

# **Bicycle Safety and Comfort Promotion by**

# **“Keep Left Scheme”**

**-Challenge and Outcomes of**

**Kanazawa City in Japan-**

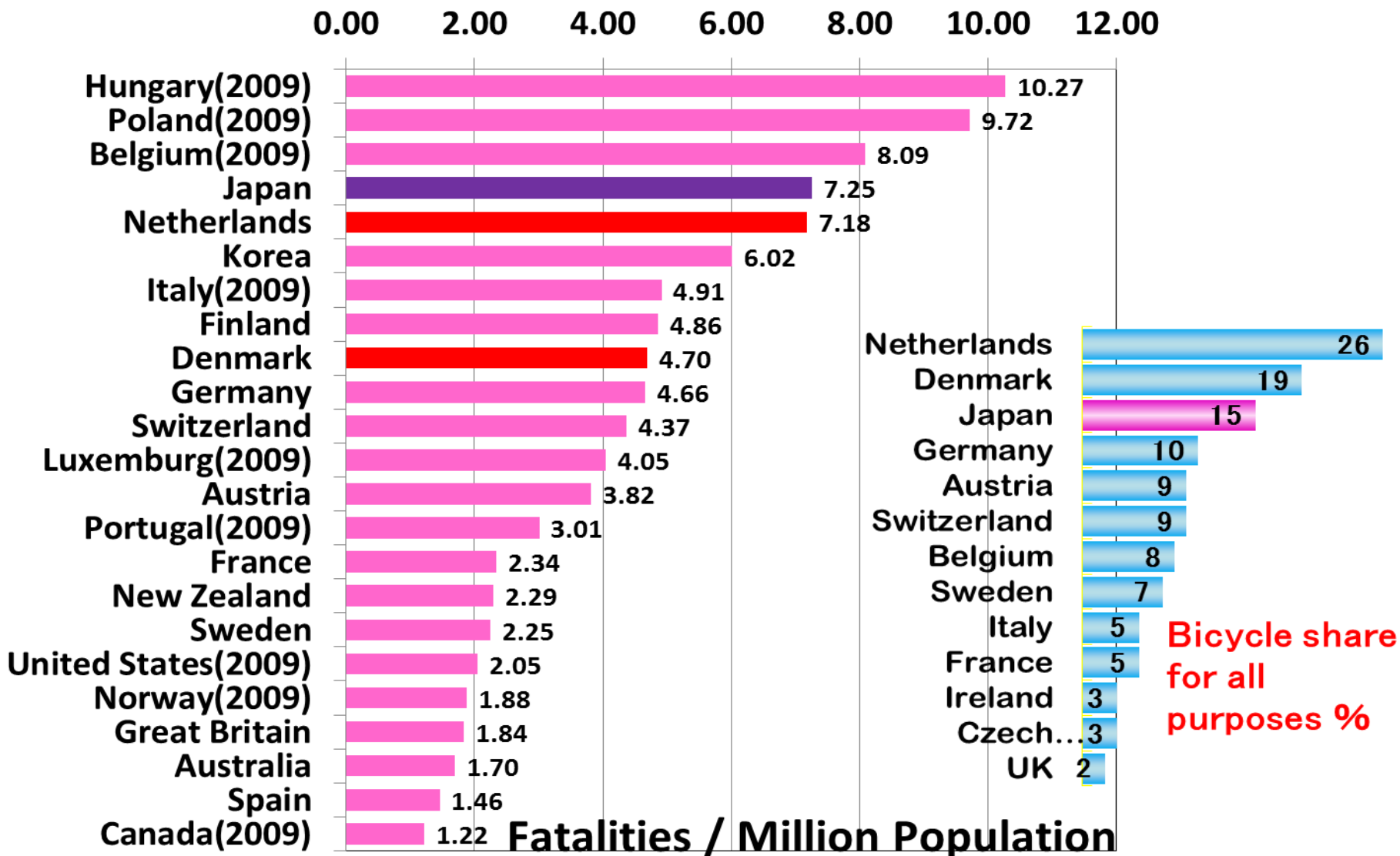
**Hideo Yamanaka : Tokushima University**

