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1st ATRANS Symposium on Transport Crisis in Thailand August 1st, 2008
Panel Discussion on
“Seed and Need for Urban Mobility Study in Asian Region”

Urban Transport Study for Asian Countries in Japan

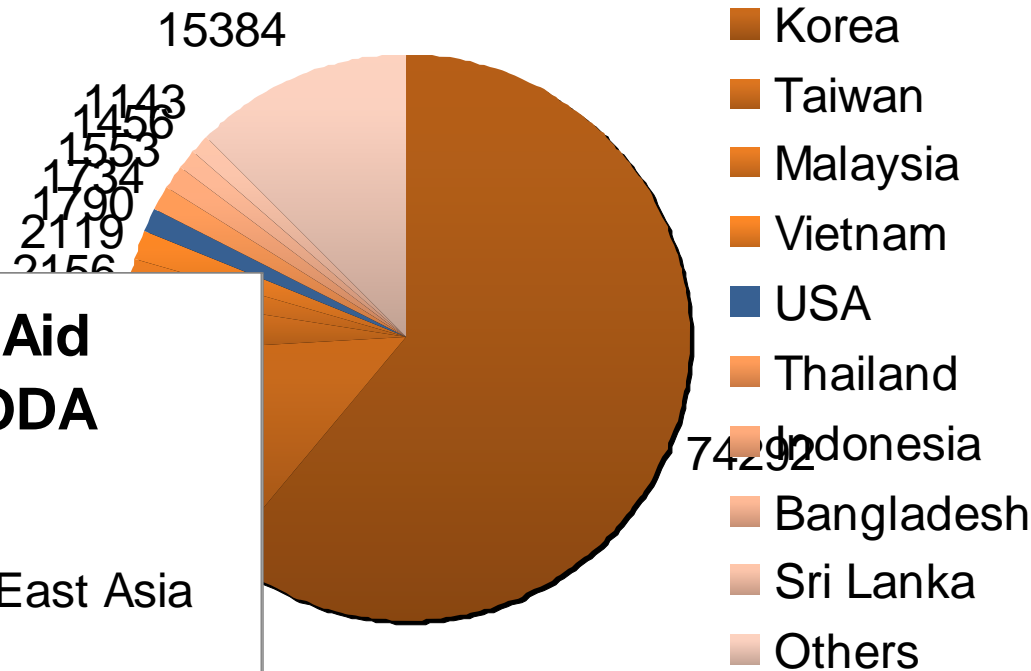
Atsushi FUKUDA, Nihon University



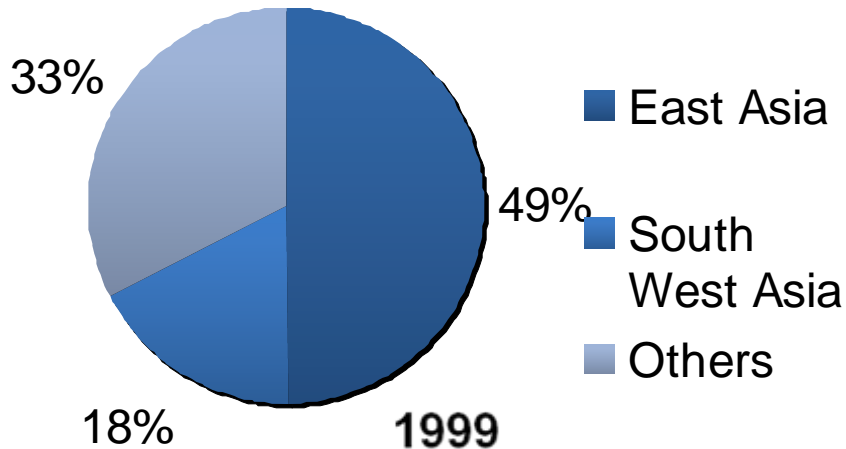
Our relationship with Asian countries



Foreign Students In Japan



Share of Bilateral Aid Under Japanese ODA



s (2006)

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What are Seeds and Needs in our international relationship

Faculty Development

Improvement of Education & Research Level

+Education & Research Base
+Contribution for Social Development

Univ. in Asia

Univ. in Japan

Follow up

Foreign Students

JSPS

Secondments

SEED-NET

AIT

Follow up

+Maintain of Education & Research Level
+International-ization
+Identify Research Topics

Contribution for Development Aid (ODA)

