

### Research for public congestion forecast with public participation

#### ○ Scope of Project

- ▶ Analyze the public behavior modification by information provision or prior educational activity for 2020 Tokyo Olympic and Paralympic Games.
- ▶ **Simulate an impact of behavior modification to congestion.**
- ▶ Develop a congestion mitigation method with public participation for 2020 Tokyo Olympic and Paralympic Games.

#### ○ Simulation for congestion of public transportation

- ▶ Develop traffic demand model on public transportation.
  - Use usual traffic demand as a basement of each scenario.
  - Add traffic demand related to Olympic Games to the basement of traffic demand. (e.g. Audiences or Other relevant people)
- ▶ Simulate multiple scenarios with traffic demand model and examine the effectiveness of each scenario

#### ○ Simulation

Table 1 Input of Traffic congestion forecasting simulation

No	Item	Content
1	with	Tokyo waterfront area
2	Date	Weekday during Olympic Games
3	Input data	- Games (Stadium, Nearest station, Capacity, Start time, End time, etc.) - Accommodation (Nearest station, Capacity, etc.) - Public transportation (Route network, Time table, Station, etc.) - Relevant people in Olympic Games (Origin-Destination, Attendance, Departure time, etc.) - FY2010 Traffic Census Result
4	Scenario	- No.1 : Weekday without big events - No.2 : Weekday with Olympic Games (without Any measures against traffic congestion) - No.3 : Weekday with Olympic Games (with ART※1) - No.4 : Weekday with Olympic Games (with ART※1, Measures to reduce traffic demand) ※1 ART : Advanced Rapid Transit

#### ○ Result

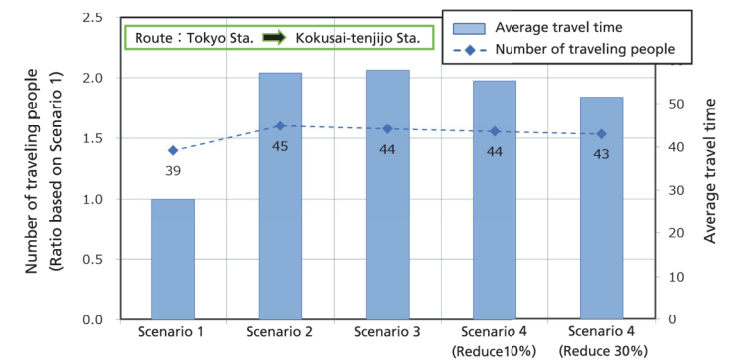


Fig.1 Average travel time / Number of traveling people

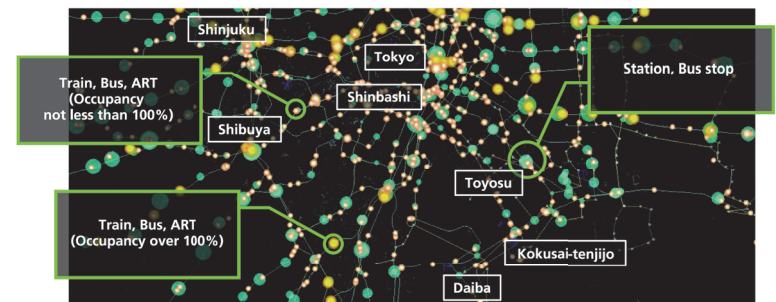


Fig.2 Simulation of scenario 3



### Basic design on the development of movement support system for people with mobility constraints

#### Object of the Project

For the tasks of movement support for people with mobility constraints during Tokyo Olympics and Paralympics and for transportation constraints in super-aging society, we will study technical development and strategy to achieve travel support for transportation constraints combining convenience and economical rationality.

#### Project Summary

To prepare for the FOT(Field operational Test) after the after fiscal 2016, we developed a basic design aimed at sophisticating a traffic accident prevention system called PICS(Pedestrian Information and Communication Systems) which supports the safety of the pedestrian (the elderly, the visually disabled) by informing traffic signal status with voice synthesis or executing time extension of green light for pedestrian crossing.

Basic design is implemented in 2 years after fiscal 2014, we narrowed down the target by studying possibility based on the countermeasure plan in the made a detailed consideration of the system.

The detailed systems are "Automatic time extension system of pedestrian green light detecting people with mobility constraints by sensor" and "people with mobility constraints assist system which provides traffic signal status through smartphone," etc.

#### Future plan

- Survey of walking speed of people with mobility constraints in order to ensure the appropriate time of green light for pedestrian,
- Study and validation of traffic signal control method to let people with mobility constraints cross safely, and system definition such as installation position or specifications of sensor,
- Technical evaluation in field to achieve service with mobile phone (ex; accuracy of position detection, communication).