**Shigeko Mikuni : Friends of the Earth Kanazawa**

**Chiaki Mikuni : Confucius Institute of Hokuriku University**



# Fatalities of Cyclist per Capita by Traffic Crashes



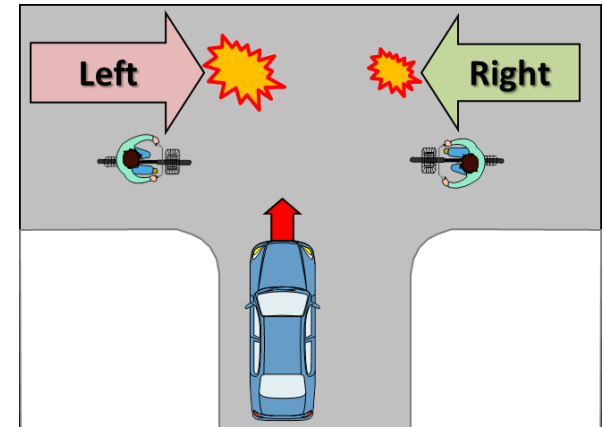
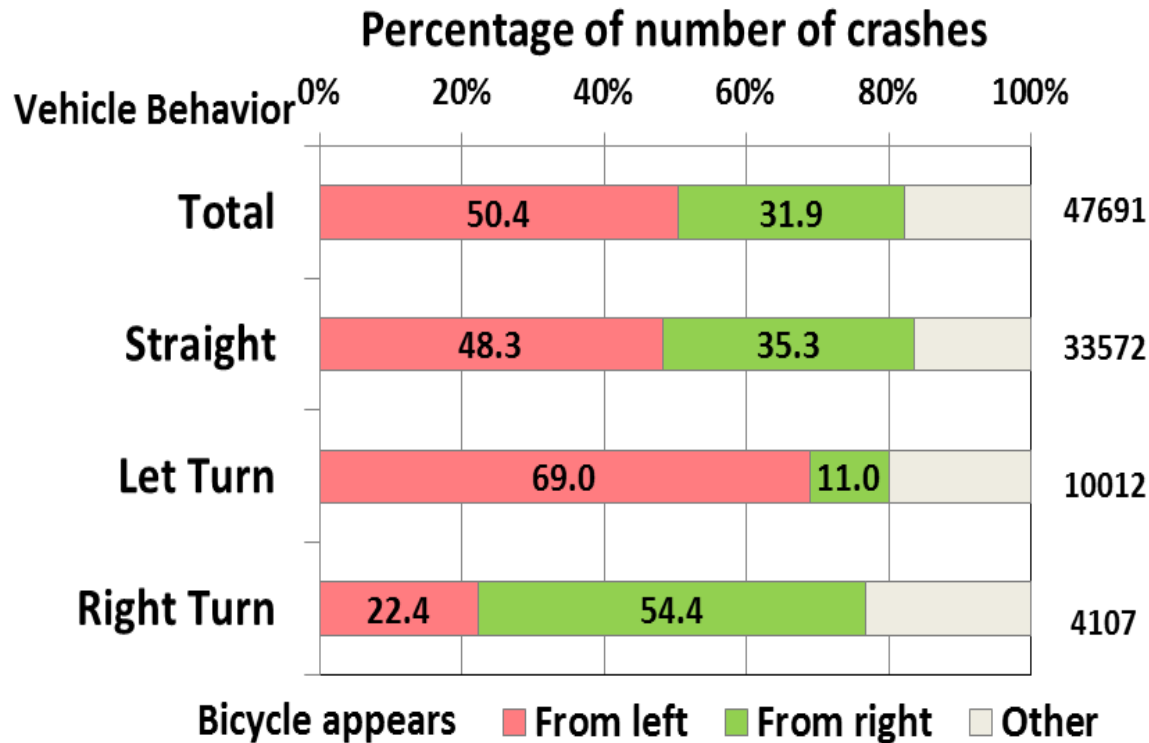