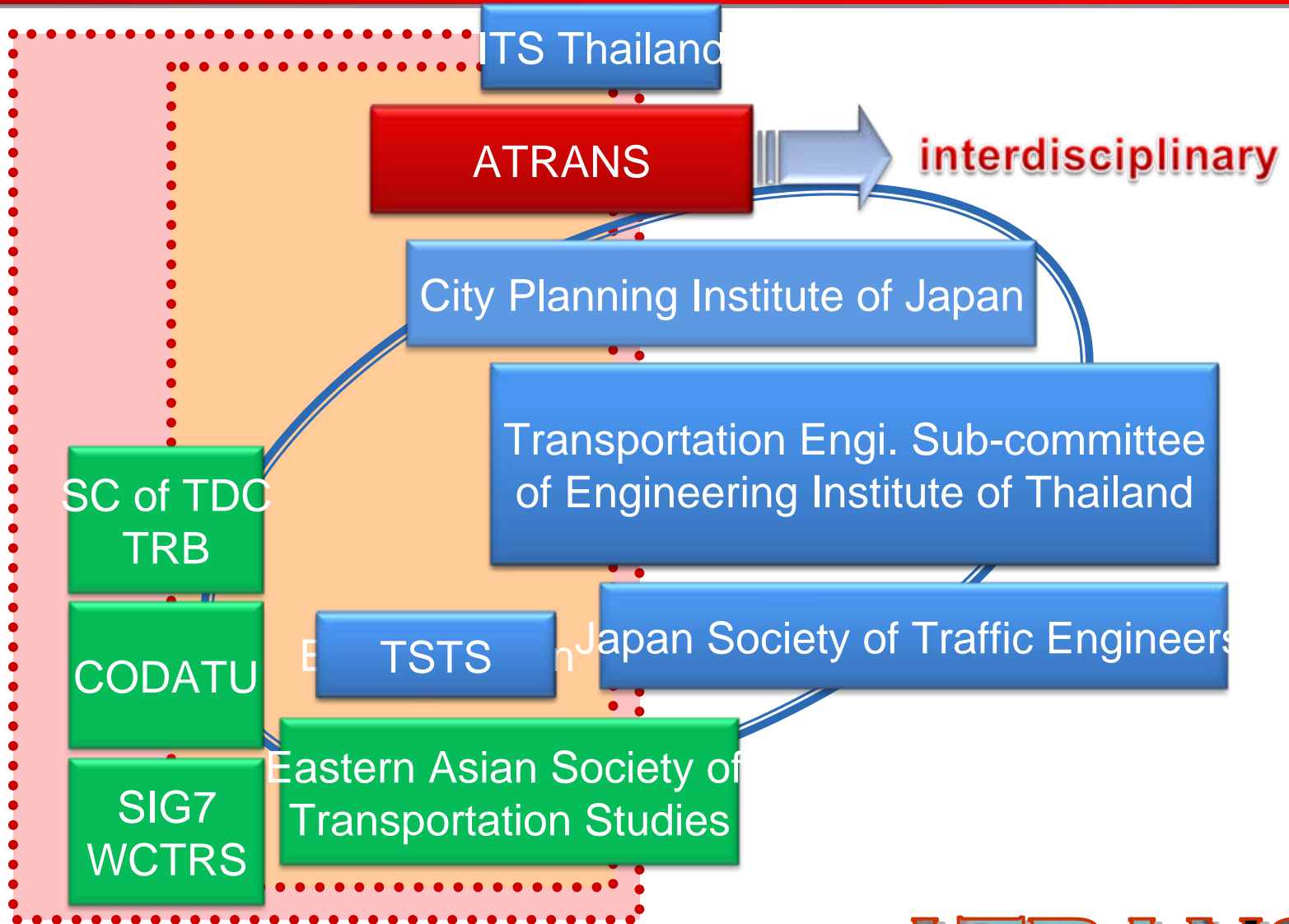
Government

Activities by Academic Soc

Government

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Role of Academic Society in our relationship



What kinds of researches have been carried out? (1)

EASTS International Research Group

IRG-01 Sustainable Transport for East Asian Megacities (STREAM)

IRG-02 International, Inter-regional, and City Logistics Research Group in Wide Variety of Asian Region

IRG-03 Dynamics of Poly-centric Employment Formation in East and Southeast Asian Cities

IRG-04 Scale Free Characteristics of the Traffic Network (SCAFT)

IRG-05 Culturally Sensitive Pedestrian-centric Philosophy to Advancement of Urban Form in East Asia

IRG-06 Building ITS Development Scheme in Asian Context

IRG-07 Risk Management of Transport and Logistics for Natural Disasters and Mega Events

IRG-08 Research on the Control Mechanism and Simulation of Safety Conditions of Perishable Foods Transportation and Logistics

IRG-09 Economic Instruments in Sustainable Transport of Asia Cities (EISTAC)

IRG-10-Sustainable Neighborhood Transportation to Improve the Quality of Life in Developing Cities

IRG-11 Research on the Flow of International Air Cargo in East Asian Region

What kinds of researches have been carried out? (2)

EASTS ICRA

Travel Behavior Analysis and its Implication to Urban Transport Planning for Developing Countries

A Comparative Study on Motorcycle Traffic Development in some Asian Countries - case of Taiwan, Malaysia and Vietnam

A Comparative Study on Urban Structures and Transportation Systems in Asian Metropolitan Cities

Comparative Analysis of Motorcycle Utilization and Forecasting Model of Motorcycle Ownership of Eastern Asian Countries

Dynamics of Poly- centric Employment Formation in East and Southeast Asian Cities

Inter-regional Valuation of Transport Safety and Exploration of Social Attitudes towards Safety Improvements Considering Southeast Asian Cities in China, Malaysia, and Indonesia: Comparative Investigation of WTP Vs Traditional Gross (Net)-Output Methods

What are needs for Japanese?

Identify research needs

- Fundamental study to understand Urban Transport System in Asian cities.
- Application of new policies, theory, model, etc. for Urban Transport in Asian Cities.

Contribution for development aid (ODA)

- Evaluation of infrastructure development and/or policy in the past.
 - To propose and nominate right projects for ODA
- Establish design code
 - To set up design standard which is appropriate to our society



