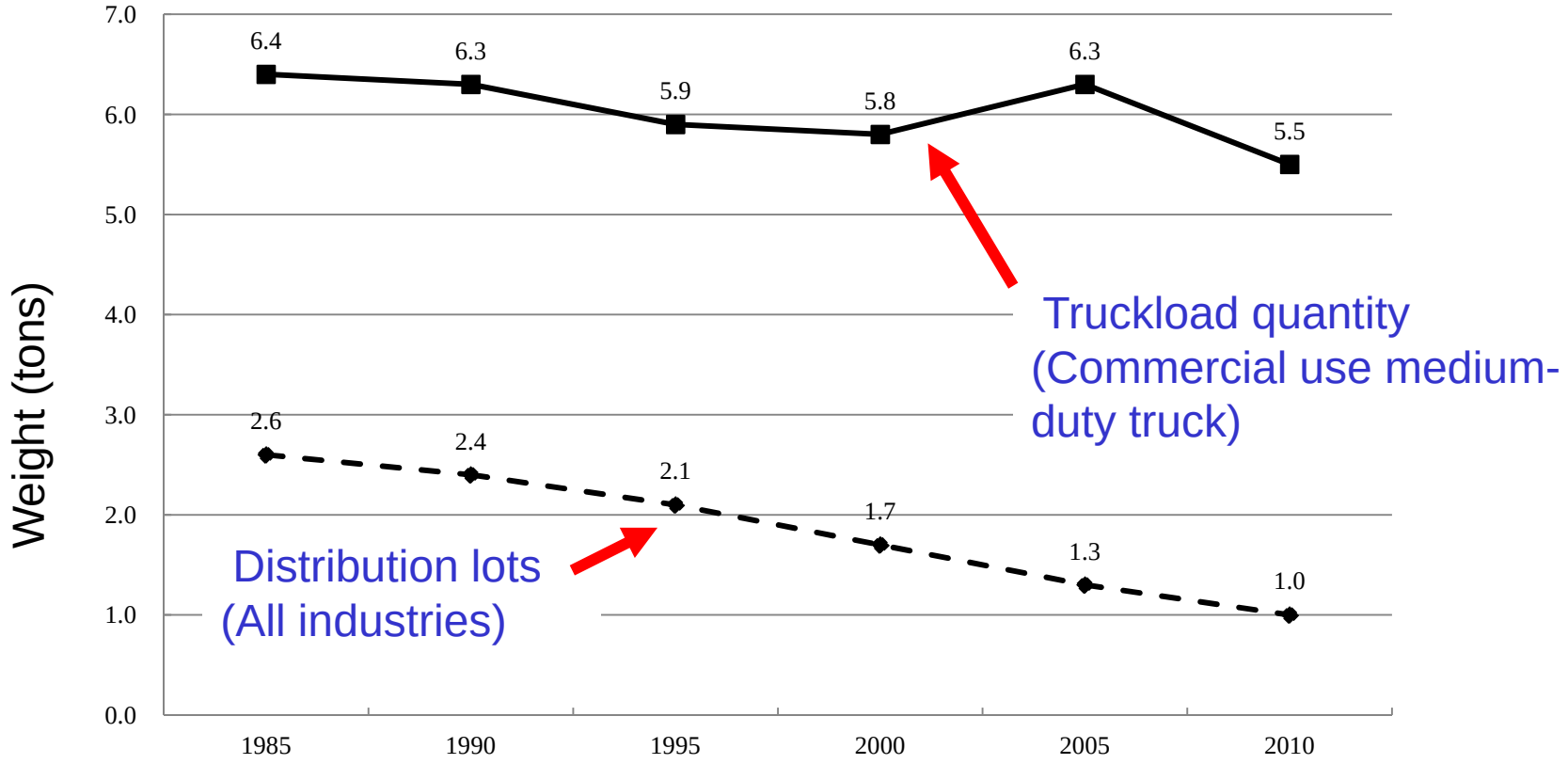
Number of shipments handled by courier services



(Notes)
1. Prepared based on documents from the Freight Forwarders Division of the Policy Bureau and from the Cargo Transport Division of the Road Transport Bureau of the Ministry of Land, Infrastructure, Transport and Tourism.
2. Postal packages prepared based on the Annual Statistical Report on Postal Services.

(1) Present Situation of Freight Transport in Japan

Distribution Lots and Truckload Quantity

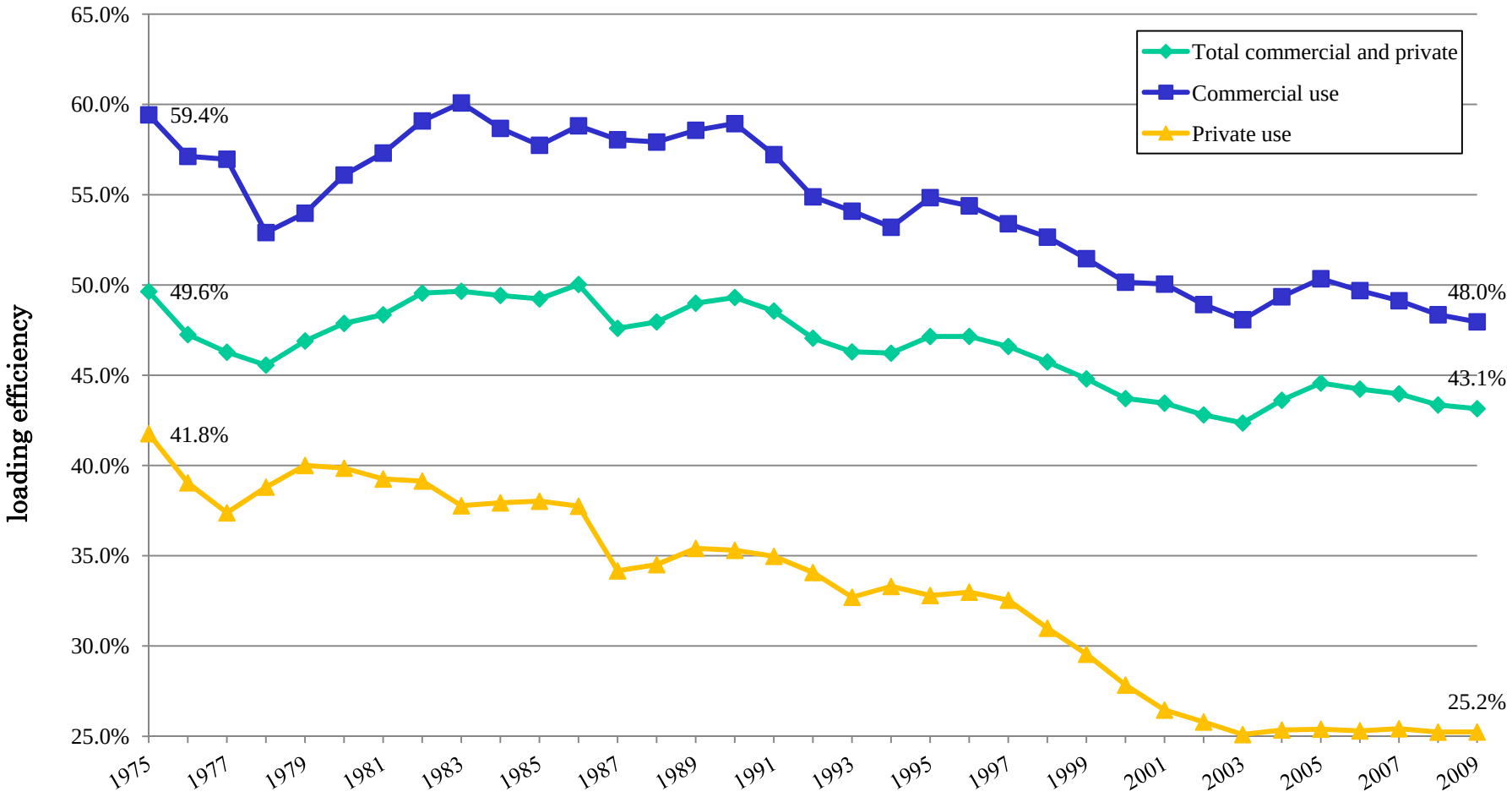


*Distribution lots: A size based on weight per shipment, it is the amount of shipments per shipment day, shipped item, and recipient (2010 Net Freight Flow Census)