**VELO-CITY**  
**GLOBAL 2016**  
2.27-3.01 TAIPEI, TAIWAN

Paper No.: 1070 Presentation Session: 29AM5



# Crossing Crashes of Bicycles and Vehicles at Junctions without Traffic Light



2007-2011 5 years Vehicle is stop controle side

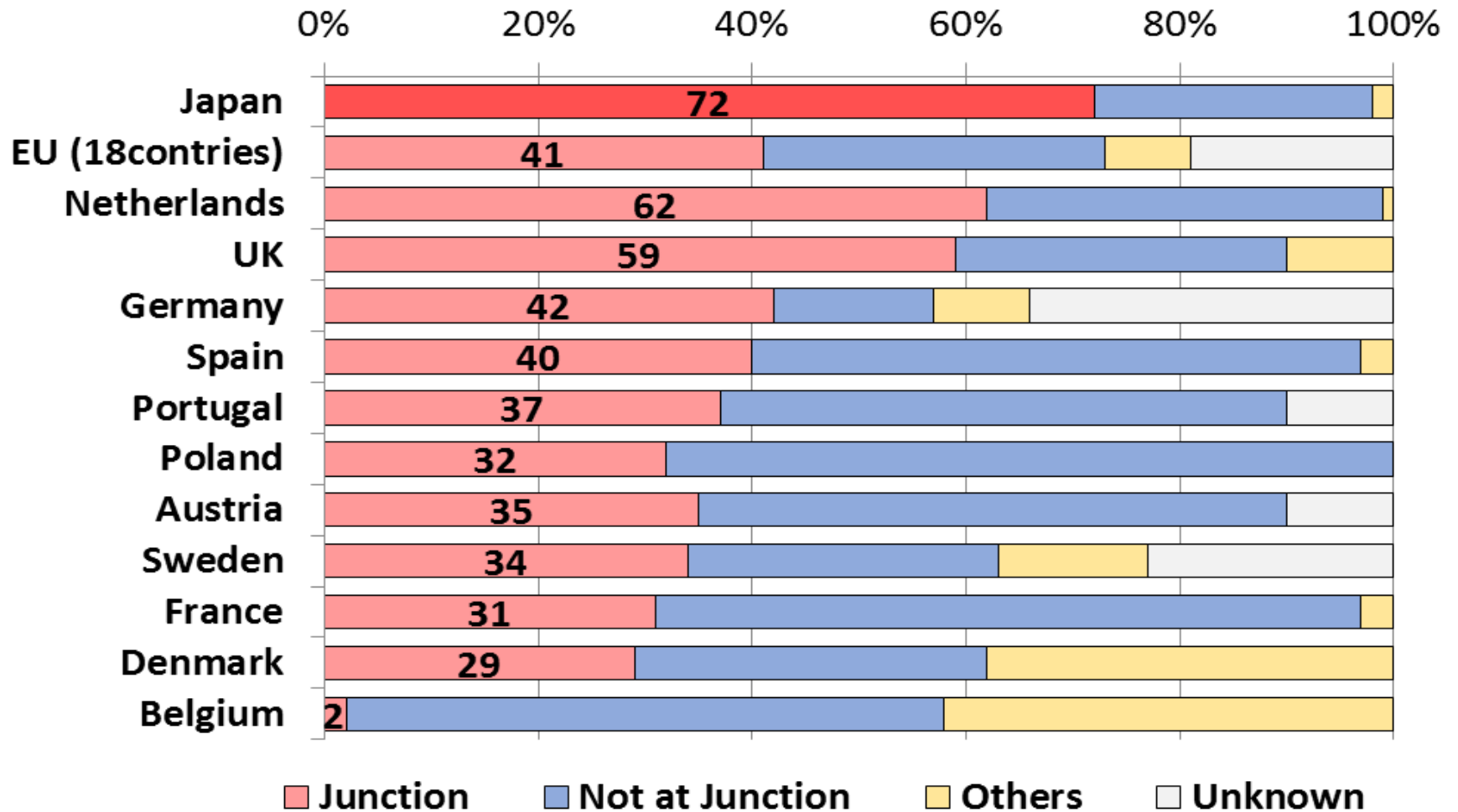
Source: ITARDA Japan 2013

# Problem



Bicycles appear from both sides  
at all conflict areas

# Percentage of Serious Injury Bicycle Crashes at Junctions



# **“Keep Left Scheme”**