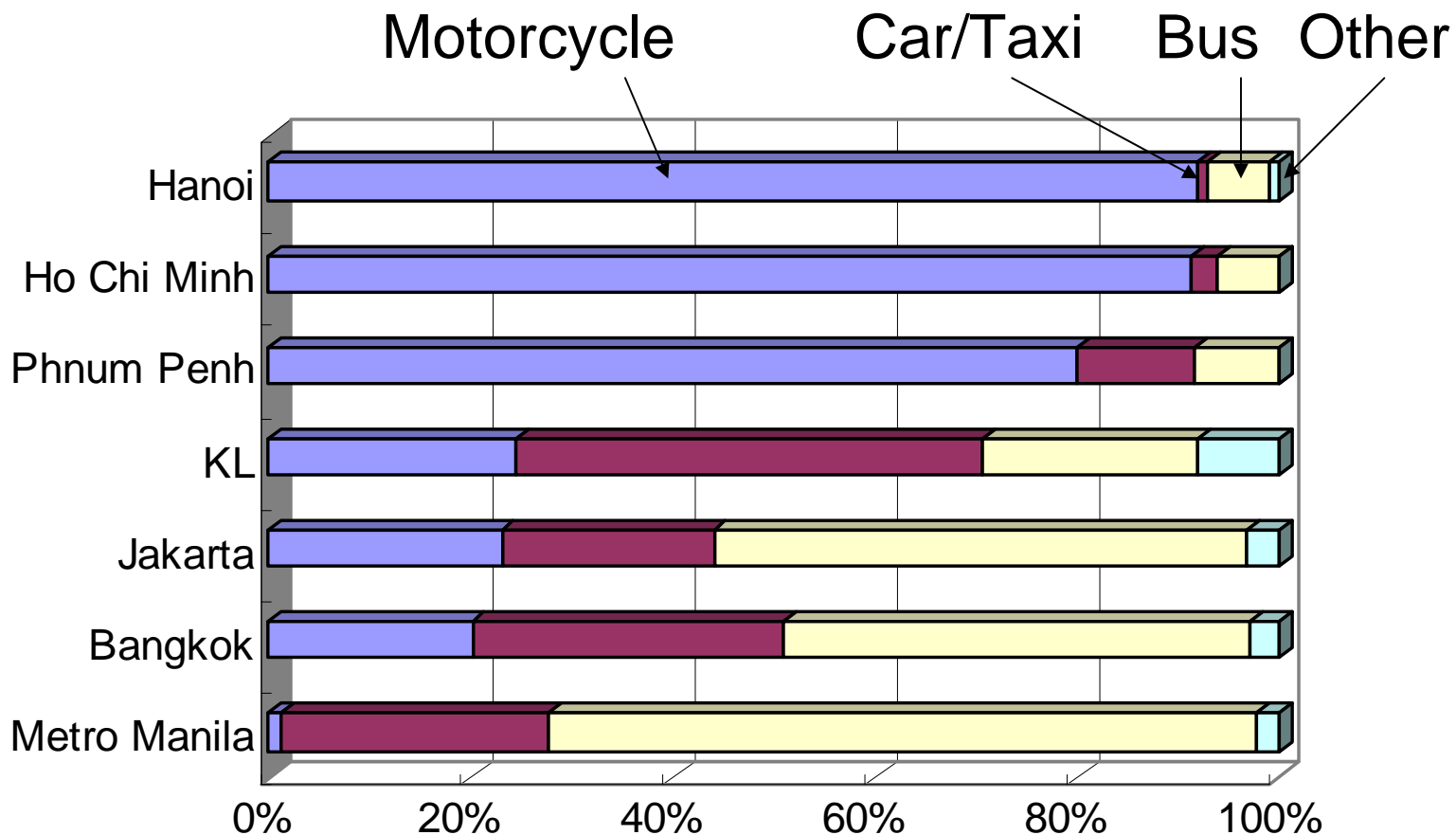
Fundamental Study of Urban Transport System in Asian Cities

- What is different and common in Urban Transport System with Japanese?
 - Study using JICA Data by Prof. Hyodo, etc.
- Will Asian cities follow the trajectory?
 - Study by Prof. Hayashi & Dr. Rithika, etc/
- How does motorization relate with urban growth?
 - Study by Dr. Varamethm, etc.
- What role will motorcycle, para-transit, etc. play as Urban Transportation Mode?
 - Many studies by Prof. Ohta, Our motorcycle study, etc.
- How will city logistic grow in future?
 - AGS Study (leaded by Prof. Ohta), etc.



Comparison modal shear by JICA data

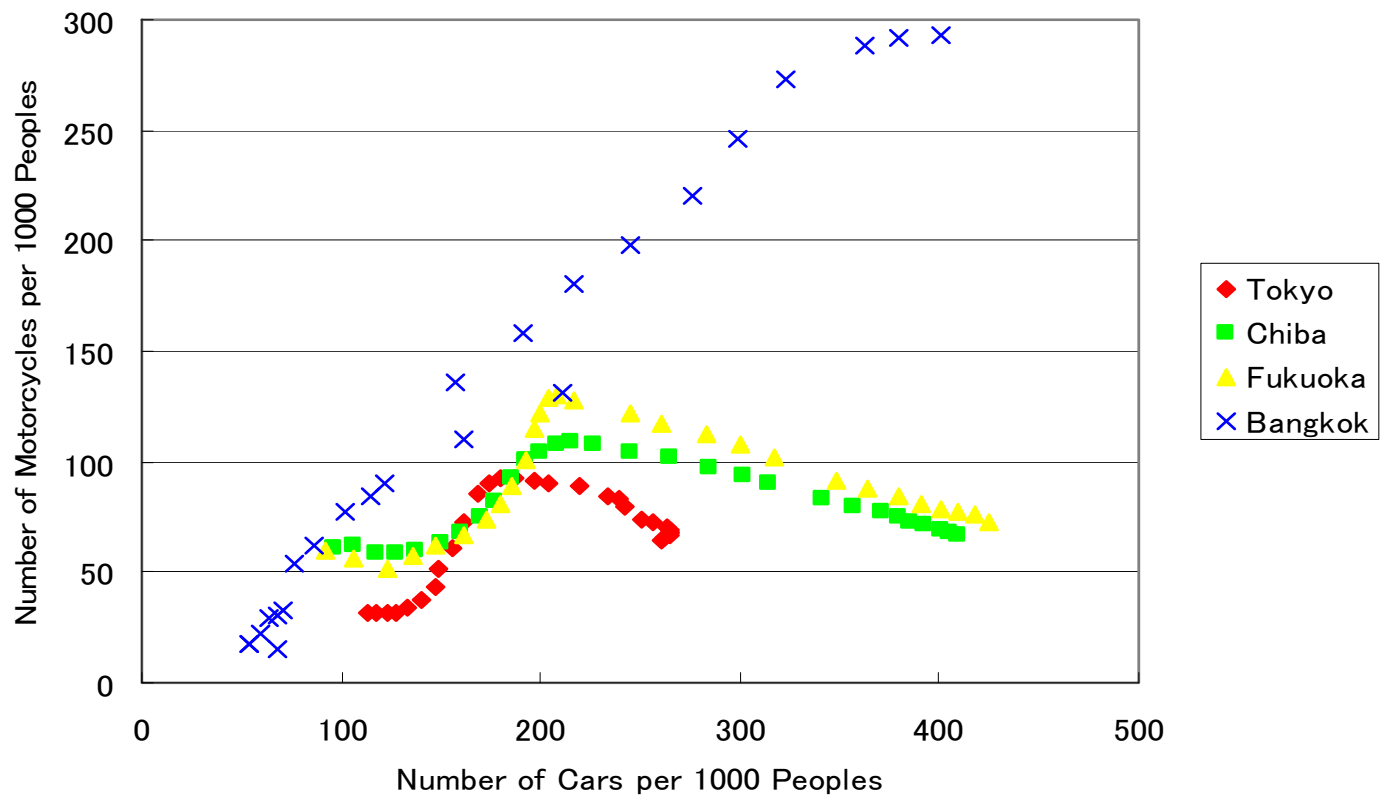
The modal shear among major cities



Out comes from motorcycle study



Fig.18 Relationship between Cars and Motorcycles in Cities



Evaluation of Infrastructure Development and policy in the past

Have infrastructure development and/or policy contributed for economical growth?