*Truckload quantity: Average load per truck = transport ton-kilometers／actual vehicle kilometers, and a standard automobile is a truck with a maximum load of 5 tons or more (based on the 2010 Land Transport Statistics Manual)

(1) Present Situation of Freight Transport in Japan

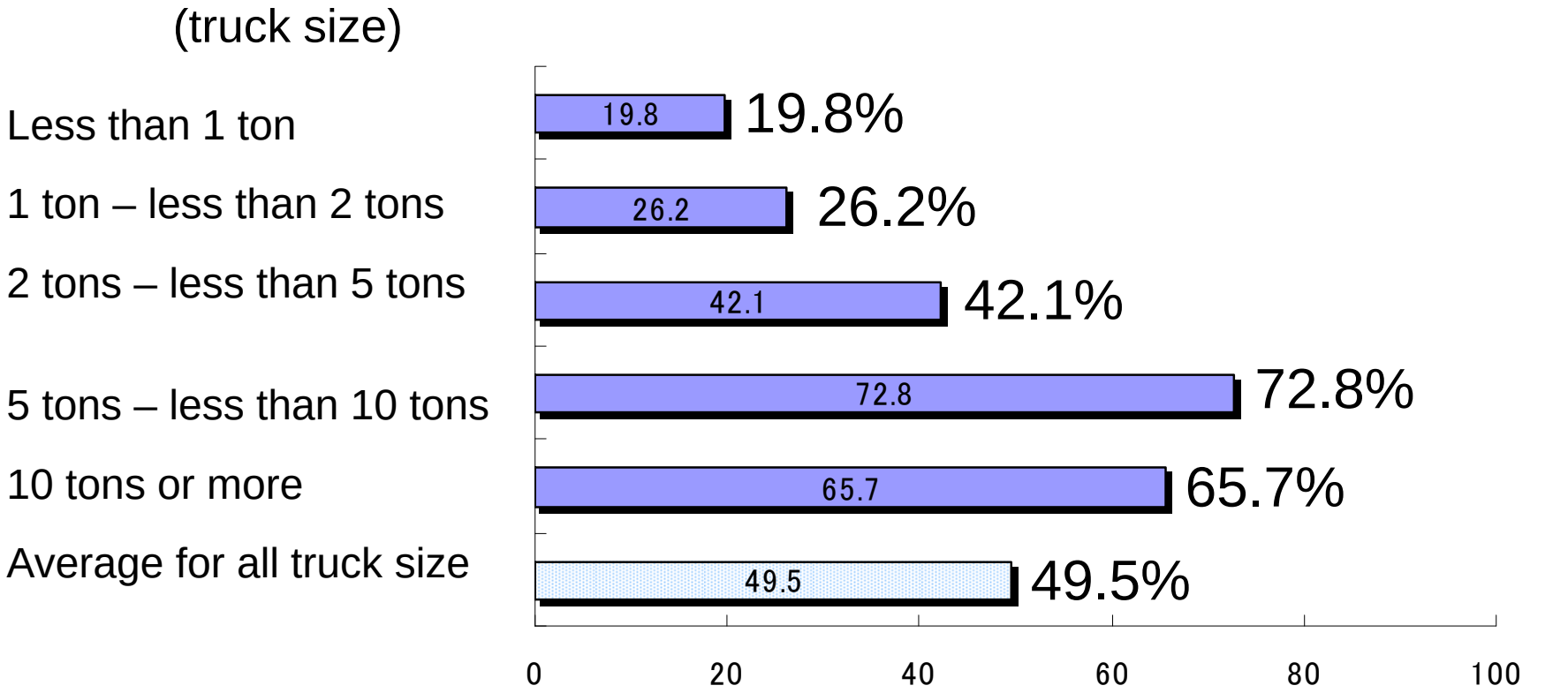
Truck Loading Efficiency



Source: Annual Statistical Report on Automobile Transport: Information and Research Department, Policy Bureau, Ministry of Land, Infrastructure, Transport and Tourism

(1) Present Situation of Freight Transport in Japan

Average Loading Efficiency by Truck Size (Tokyo area)

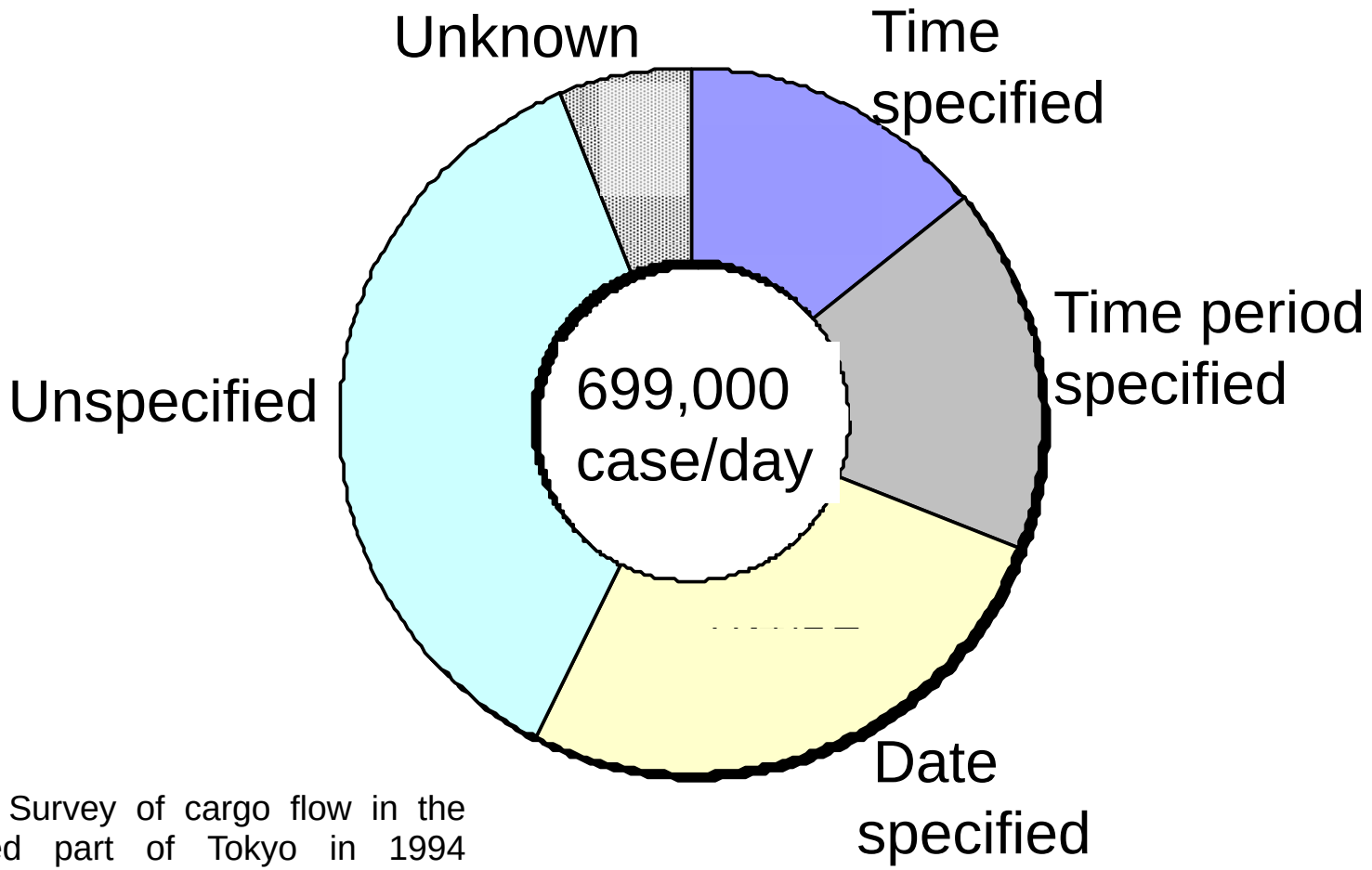


Average loading efficiency in the Tokyo metropolitan area (1994)
(loading weight/maximum loading weight x 100) (%)