## **Challenge and Outcomes of Kanazawa City**



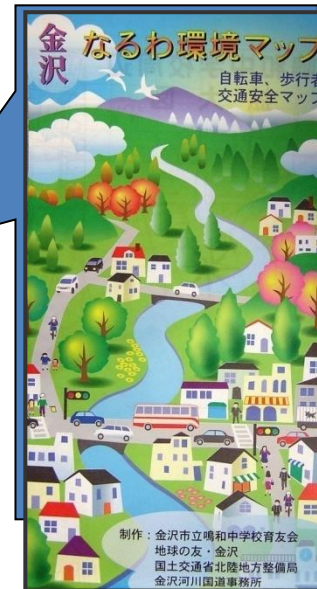
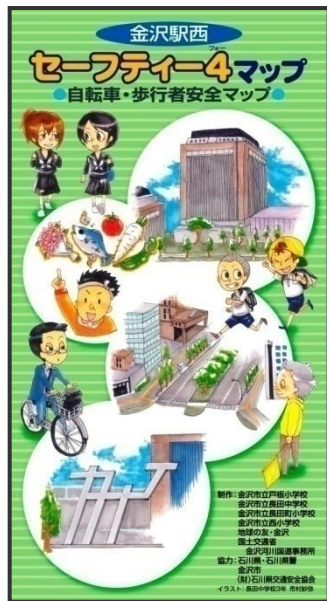
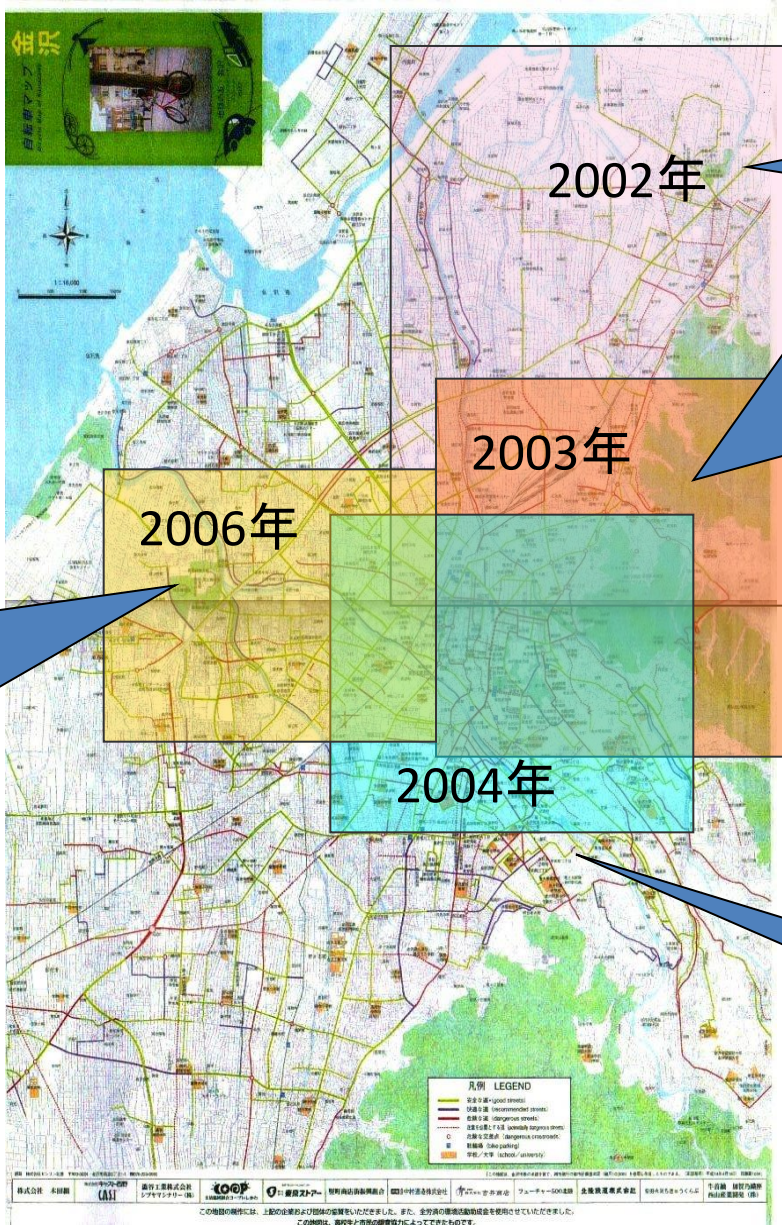
- In 2000, before the forum under the topic of “Transportation and Environment,” the guest speaker Matthias Zimmerman, representative of the “Transportation and Environment” NGO in Switzerland (VCS) investigated with us the conditions of the streets and crossroads in the downtown area of Kanazawa.