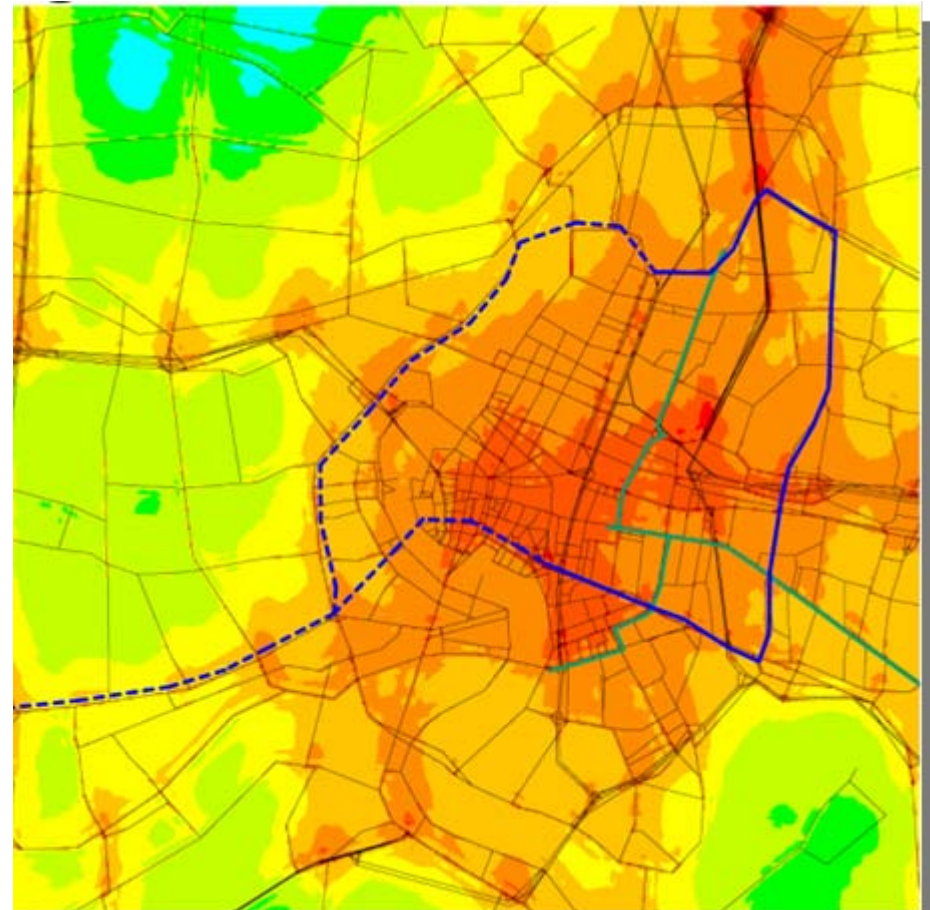
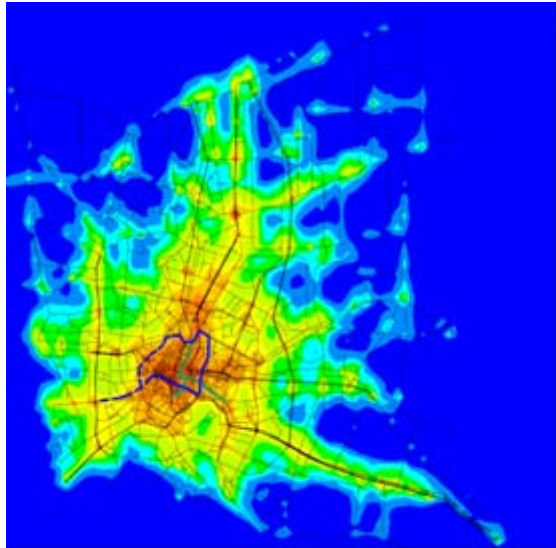
- How to estimate economical impact of infrastructure development? How to evaluate cross impacts of different infrastructures?
 - Cost benefit manual (like RAS-W, COBA, etc.) in JAPAN was established in 1996.
- What role have the government played for development ?
- What kinds of infrastructure will be developed?
 - Timing
 - Road transport based or rail based?

Outcomes from JBIC study (2)



Outcomes from JBIC study (3)

Vehicle derived CO concentration of with extension case (2011)