Source: Survey of cargo flow in the urbanized part of Tokyo in 1994

(1) Present Situation of Freight Transport in Japan

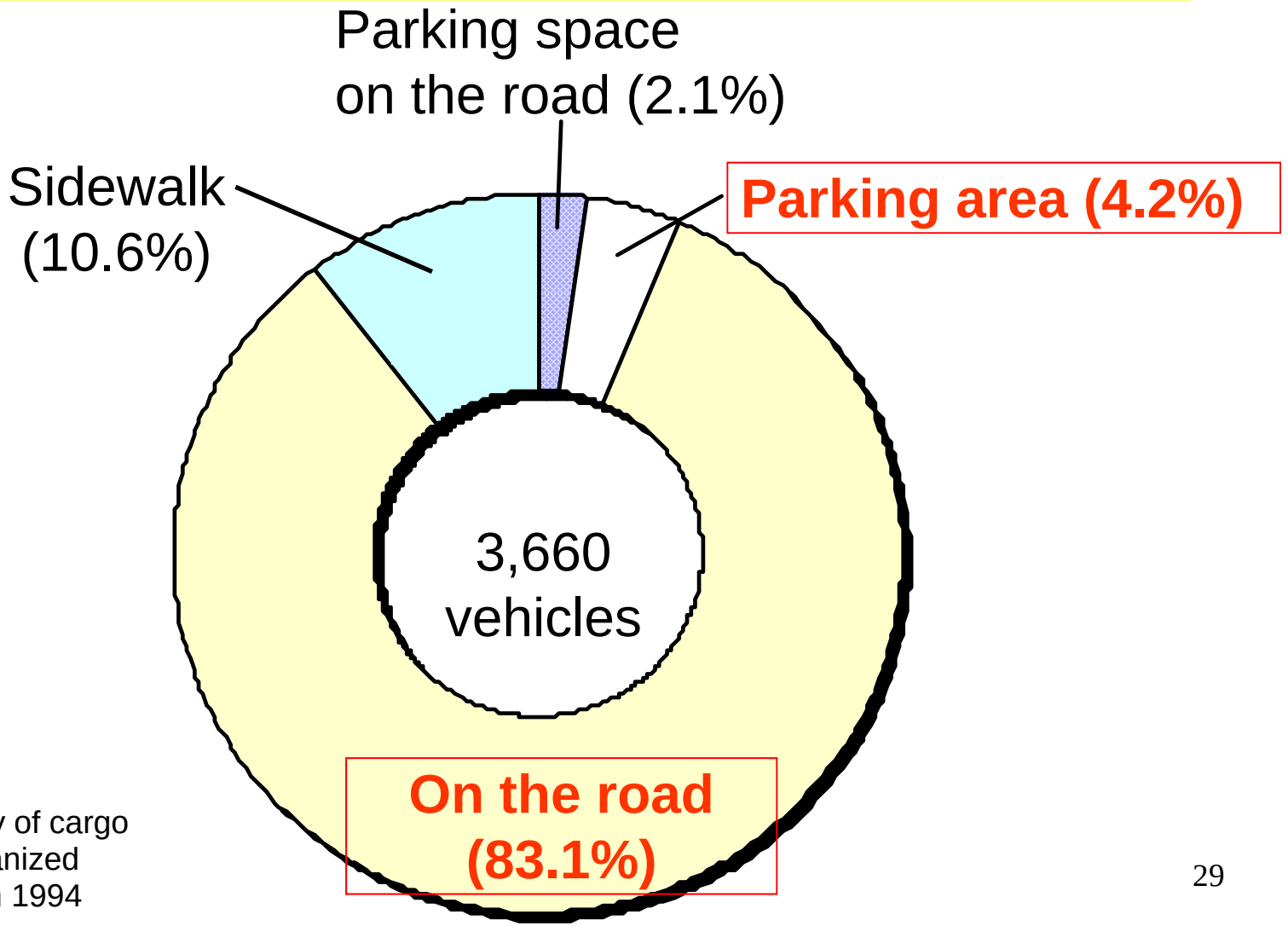
Percentage of Cargo with Specified Delivery Times (Tokyo area)



Source: Survey of cargo flow in the urbanized part of Tokyo in 1994 (shipped base)

(1) Present Situation of Freight Transport in Japan

Percentage of Loading Place (Tokyo area)



Source: Survey of cargo flow in the urbanized part of Tokyo in 1994

(2) Problems of City Logistics

Problem: Deterioration of living environments caused by inflow of freight vehicles into city center and by on-street parking

Freight Vehicles' Inflow to downtown


Blocked View by on-street parking trucks


Freight vehicles driving on a school road


Freight vehicles loading/unloading nearby bus stop

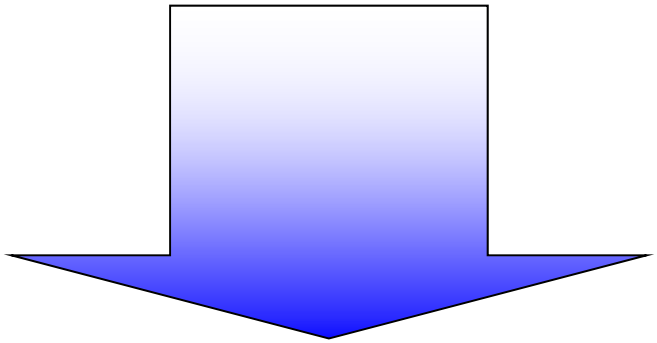
<Deteriorated traffic flow and safety of pedestrian and vehicles>
-Freight vehicles loading/unloading on street hinder public transport.
-Freight vehicles delivering to downtown drive on busy streets.
-Freight vehicles flowing into narrow streets deteriorate traffic safety on school roads and sidewalks.

(2) Problems of City Logistics

Background：“What impedes the problem resolution?”

-Difficulty in finding/securing parking spaces.

-Insufficient consensus-building among related parties that is crucial to implement city logistics measures.



Direction of Measures

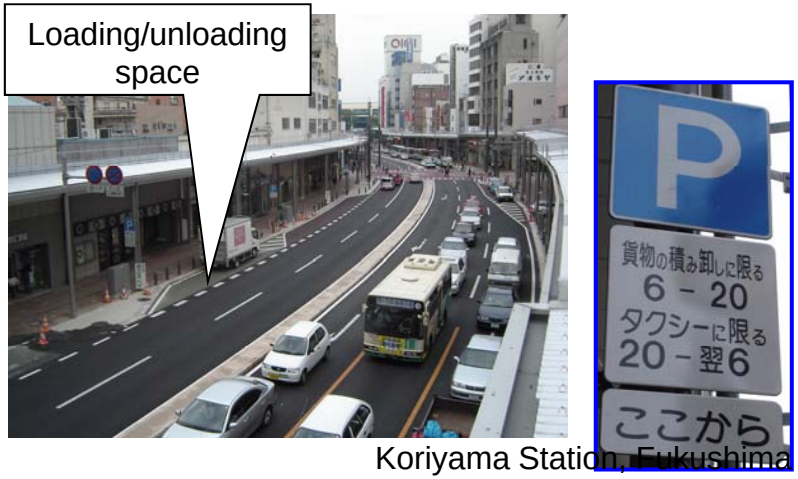
-Support to find/create parking spaces through subsidizing pilot programs.

-Enhance parking measures through discussion in the committees set by the involved locals.

(3) “Hard” Measures for Loading and Unloading Spaces (Infrastructure development)

Developing on-street loading/unloading spaces, off-road parking facilities and ordinance that requires large buildings to install loading/unloading facilities.