# Citizens and Students Participation in the Bicycle Map Project



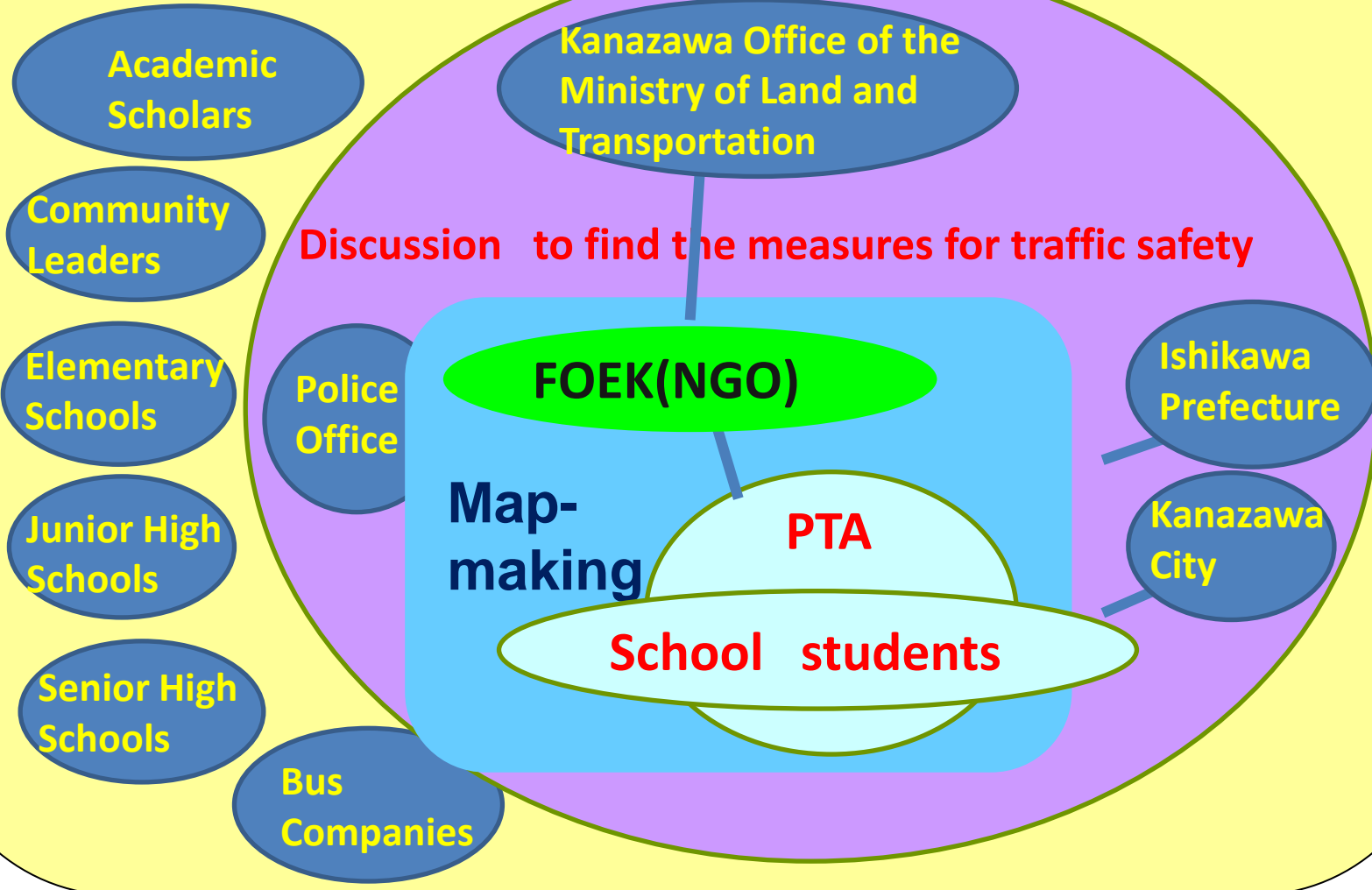
By PTA people



# Cooperation and Coordination



# The District Conference for finding Measures of Traffic Safety on R159 (national road) in Kanazawa



# Dialogue with High School Students



金沢市立中央小学校地区 自転車・歩行者安全社会実験の  
取り組みのひとつ



金沢市の自転車走行指導帯の  
整備予定に基づいて  
利用する生徒の声を聞き  
「自転車安全運転マニュアル」  
制作に役立てる



# Two Principles for Safer Cycling

1. Cyclist should not ride on sidewalks but on carriageway.
2. Cyclists should keep to the left on the streets.

## Two wheels for practice

- 1. Improvement of streets and road markings**