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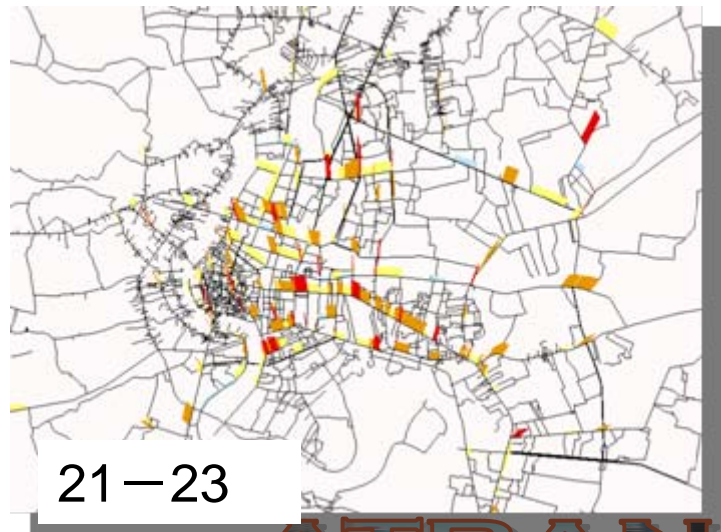
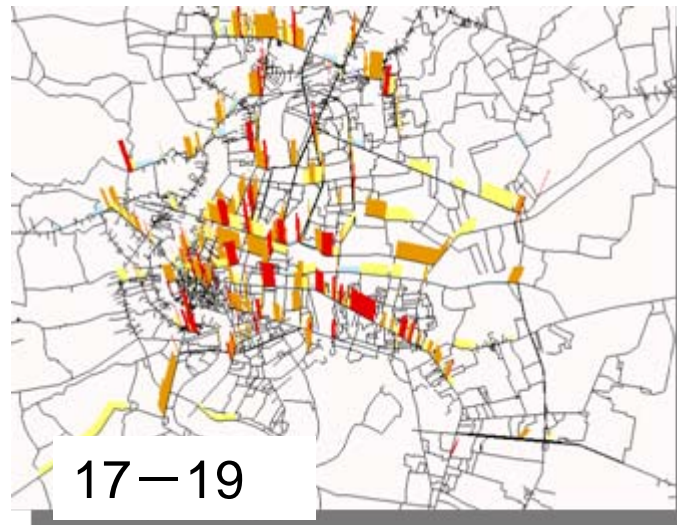
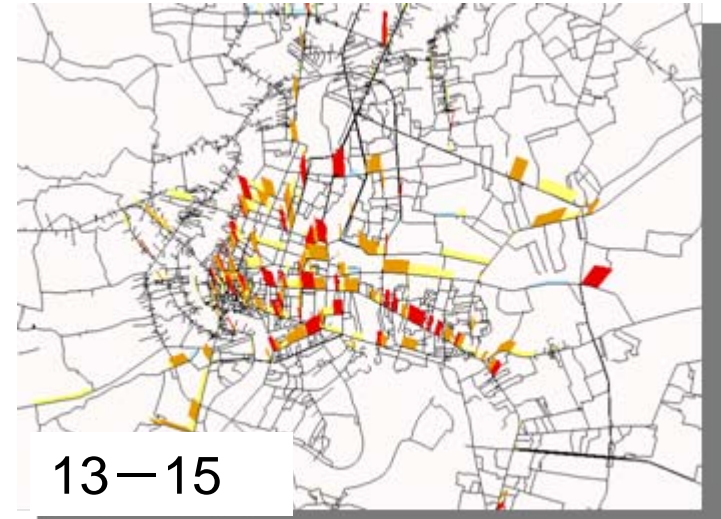
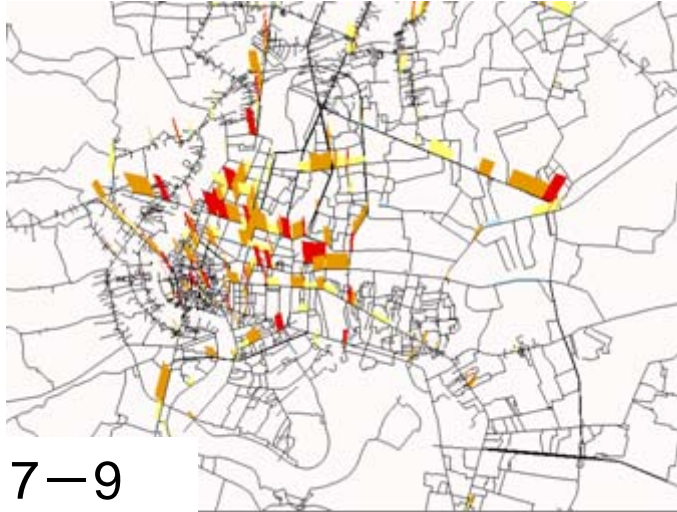
Innovated technology

Have infrastructure development contributed for economical growth?

- How to estimate economical impact of infrastructure development?
- How to evaluate cross impacts of different infrastructures
- What kinds of infrastructure will be developed?
 - Timing
 - Automobile based or Rail based?



Possibility to introduce innovative technology such as Probe Vehicle System





Development of ASIA Code





Environment in Asian countries is quite different with western nations. We need own code, standard, or manual that will be match with our environment.



- HCM ?
 - Traffic Impact Assessment Guide (ITE) ?
- 

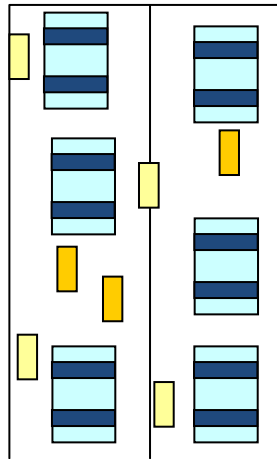
Possibility to establish ASIA Code for other civil engineering fields has been discussed by ACCEC.



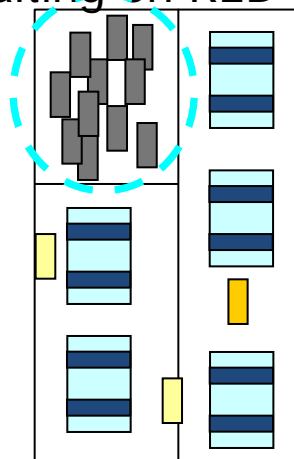
Development of ASIA Code Motorcycle Study