On-street loading/unloading spaces



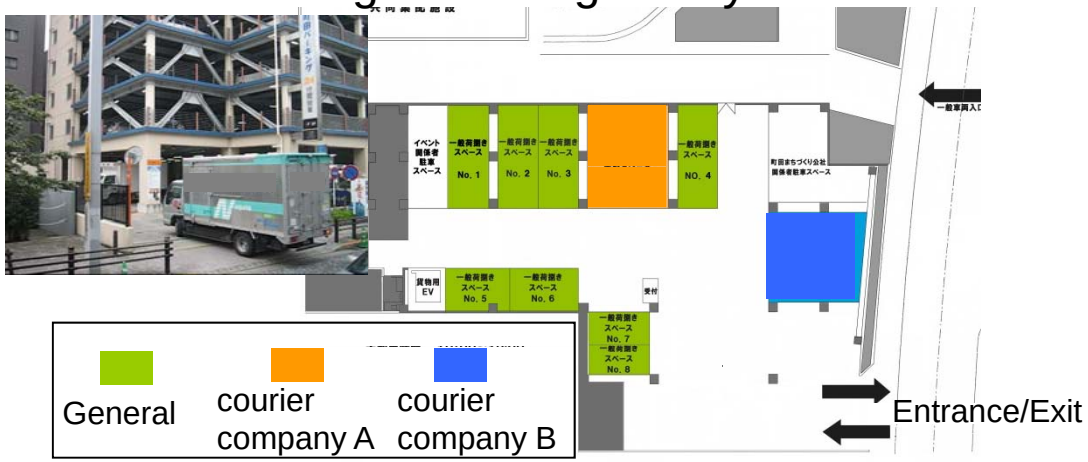
Koriyama Station, Fukushima

Tokyo Parking Ordinance (amended in 2002)

excerpted from the section of loading/unloading parking lots

Section	Section to be developed Parking facilities				Surrounding area
Use	Specified use				specified use
	department store	Office	storage	Other	
Subject Area	2,000m^2				3,000m^2
Standard Area	2,500m^2	5,500m^2	2,000m^2	3,500m^2	7,000m^2

Off-street loading/unloading facility



Plane view of the parking facility at Poppo Machida

Parking facility obliged to be installed by the parking ordinance (Marunouchi Building)

(3) “Hard” Measures for Loading and Unloading Spaces (Infrastructure development)

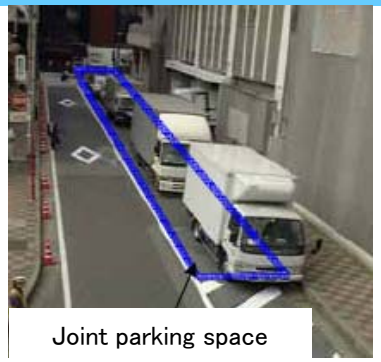
Unique and successful parking measures conducted by local parties

Practice of loading/unloading parking space installation

Example A. Parking space (Koriyama City, Fukushima)

-Converting one lane of roadway to loading/unloading space.
-Laying down the rules for use of the space.

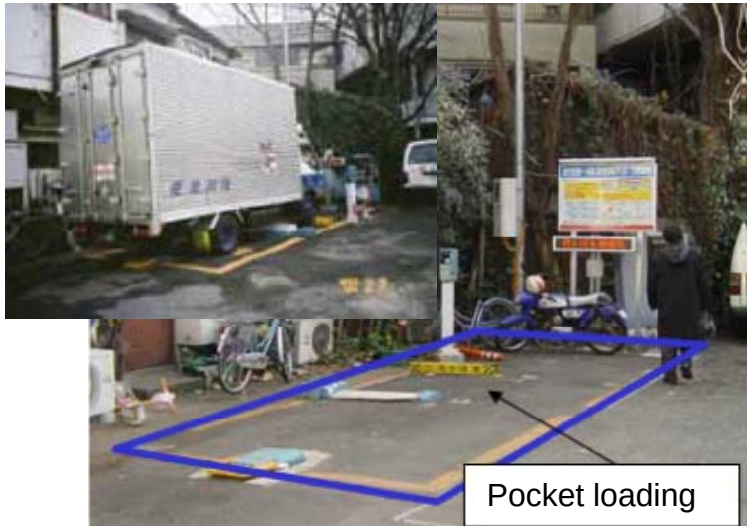
Example B. Joint parking space (Kashiwa City, Chiba)



-Securing on-street loading/unloading spaces, by changing road marking.

Example C. Pocket loading (Nerima, Tokyo)

-Securing loading/unloading parking space by converting a part of existing parking or vacant lot to off-street parking facilities.
-Possible to introduce reservation system.



(4) Efforts for Loading and Unloading Spaces (Pilot Programs, Soft Measures)

Efforts for Loading and Unloading Spaces—Pilot Programs

With the diversification of values and needs and the improvement of the awareness about the living environment, there is a growing need for listening to a wide range of opinions from the local residents, etc. Think about introducing measures, while taking into account these opinions.

Pilot programs are used to judge whether the measures are to be implemented or not based on everybody's opinion about these new measures and by actually experiencing them by limiting their location and duration, in order to solve the problems a community has.

The administrative organizations such as local governments, NPOs and councils run by private companies apply. (However, the involvement of the local governments related to the measures is required.)

- Past efforts (1999 to 2001) (The pilot programs that were publicly advertised by the Bureau of Public Roads of the Ministry of Land, Infrastructure, Transport and Tourism and that were adopted.)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
No. of adoption	6	9	14	14	20	29	32	41	33	17	14	9	10	248

Theme	Examples of the efforts	No. of communities
① Placing priority on pedestrians and bicycles	Daily life road zone, transit mall	62
② Promoting the use of public transport	Park and ride, shared use of cars	14
③ Improvement of bicycle usage environment	Introduction of rental bicycles, creation of bicycle running spaces	38
④ Smoother transportation in tourist areas	Limiting the influx of tourist traffic, providing comprehensive tourist information	22
⑤ Community-based use of roads such as open-air cafes	Multiple uses of road space such as open-air cafes and events	48
⑥ The road guidance by road names	The road guidance system based on road names and positional number method	22
⑦ Logistics and parking measures	Creation of loading and unloading spaces on the road and off the road	11
Other	Regulations on road construction, provision of information to pedestrians	31
Total		248

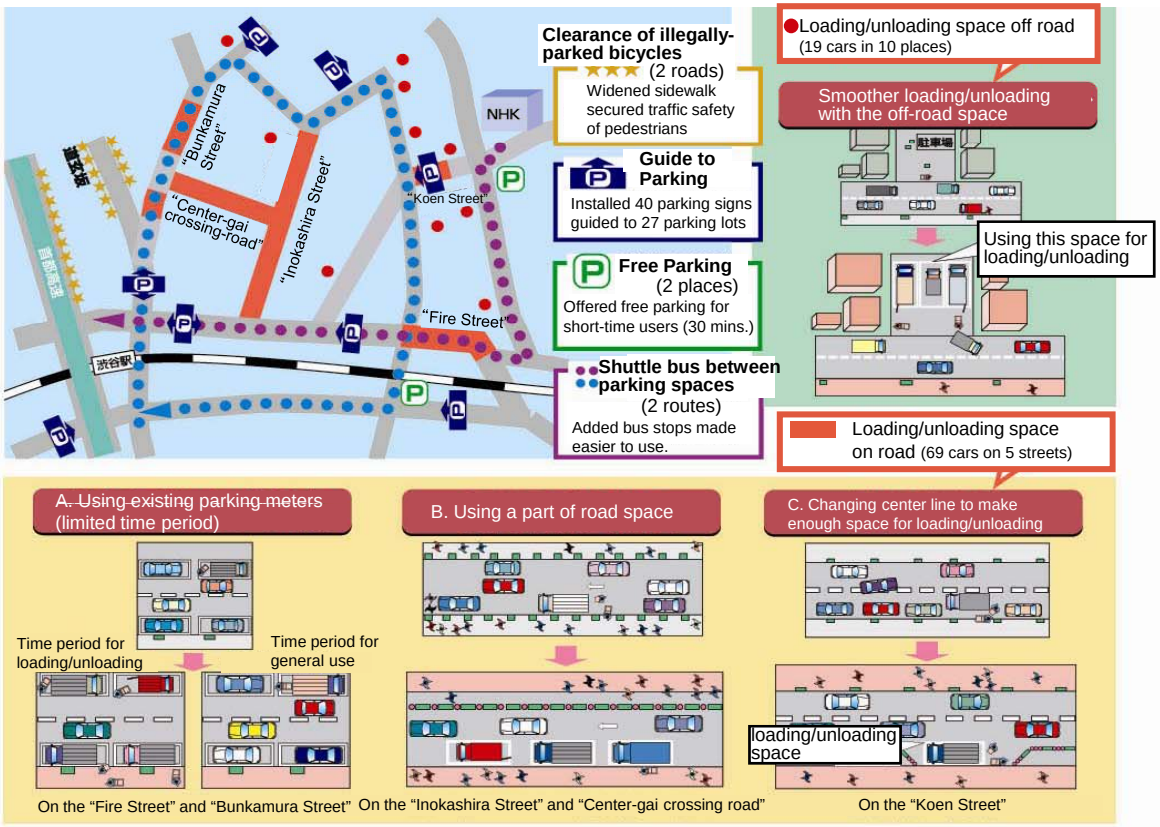
(4) “Soft” Measures for Loading and Unloading Spaces (Pilot Programs, FQPs)

Pilot program: 1. Securing loading/unloading space (Shibuya, Tokyo, 2000)

Comprehensive pilot program of terminal distribution and parking management

Period: From Oct. to Nov., 2000

Loading/unloading spaces on/off road have been installed by making good use of existing parking meters and general parking spaces to eliminate illegal on-street parking and loading/unloading to realize smoother traffic. Also, the program included guiding vehicles to the parking lots and offering free parking for short-time users and then the effect of the program was evaluated.



