

IRG Activity Report

Date of Submission: 11 / 10 / 2012

1. IRG code and name of IRG

- 1) IRG code: IRG - 010 - 2006
- 2) Name of IRG
Sustainable Neighborhood Transportation to Improve the Quality of Life in Developing Cities

2. List of research members

- 1) Prof. Hisashi Kubota, D.Eng., Saitama University, Japan (Representative)
- 2) Prof. Wimpy Santosa, Ph.D., Parahyangan Catholic University, Indonesia
- 3) Kunihiro Sakamoto, D.Eng., Eagle Bus Co., LTD., Japan
- 4) Yusak O. Susilo, D.Eng., KTH Stockholm, Sweden
- 5) Djoen San Santoso, Ph.D., Asian Institute of Technology, Thailand
- 6) Kardi Teknomo, Ph.D., Ateneo de Manila University, the Philippines
- 7) Jose Regin F. Regidor, D.Eng. University of the Philippines, Philippines
- 8) Tri Basuki Joewono, Ph.D., Parahyangan Catholic University, Indonesia
- 9) Karl N. Vergel, D.Eng., University of the Philippines Diliman, Philippines
- 10) Noriel Christopher C. Tiglao, D.Eng., University of the Philippines, Philippines
- 11) Ma. Sheilah G. Napalang, D.Eng, University of the Philippines, Philippines
- 12) Aya Kojima, Ph.D., Saitama University, Japan
- 13) Farzana Rahman, Ph.D., Presidency University, Bangladesh
- 14) Dr. Budi Hartanto Susilo, Maranatha Christian University, Indonesia.
- 15) Seiji Hashimoto, D.Eng., Okayama University, Japan

3. Purpose and Mission of IRG

It is widely believed that the built environment of the individuals' residential area highly influences the way individual composes their daily travel pattern. Unfortunately, many transportation developments and planning for neighborhood in developing countries were hardly taken the built environment factors into account. Many of previous plans are only considered the economic benefit that might be generated later by the car users, without considering other aspects of the quality of life of the local community itself. The ignorance of these factors has made the transportation condition and the quality of life of local communities in many developing cities is deteriorating.

In order to improve the synergy of infrastructure development with the development of local community's quality of live, some European cities have very strict urban policies which include a limitation of the car usage within the city centre, suppress the size of the cities, avoid a centralized development, distribute the activity centre between regions, empower the non-motorized and public transport system, and keep the shopping area in the city centre within a walkable distance. These practices are considered as a successful way to suppress car travel, support a sustainable development policy, revitalize the local economy activities, and increase the local's quality of life.

On the other side, the planning and development of residential areas earned a lot of attention in transport demand management, especially in developed countries, such as

reducing through traffic, designing and installing traffic calming to reduce the speed and increase safety, selecting devices in order to reduce the noise, improving the environmental capacity of residential area, incorporating and improving residents participations, among others. The topic of sustainability and the quality of life of residential becomes the main focus in planning and designing the residential area.

In order to create such conditions, recently, several Asian cities have tried to apply some of those policies, such as starting to re-develop their local shopping centre become a car free pedestrian mall / street mall. In addition, several examples in introducing TDM measures for residential in Japanese context can be also viewed as an early effort in improving the neighborhood. Although there are a lot of positive stories for such development in European cities, its compatibility with cities in developing countries has never been tested. The issues of whether this kind of development will reduce the amount of travel and revitalize the local economy or just another money factory for property developers and generate more congestion have never been examined before as well. The reservation of 'local value and characteristics' can also be questioned and explored for Asian context at the time the planners deal with neighborhood planning and design.

This research aims to develop an Asian type guide and practice in planning and designing a sustainable neighborhood which is able to improve the quality of life of the resident and community. This will be achieved by examining the impact of street-mall/pedestrian-mall development to the local community and exploring an appropriate residential transportation planning and design for developing cities that based on a sustainability concept, considering the quality of life of the local community, and empowering the local community's strength. The initial case study will be chosen in one of the neighborhood area in Indonesian, Thailand, and Japanese cities, while other cities in Asian countries will be included in the following research stages. The questions that will be addressed in this research are as follows:

- i. how far the existence of the street-mall boost-up the quality of life of the local residence, as well as the neighborhood economy (e.g. nearby stores and businesses);
- ii. how far the mall development could reduce the amount of the regional traffic;
- iii. some possible negative impacts of the development also will be assessed, such as how far it will generate traffic congestions and pollutions and increase the crime rate;
- iv. how far this kind of development will empower the traditional market player, improve their role, and providing new neighborhood environment in urban down-town.
- v. what measures are appropriate to improve the transportation in residential area that is effectively reduce the through traffic, reduce speed, and increase safety;
- vi. what processes should be proceed to introduce, plan, implement, and evaluate the measures that ensure the efficiency and effectiveness; also
- vii. what kind of change in travel behavior of residential area exists, when the measures are applied.

It is expected that, at the end, this research would produce such as a complete description of the influence of pedestrian-mall/street-mall to the regional and neighborhood transportation condition and the local community's quality of live, as well as a guide in planning and designing transportation in residential areas.

This research group also functions as a forum for all stakeholders to share, to transfer, and to exchange experiences, technologies, and opinions regarding the sustainable neighborhood transportation planning from developed and developing cities, which will strengthen each other. It can be obtained by conducting a workshop or international seminar which is

specifically dedicated for this theme. In addition, the research reports will be published in several methods, i.e. special session in EASTS conference, book, website, among others, while the result of analysis will be published in referred journal.

4. Achievements of IRG in 2011-2012

1) Paper, report and book: (Title, Authors, Year, Name of journal etc.)

(You don't need to attach the files.)