- 2. Education for cyclists on the streets**

# Before





# Bike Lane in the Narrow Streets



sidewalk

**After improving infrastructure, one day early in the morning, community neighbors, police officers, teachers, officers and FOEK members advised cyclists to keep left for safer cycling.**



# After









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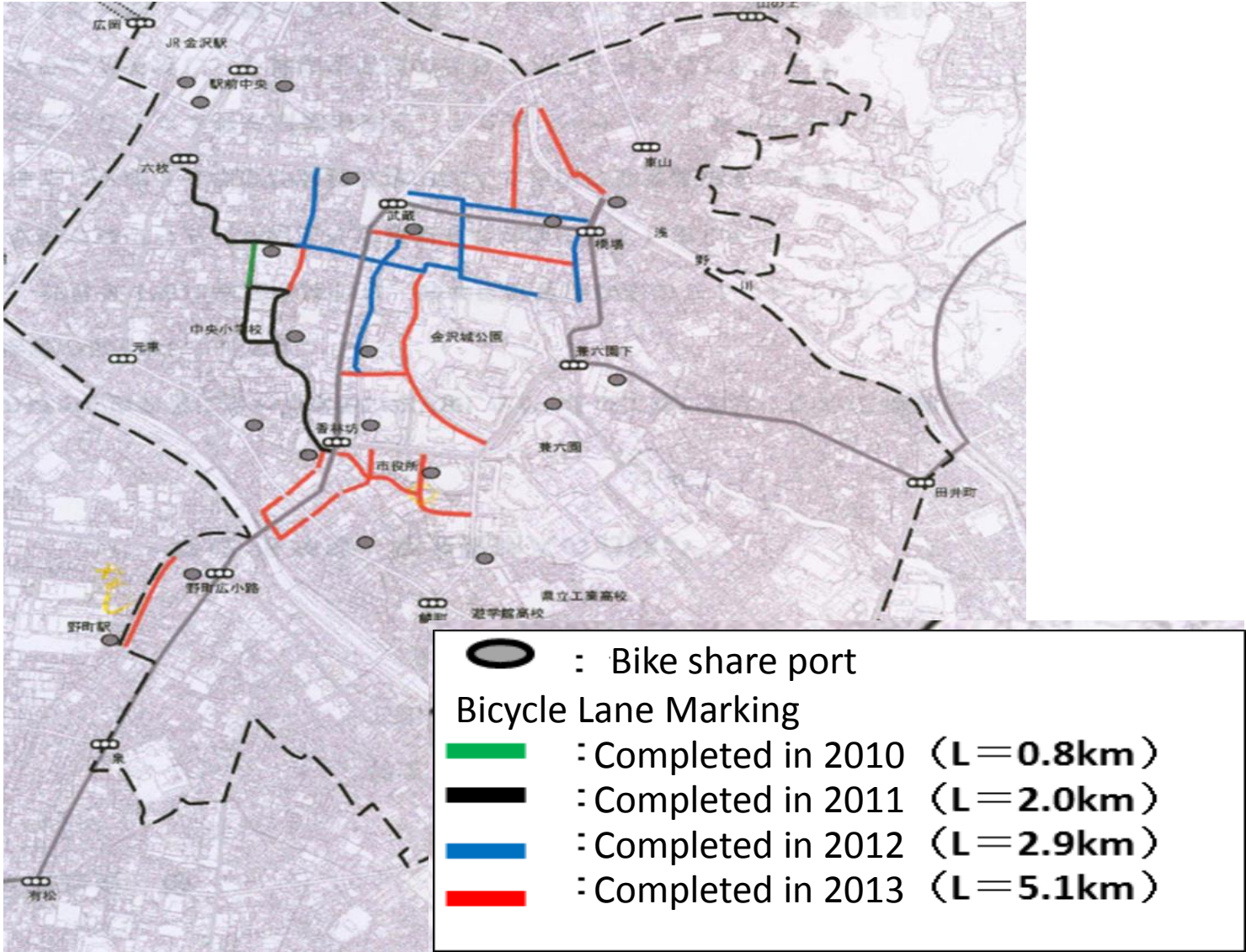
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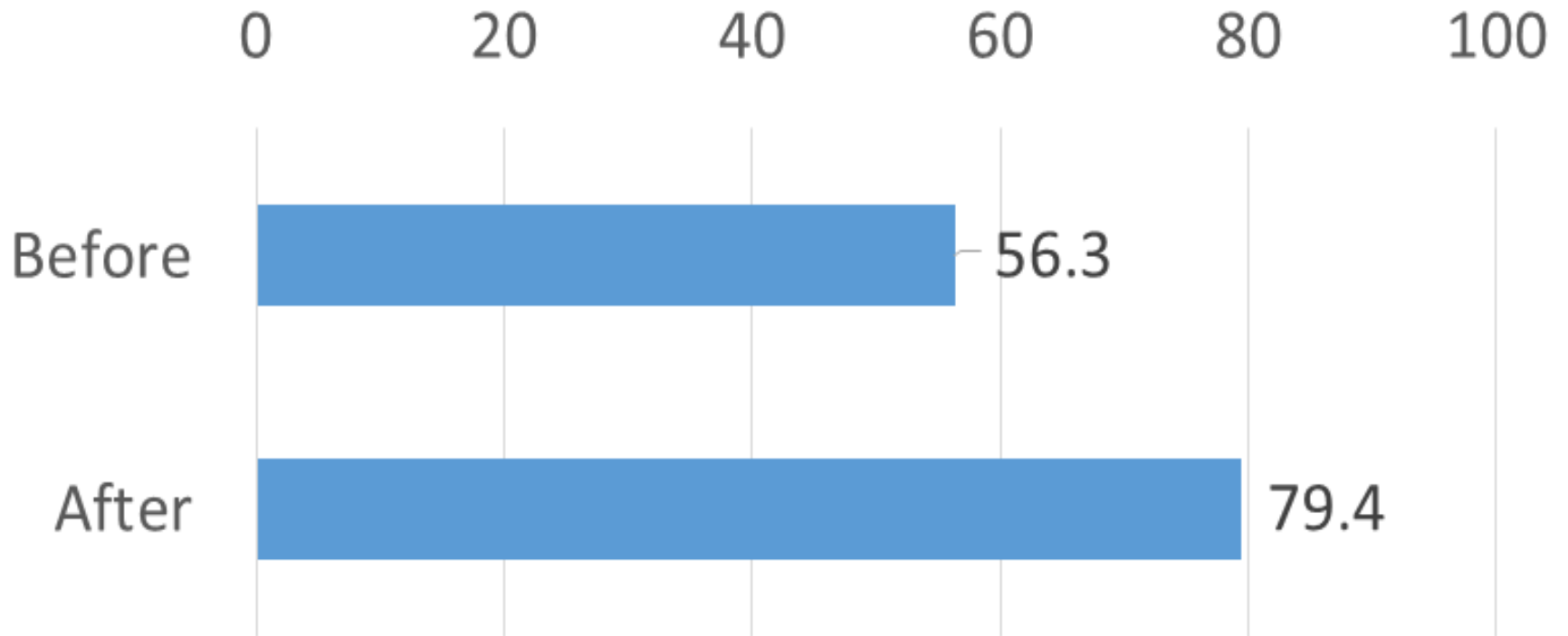
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# Implemented Streets with Bicycle Lane Markings