-Comprehensive pilot program was conducted to relieve traffic congestion in Shibuya, Tokyo.
-Secured new parking space for loading/unloading by changing the lane width to avoid on-street parking.
-The program resulted in improved travel speed and less illegal on-street parking by freight vehicles.

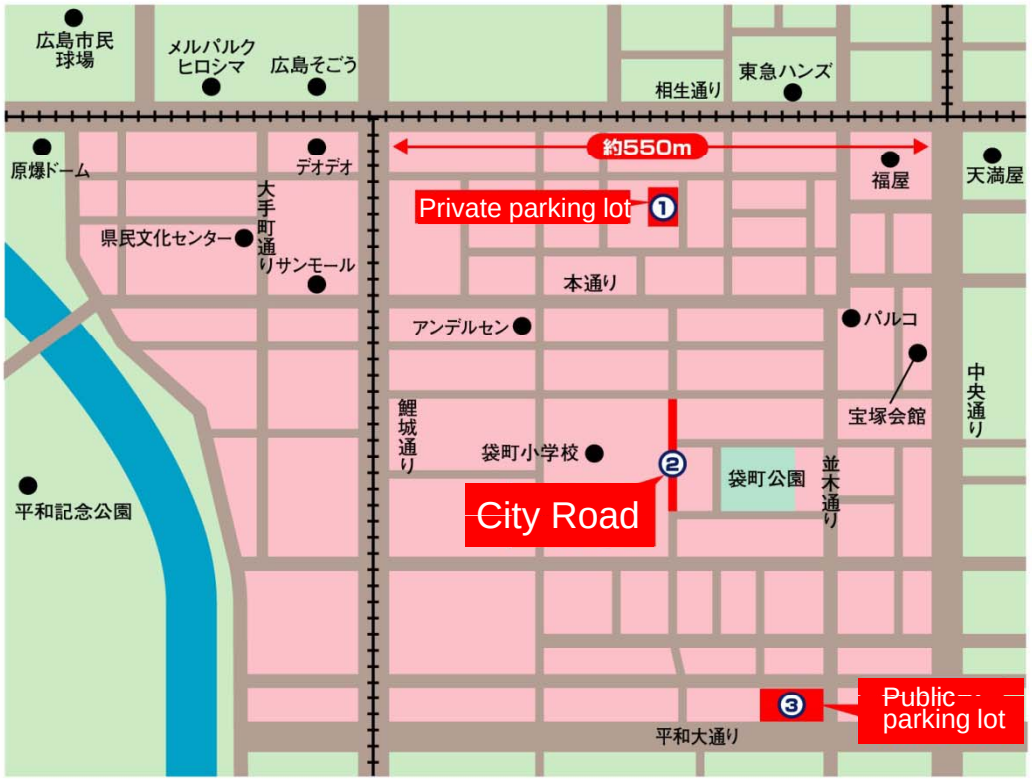
(4) “Soft” Measures for Loading and Unloading Spaces (Pilot Programs, FQPs)

Pilot program: 2. Securing joint loading/unloading space (Hiroshima City, Hiroshima, 2006)

Pilot program for better logistics and community renovation

Period: From Nov.1st to Nov.30th, 2000

Joint loading/unloading parking spaces on/off road were secured at the center of Hiroshima City.



① A part of private parking lot was borrowed for loading/unloading space off road.

② Loading/unloading space was secured on the city road.

③ Loading/unloading space was secured in a part of public parking lot.

-Parked vehicles for loading/unloading had been blocking the traffic and deteriorating traffic safety of pedestrians.
-Joint loading/unloading space had been secured using the existing road space or parking space (private or public) and the effect of reduction in operation time and improved traffic security of pedestrians was examined.
-About 70 % of the delivery companies and 40 % of the drivers expressed they could expect efficiency improvement.

(4) “Soft” Measures for Loading and Unloading Spaces (Pilot Programs, FQPs)

-Higashi Osaka FQP* was established by the local stakeholders to tackle the freight parking problem in Nov 2006.

-An action plan to address the local problems was formulated and the locals cooperatively have been working on it.

Challenges

Chronic and Serious situation with on-street parking of freight vehicles.

Chronic on-street parking (in the subject area)

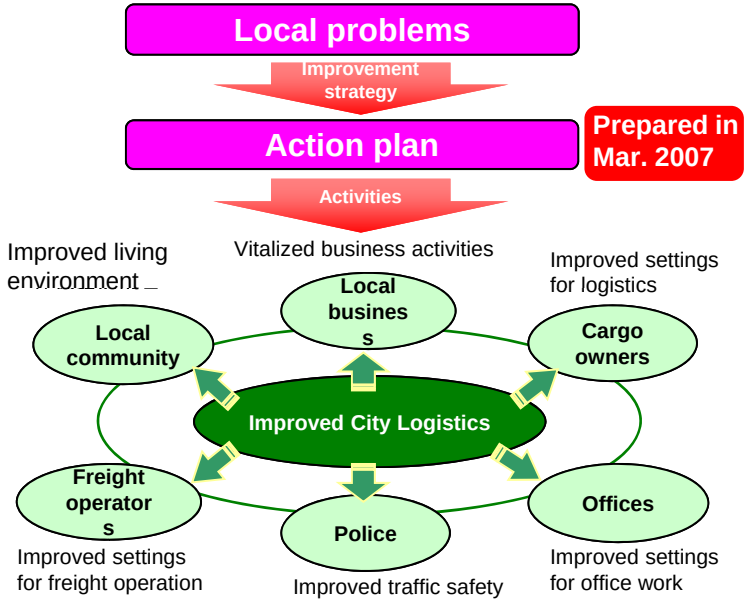
Higashi Osaka FQP* was established in November 2006 to realize future vision of the area in which local stakeholders such as cargo owners, delivery companies, local governments and police work together.

(*FQP: Freight Quality Partnership)
Freight Quality Partnerships are a means for freight operators, cargo owners, police, local government, local residents and other interested stakeholders to work together to address local environmental and social problems as well as to promote better understanding about freight traffic and improved efficiency.

Picture of the partnership action

An action plan was formulated in March 2007 to help the interested stakeholders to address the problems voluntarily based on the opinions in the local community.

Subject area
(Accumulation of distribution center and track terminal on the area)



Source: Higashi Osaka FQP website and Osaka prefecture

(4) “Soft” Measures for Loading and Unloading Spaces (Pilot Programs, FQPs)

Outline of the Action Plan

1. Eliminating trucks’ on-street parking	-Development of logistics parking -Informing the location of parking space
2. Eliminating private cars’ on-street parking	-Instructing and raising awareness about illegal street-parking -Tightening of regulations
3. Managing traffic flow	-Traffic restriction into the residential roads -Access route map of the subject area
4. Improving the local environment	-Planting trees and trash picking activities -Idling stop practice

FQP meeting

Consensus building among stakeholders with different interests through the FQP meetings and workshops in order to carry out the action plan.

A flyer for raising awareness of illegal on-street parking

A flyer of voluntary traffic restraint into the residential roads.