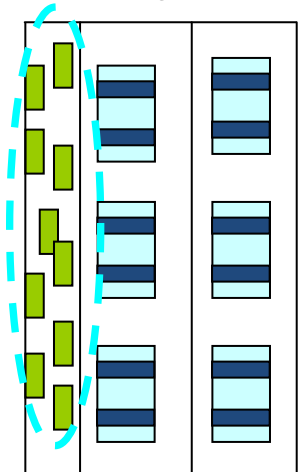
normal



Area for motorcycles waiting on RED



a motorcycles' lane

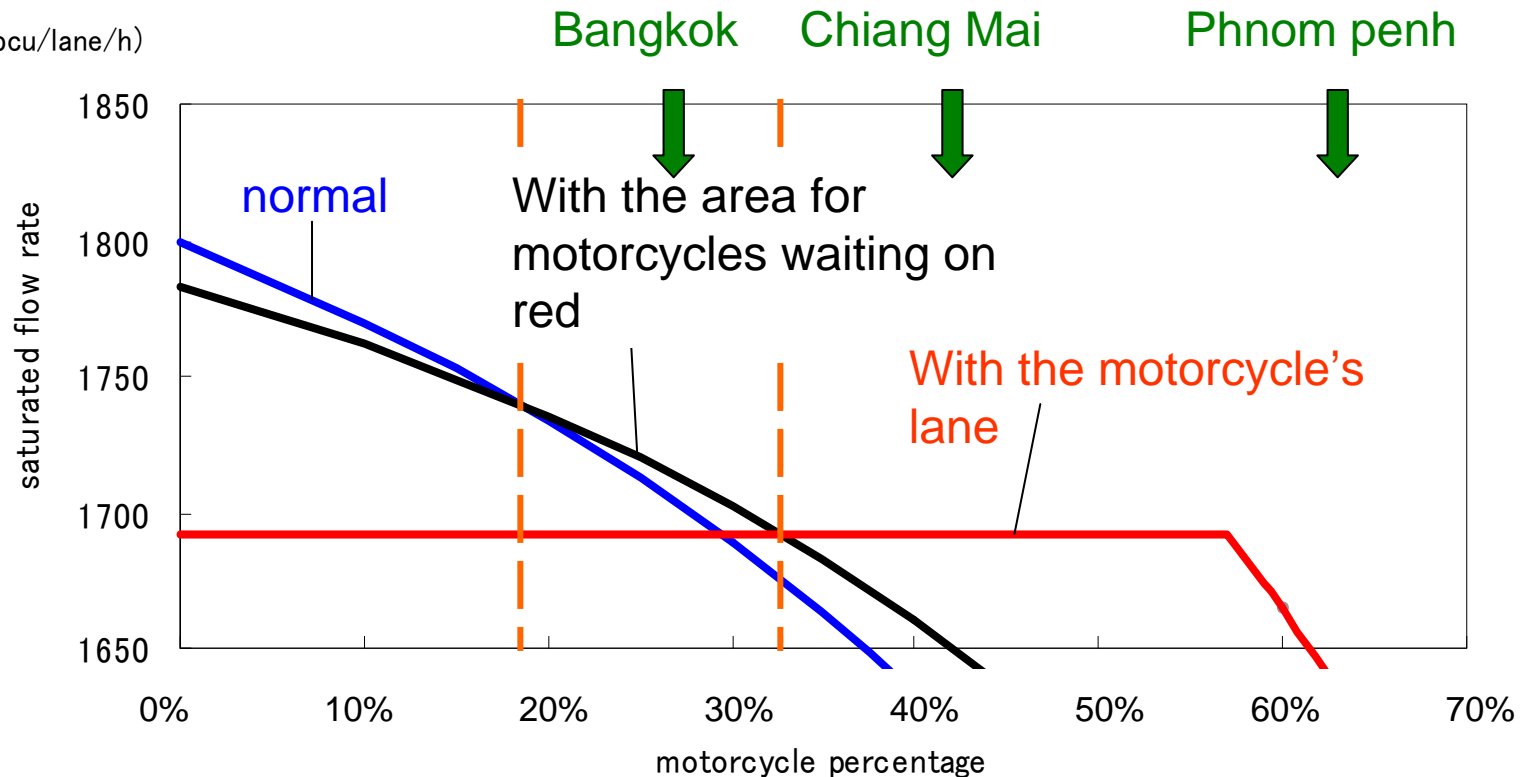


The influence on saturated traffic flow varies in the relative positions of motorcycles to passenger cars

- ①
 - ... motorcycles alongside of cars, or on the side of lane
 - ... motorcycles between two passenger cars , just in front of follower
- ②
 - ... motorcycles which start from the area where they wait on red
 - ... motorcycles which run in the lane of motorcycles

Development of ASIA code Motorcycle Study (3)

(pcu/lane/h)