1. Kojima, A., Elfferding, S., Kubota, H., Intelligent rat-runner: impact of car navigation system on safety of residential roads, Proceedings of 19th ITS World Congress, CD-ROM, 2012.
2. Susilo, Y.O. and Waygood, E.O.D. (n.d.) The structural changes of children's activity-travel engagements in the Osaka Metropolitan Area. *Journal of Transport Geography* Vol.20, Issue 1, pp.41-50, 2012.
3. Susilo, B.H., Santosa, W., and Joewono, T.B., Modeling Road Traffic Accident In The Province Of West Java, Indonesia, Jeju, South Korea, 20-23 June 2011
4. Santoso, D.S., Joewono, T.B., Susilo, Y.O., and Anggraeni, M., The Relationship between Quality of Public Space and Duration of Parking in Shopping Centers, EASTS Conference, Jeju, South Korea, 20-23 June 2011
5. Joewono, T.B., Adipratama, D.H., Puar, G.H.P., and Jaganaputra, A., The Effectiveness of Indonesian Speed Reduction Devices, EASTS Conference, Jeju, South Korea, 20-23 June 2011
6. Joewono, T.B. and Susilo, Y.O., User Preferences regarding Public Transport Policies in Indonesian Cities: an Initial Study, EASTS Conference, Jeju, South Korea, 20-23 June 2011
7. Jaganaputra, A., and Joewono, T.B., Pengaruh Penggunaan *Speed Humps* Terhadap Tingkat Kebisingan, Jurnal Transportasi, Indonesian Inter-University Forum on Transportation Studies (FSTPT, Forum Studi Transportasi antar Perguruan Tinggi), Vol.11, No.1, 2011
8. Susilo, Y.O. and Waygood, E.O.D. (2011) The evolution of children's activity-travel engagements in the Osaka Metropolitan Area. *The 9th Eastern Asia Society of Transportation Studies (EASTS) Conference*, Jeju, Korea.
9. Waygood, E.O.D. and Susilo, Y.O. (2011) East or West, does it matter? Comparison of children activity-travel behaviours in the UK and Japan. *The 9th Eastern Asia Society of Transportation Studies (EASTS) Conference*, Jeju, Korea.
10. Macabbabad, R.J.R.M., and Regidor, J.R.F. (2011) A Study on Travel Time and Delay Survey and Traffic Data Analysis and Visualization Methodology. Proceedings of the 9th Conference of the Eastern Asia Society for Transportation Studies, Vol. 8, Jeju, Korea.
11. Regidor, J.R.F. (2011) Evaluating the Effectiveness of Traffic Schemes for an Open Campus. Proceedings of the 9th Conference of the Eastern Asia Society for Transportation Studies, Vol. 8, Jeju, Korea.
12. Regidor, J.R.F. and Uy, F.A.A. (2011) Characteristics of Road Crashes Involving Motorcycles in Metro Manila and Other Selected Cities in the Philippines. Proceedings of the 9th Conference of the Eastern Asia Society for Transportation Studies, Vol. 8, Jeju, Korea.
13. Uy, F.A.A. and Regidor, J.R.F. (2011) A Study on Motorcycle Rider Characteristic and Behavior in Metro Manila. Proceedings of the 9th Conference of the Eastern Asia Society for Transportation Studies, Vol. 8, Jeju, Korea.
14. Santoso, D.S., Joewono, T.B., Susilo, Y. and Anggraeni, M. (2011) The Relationship between Quality of Public Space and Duration of Parking in Shopping Centers. Proceedings of the 9th Conference of the Eastern Asia Society for Transportation Studies, Vol. 8, Jeju, Korea.

2) Seminar, symposium and special session: (Title, Date, Venue & abstract)

21 June 2011, a special session in EASTS Conference, Jeju, Korea

Abstract: 5 papers will be presented in this special session

3) Group meeting: (Date, Venue & abstract)

i. July – August 2010, Online discussion.

Abstract: to discuss a plan to transfer research fund to the members.

ii. 6-13 June 2011, Online discussion.

Abstract: to discuss a future plan.

iii. 21 June 2011, Group meeting at EASTS Conference, Jeju, Korea

Abstract: to discuss a future plan.

4) Result of application for the research grants: (Name & result)

1. IRG Research Grant from EASTS, 100.000 JPY, 2009.

2. Joewono, T.B., Grant for International Conference from the Directorate of Higher Education, Ministry of Education, ROI, 2010, Result: Accepted

3. Joewono, T.B., Grant for Competence based Research regarding Traffic Psychology in Indonesian cities from the Directorate of Higher Education, Ministry of Education, ROI, 2009 & 2010, Result: Accepted for the 1st year and 2nd year.

4. Regidor, J.R.F. Engineering Research and Development for Technology, Research Dissemination Grant, April 2011, Approved.

5) Promotional activities of your IRG: (Home page, Newsletter, Mailing list etc.)

5. Will you continue your IRG's activity after 2013 EASTS conference?

Please select the answer. [YES / NO]

If you have an intention to complete your IRG, please submit a final report of the IRG based on original purpose and mission of the IRG. You can make the final report by free format.

Furthermore, please submit useful materials such as PowerPoint slides used at IRG's seminar if possible.

The materials will be shown on the EASTS website.

6. Future research plan and including time frame with the following items:

- Possibility to hold seminar and symposium (Date & Venue)

(Notice: the number of submitted papers to 2011 EASTS conference is one of the criteria for holding special session of IRG.)

1. All members will attend and present papers in the 2013 EASTS Conference

- Special considerations to young researchers

This group provides a big consideration to young researcher. Several undergraduate and graduate students in Parahyangan Catholic University and the University of the Philippines Diliman are also involved in these topics of research.