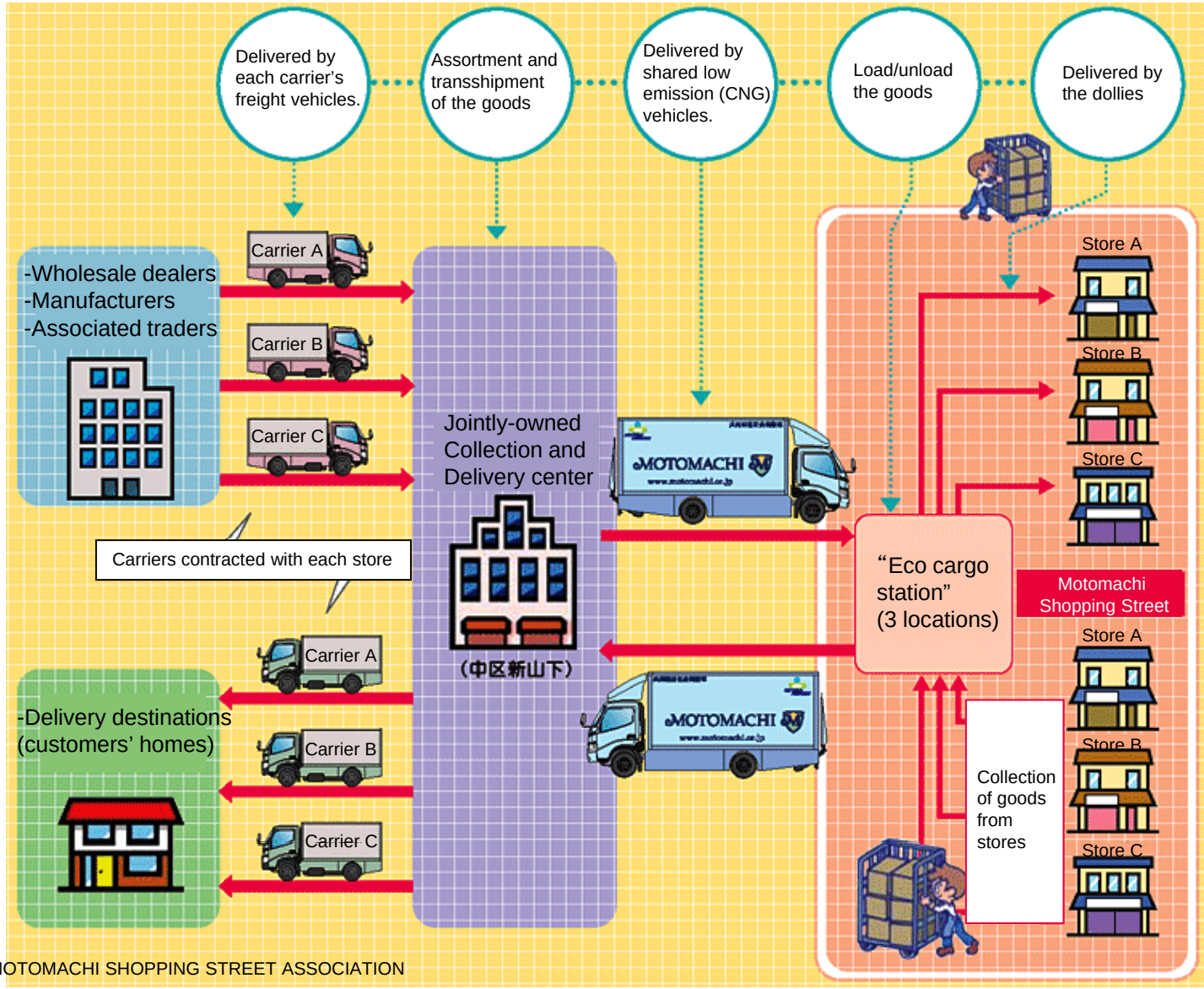
Raising awareness by handing out a flyer to drivers

Source: Higashi Osaka FQP website and Osaka prefecture

(5) Recent Case Examples

Example A. Joint delivery in the shopping street to address the City Logistics problems (Motomachi Shopping Street, Yokohama City, Kanagawa)