the most efficient intersection's type varies in the motorcycle percentage

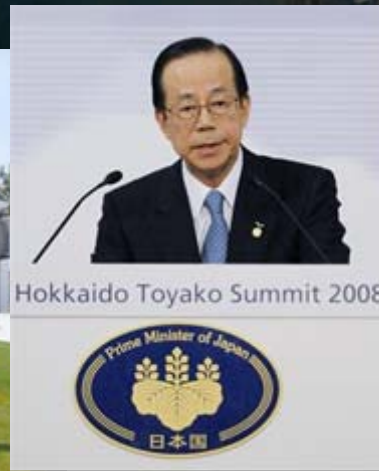
Other urgent issue



Inconvenient truth



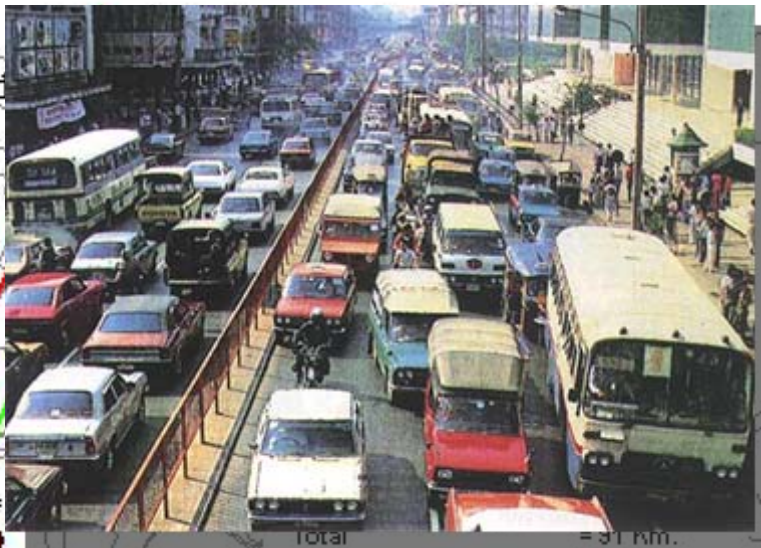
Summit at Toyako



Prime minister
Fukuda

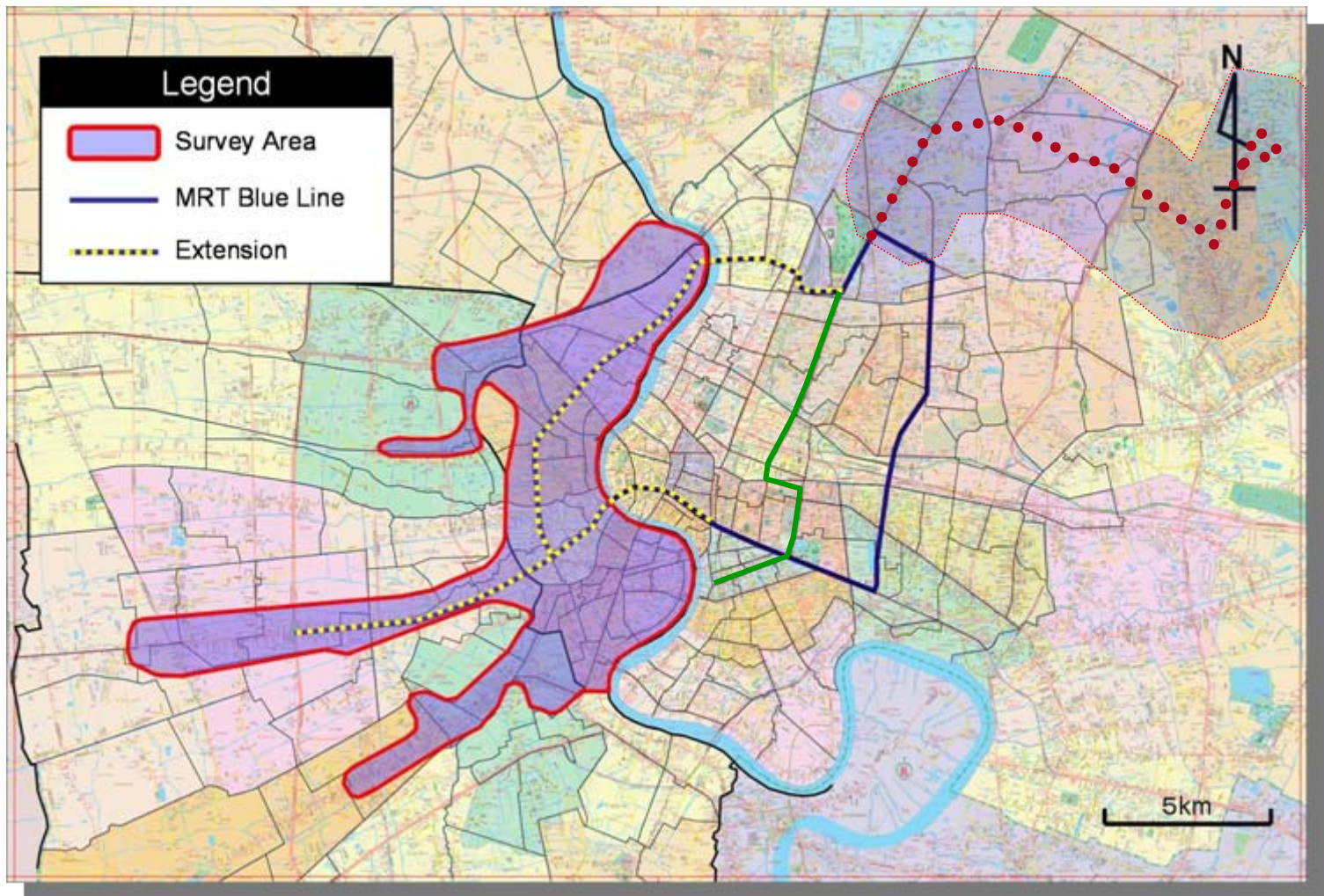
Try to cut down
50 % of GHG
emission until
year 2050

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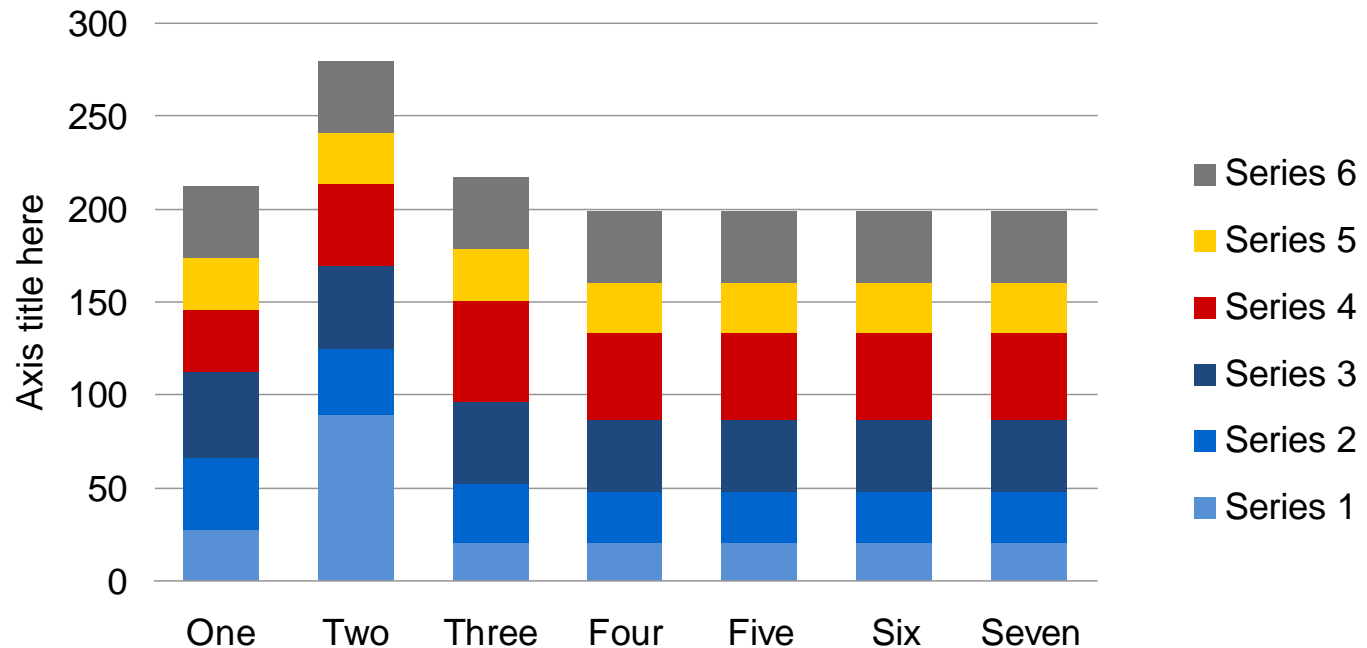
- Underground
- Elevated