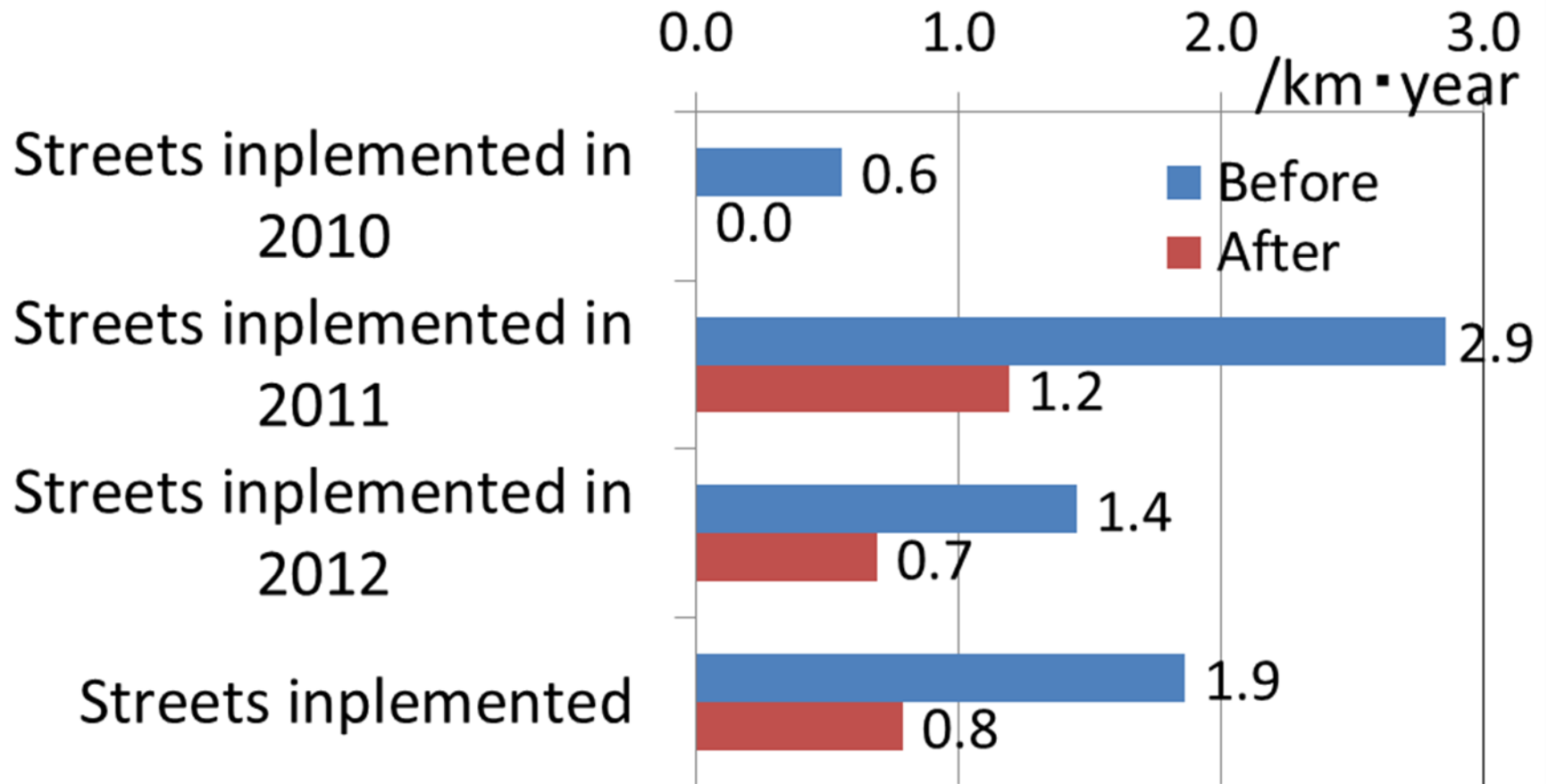




# Percentage of Bicycles Running left side



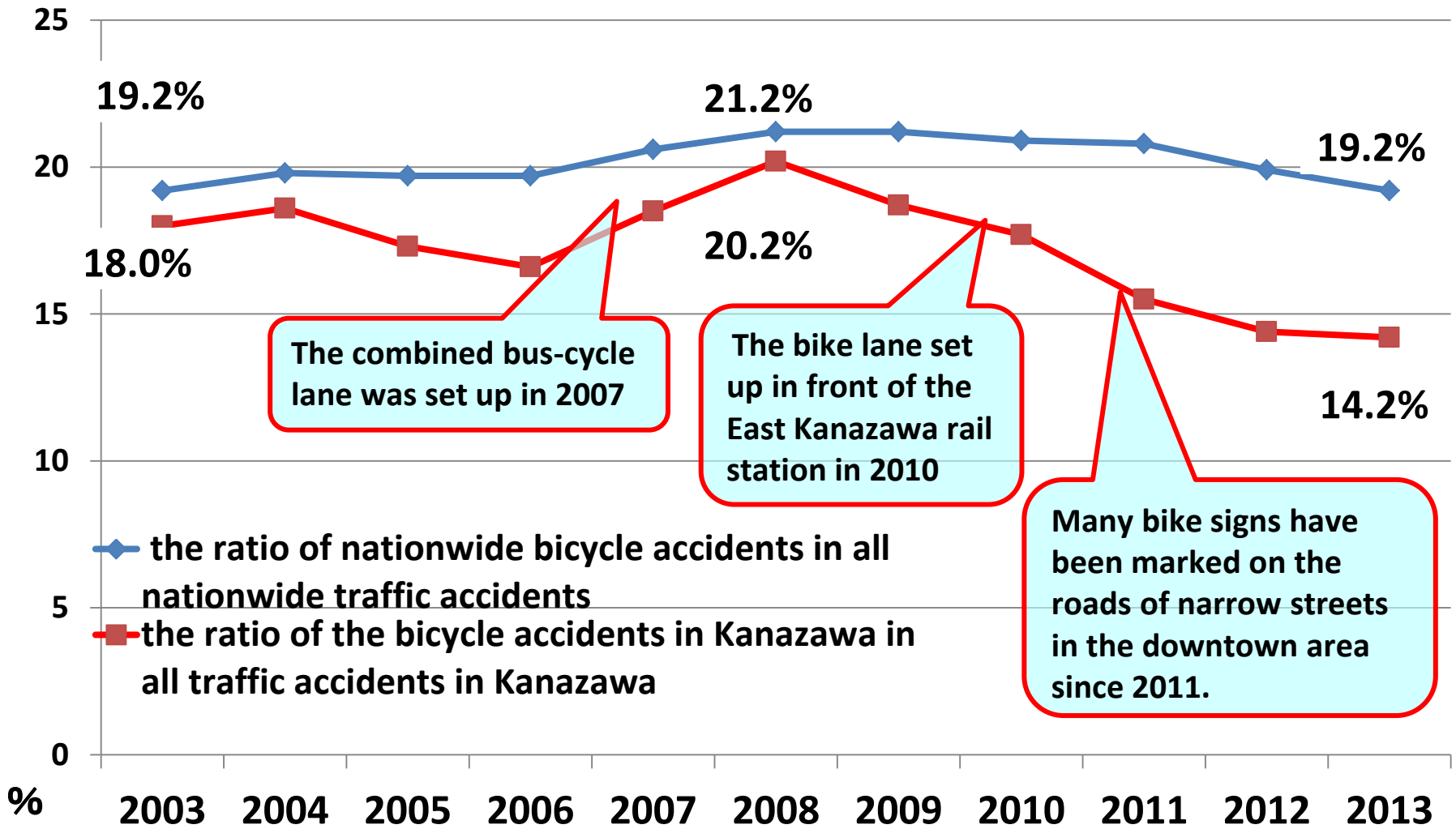
# Bicycle Accidents Before and After



# Results of Statistical Hypothesis Test

Target	Crash type	Binomial Test	
		p-value	
Streets implemented in 2010-2012	All	0.02	significant reduction
	Crossing	0.03	significant reduction

# Bicycle Accidents in Kanazawa City



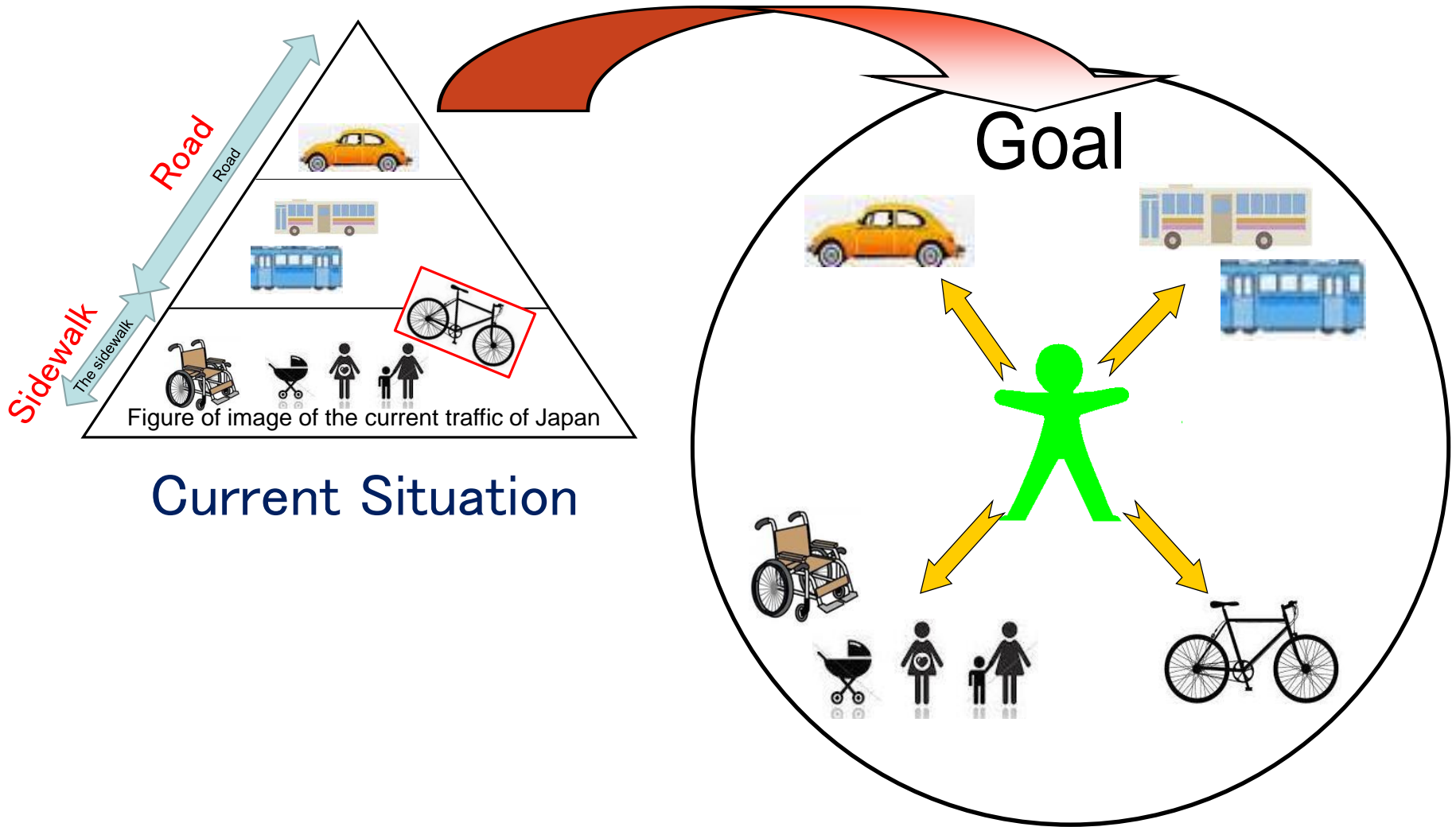


Thank you,

Come to cycle

**Kanazawa**





## Current Situation

**To create traffic environments sharing with pedestrians, cyclists and car drivers for safer transportation. So that people can choose the appropriate way whenever possible.**



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# Problem!

- **Bicycle appears from both sides at all conflict areas**