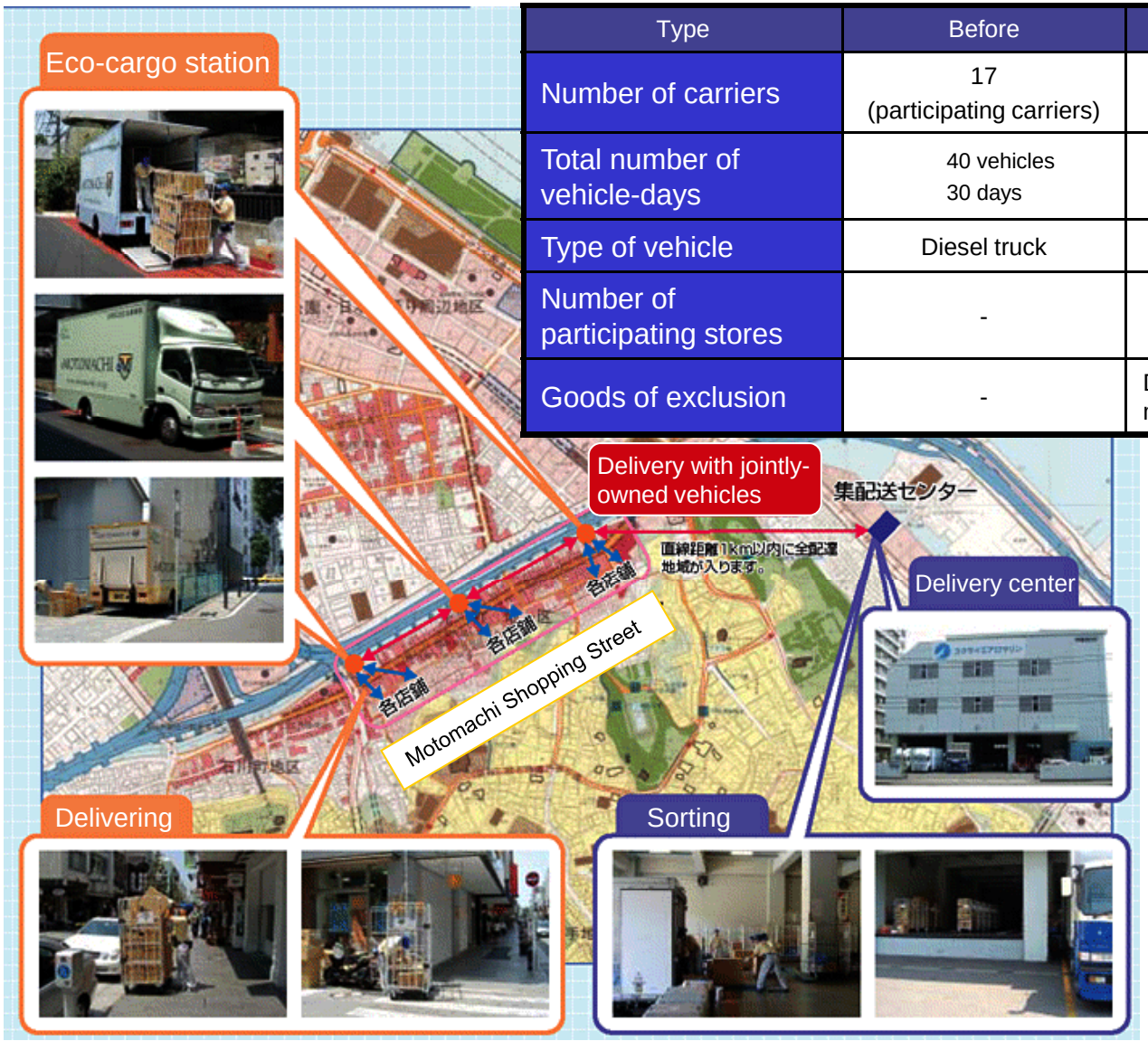
1. Overview of the Joint Delivery



Source: MOTOMACHI SHOPPING STREET ASSOCIATION

(5) Recent Case Examples

2. Actual Operation



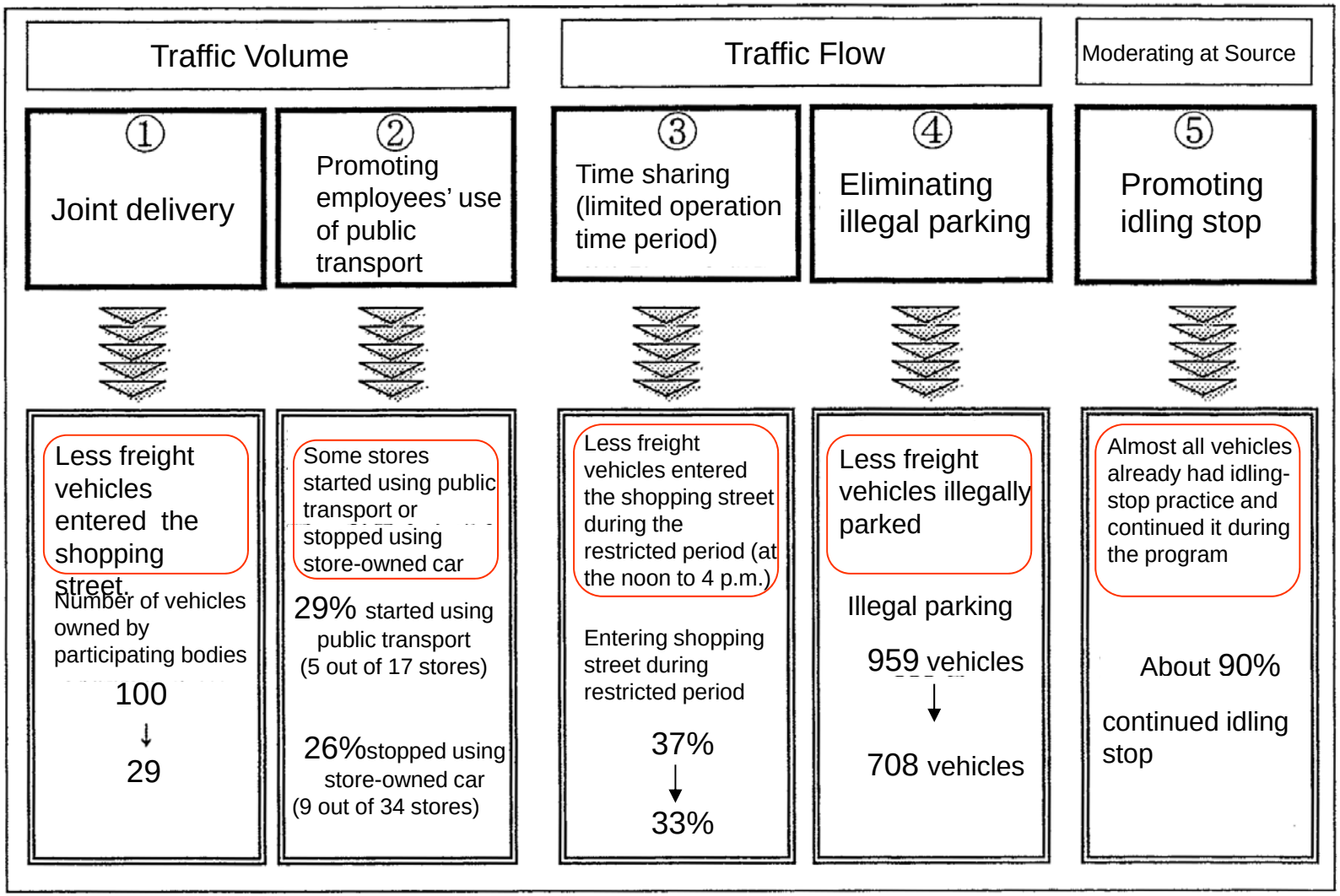
Result of joint delivery

Type	Before	After
Number of carriers	17 (participating carriers)	1 (jointly-owned carrier)
Total number of vehicle-days	40 vehicles 30 days	20 vehicles 30 days
Type of vehicle	Diesel truck	CNG truck
Number of participating stores	-	Almost all stores
Goods of exclusion	-	Directly delivered goods from manufactures, High-value items

Source: MOTOMACHI SHOPPING STREET ASSOCIATION

(5) Recent Case Examples

3. Effect of the Program



Source: MOTOMACHI SHOPPING STREET ASSOCIATION Original: "Study on the traffic environment of Motmomachi Shopping Street", 2001

(5) Recent Case Examples

Example C. Comprehensive efforts by local authority (Kanazawa City, Ishikawa)

Background

-Chronic traffic congestion at the city center on Route157
-Caused partly by freight vehicles parking for loading/unloading on traffic lane on which it is impossible to install on-road parking spots
-Needed to eliminate on-street parking to secure smooth traffic flow
-Started taking serious countermeasures from 1992

Situation before countermeasures

12-hour traffic volume of Route 157 on weekday in 1990:

25,306 vehicles

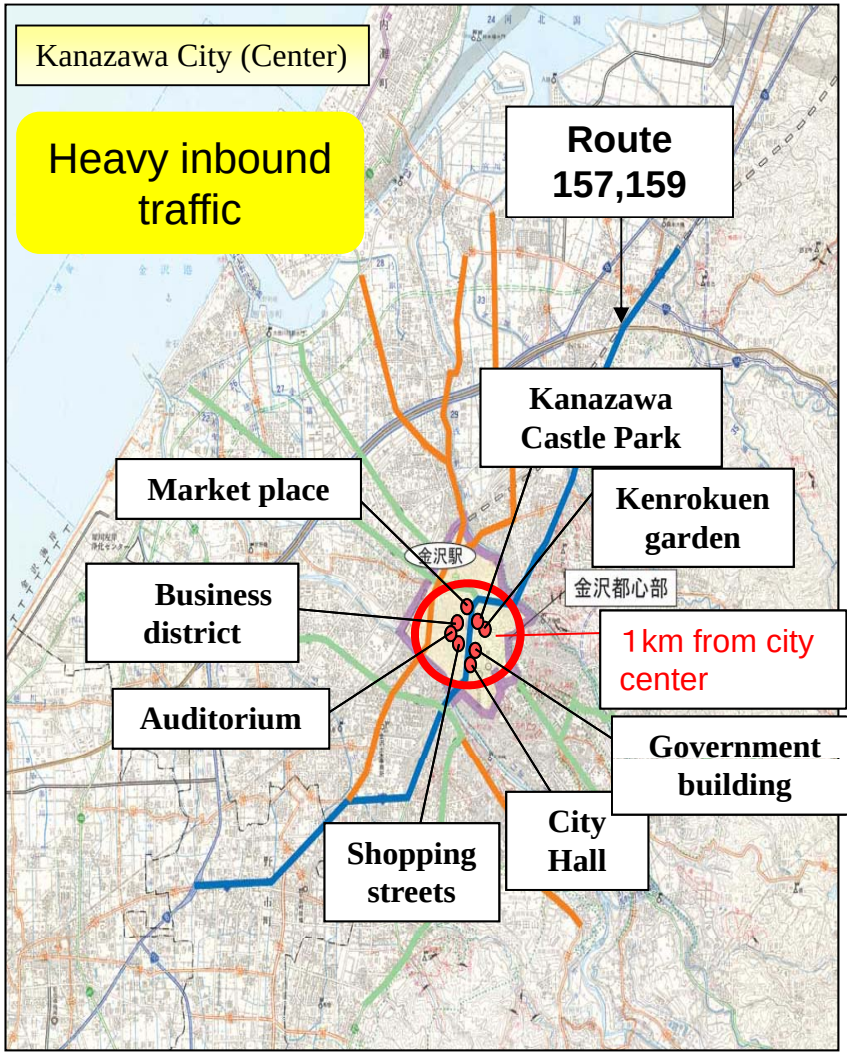
(including 5,658 small freight truck)

Ratio of small freight trucks: 22.4%

Survey on Illegal Parking (before bylaw on illegal parking):

1,911 illegally-parked vehicles

(10 - 11 am, 2 - 3 pm and 4 - 5 pm in May 1992)