Outcomes from JBIC study (1)



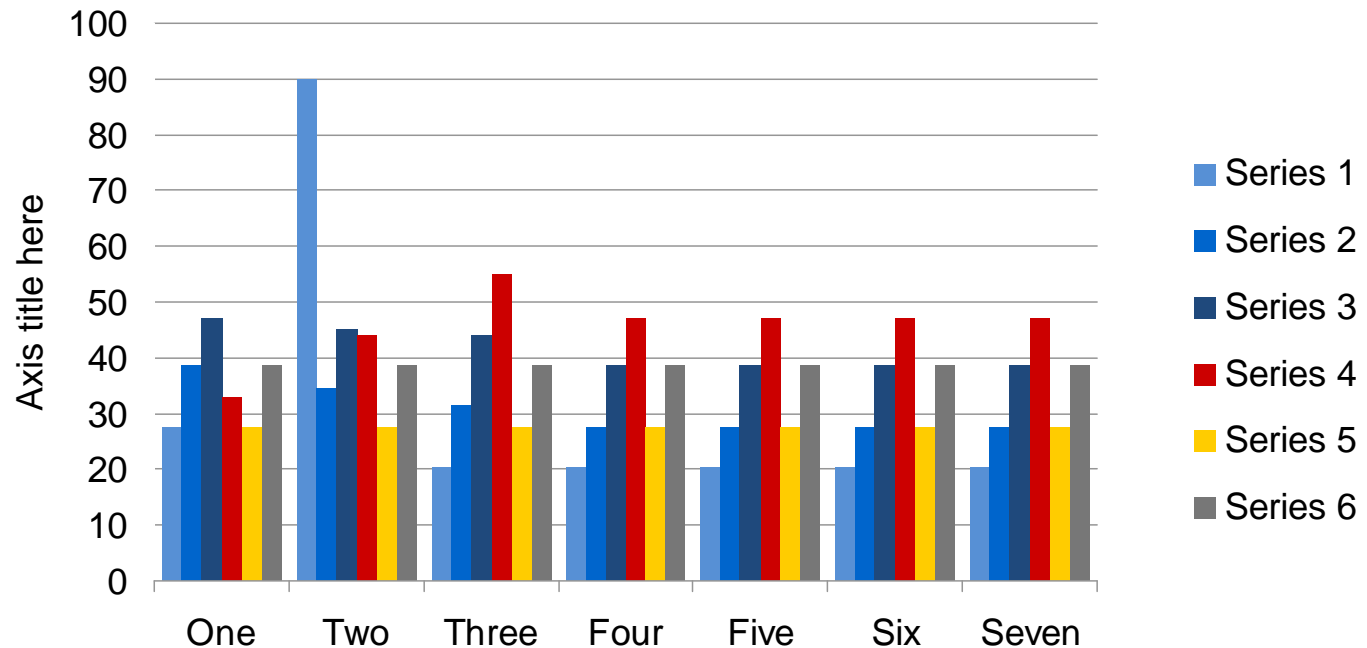
Example of a column chart (1)

Delete series and categories as appropriate



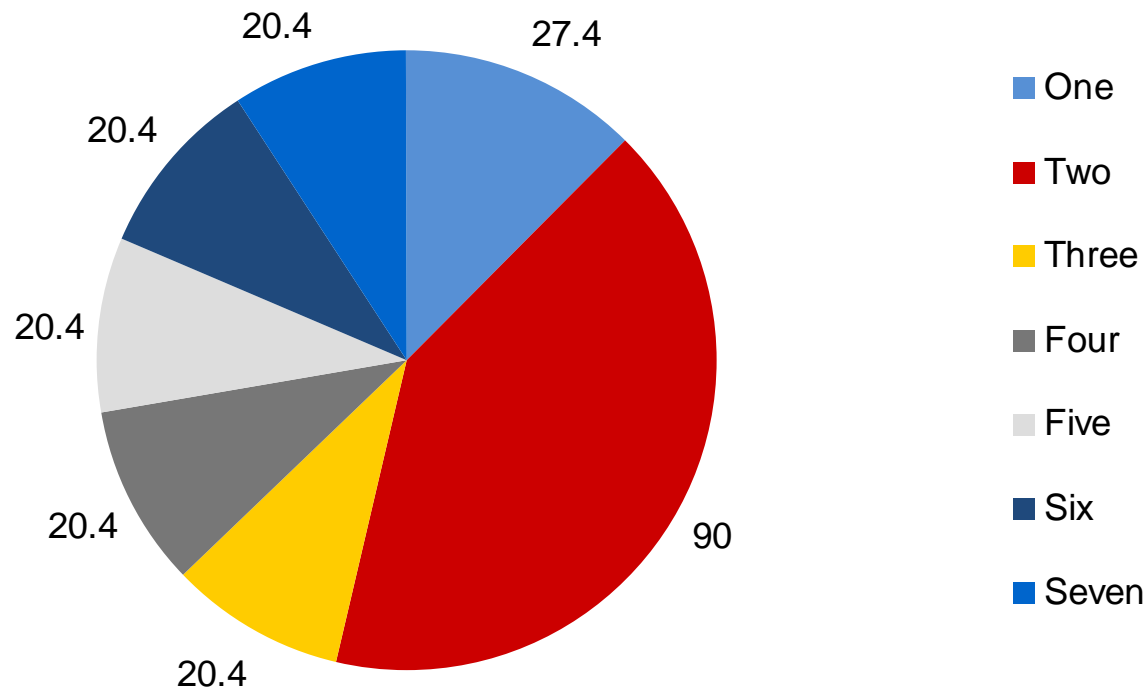
Example of a column chart (2)

Delete series and categories as appropriate



Example of a pie chart

Delete series as appropriate





Picture slide




Subheading (first level text)

- Bullet 1 (second level text)
 - Bullet 2
 - Bullet 3
 - Bullet 4



Examples of suggested styles



| | Column heading | Column heading | Column heading |
|-------------|----------------|----------------|----------------|
| Row heading | Data | Data | Data |
| Row heading | Data | Data | Data |
| Row heading | Data | Data | Data |

Text box

Text box
With shadow