Source: Kanazawa City

(5) Recent Case Examples

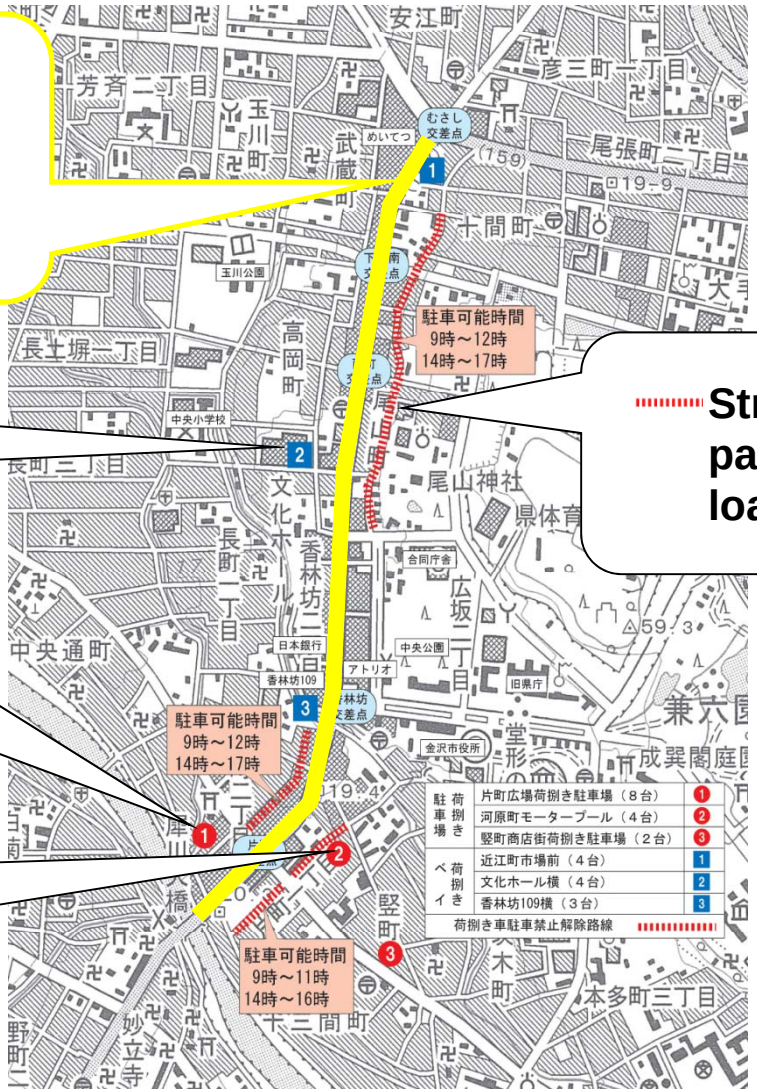
Parking spaces along the main road

Monitored zone for illegal parking
（R157　L = 1,655 m）
Instructing violators about illegal parking by supervisor staff.

Installed on-road parking spots
1 2 3

Created parking lots on city-owned property
1 3

Borrowed private parking lot by City
2



Street permitted parking for loading/unloading

Source: Kanazawa City

(5) Recent Case Examples

Monitored zone for illegal parking

Parking and stopping ban during the busy hours on the bus lane
(7:30 to 9:00 and 17:00 to 18:30)

Instructed by
-supervisor staff (10:00 to 17:00)
-contracted staff (18:30 to 21:00)

Street permitted parking for loading/unloading

Parking permit with a time limit
(9:00 to 11:00 and 14:00 to 16:00)

Source: Kanazawa City

(5) Recent Case Examples

Installed on-road parking spots

1 Nearby the Market place

Spaces for 4 vehicles

2 Nearby the auditorium

Spaces for 4 vehicles

Source: Kanazawa City

(5) Recent Case Examples

Installed on-road parking spots

3 By “Kohrinbo 109” shopping building

Source: Kanazawa City

(5) Recent Case Examples

Created free loading/unloading parking spaces

“Kata-machi” parking space (city-owned)

The City created a longed-for loading/unloading parking space on the city-owned property at the city center.

A private parking space

The City borrowed the private parking lot for carriers at the busy city center, where loading/unloading spaces were insufficient.

Source: Kanazawa City

(5) Recent Case Examples

Result (1)

Reduced traffic volume

12-hour traffic volume on weekday of the Route 157

Before (1990): **25,306** vehicles（including **5,658** small freight trucks）
Ratio of small freight trucks: **22.4%**

After (2005) :**22,361** vehicles（ including **2,121** small freight trucks ）
Ratio of small freight trucks: **9.5%**

Reduced illegally parked vehicles

Before the bylaw : 1,911 vehicles (surveyed in May 1992)

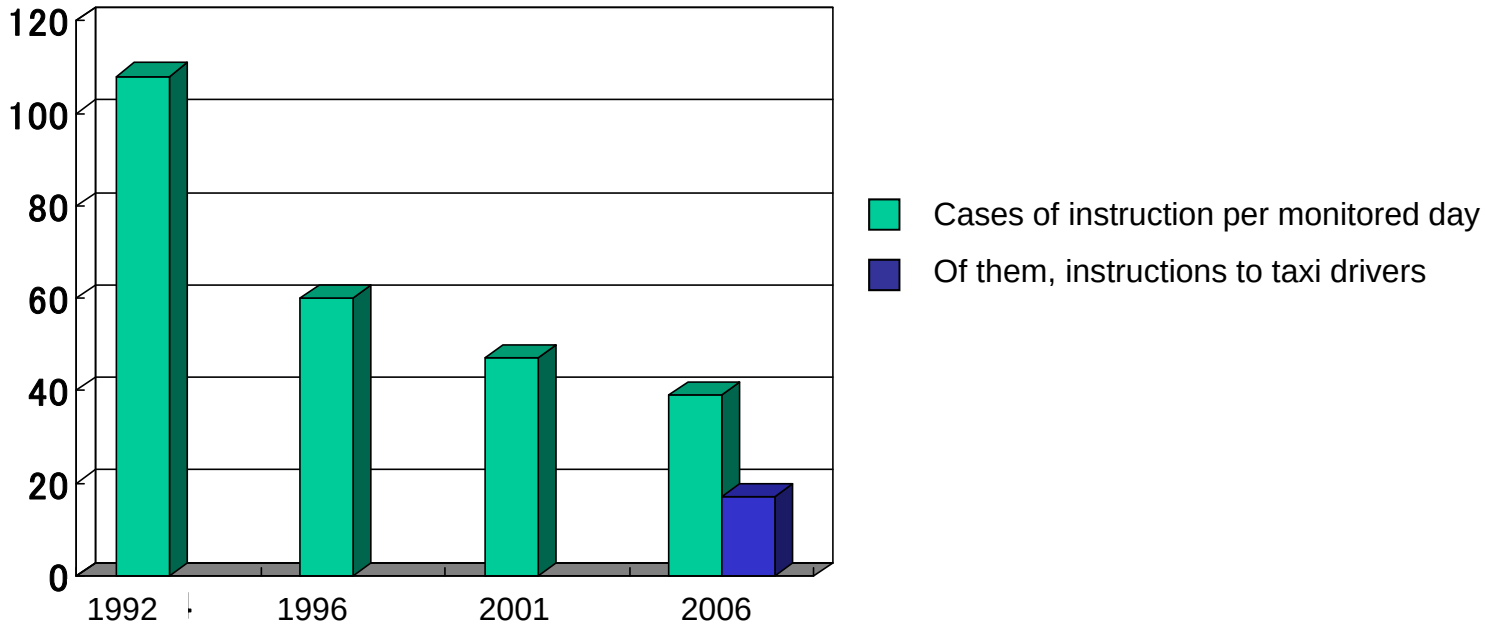
After the bylaw : 386 vehicles (surveyed in Feb 1993)

Source: Kanazawa City

(5) Recent Case Examples

Result (2)

Reduced cases of instruction → **Reduced parked vehicles**



Frequency of the cases that the supervisors gave illegal parkers instructions/warnings on route 157

Source: Kanazawa City

(5) Recent Case Examples

Summary

(1) Combination of parking restriction and permission to induce loading/unloading works on the backstreets instead of the main road.
- instructed by supervisors on the monitored road.

(2) Installed on-street parking spots
- Spaces for 11 vehicles at 3 spots

(3) City created loading/unloading parking lots
- Spaces for 10 vehicles at 2 parking lots

(4) City borrowed parking lots from private sector
- Spaces for 4 vehicles at 1 private parking lot

(5) Subsidies for borrowing parking lots
- 3 parties for 8 vehicles in 2005
- 2 parties for 5 vehicles in 2006

*currently no subsides applied due to conversion of the property for other use or to cost saving

Challenges

(1) Difficulty in finding a parking space on the right spot
- difficult to find a property
- high-priced

(2) Need to continue monitoring despite reduced illegal parking
- Carriers tend to illegally park when supervisors are not around.

(3) Too many loading/unloading vehicles
- responding to frequent & small amount delivery needs
- joint delivery
- improving efficiency

Cooperation among cargo owners, carriers and government with shared awareness of challenges is the key.

Source: Kanazawa City

Thank you for your attention.