

'DAEGU ON THE MOVE'

Raising Urban Mobility Awareness in Daegu - SURVEY RESULTS

Yeungnam University School of Architecture - Summer'11 Workshop

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The workshop was carried out with a group of 31 students from the Yeungnam University School of Architecture in Daegu. Their age group is from 18 to 22. They all live in Daegu and are originally from the city or surrounding area. We should note that the school's academic curriculum does not include subjects on mobility or transportation.

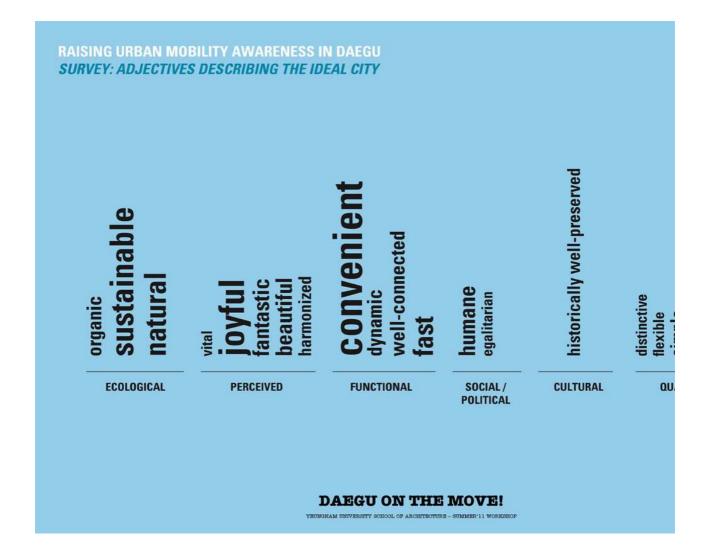
Daegu, located on the SE corner of the peninsula, is one of the main cities in South Korea, with a population of aprox. 2.5 million people. Of prehistorical origins, its location on an alluvial plain by the river Nakdonggang has made it traditionally an agricultural and textile centre, and in recent times the city was the home to the regimes that brought South Korea's rapid economic growth (1960s – 1980s).

Daegu is the hub of inland railroad traffic, and its KTX (Korean fast speed train) station has the second largest passenger traffic in Korea after Seoul Station. The city is undergoing the construction of the subway network since 1992, with two lines completed and a third one in progress as an elevated monorail. The city has also its own airport. Nowadays Daegu is making efforts to establish itself as the center of the fashion and high-tech industries, is implementing an image campaign called 'Colorful Daegu', and will be the host of the 2011 World Championships in Athletics.

In an effort to make the results of the survey readily understandable and self-explanatory, the tutors of the survey processed the answers with an Excel chart and elaborated a visual graphic for each of the questions.

The survey consisted of four questions:

 ${\bf 1.\,IDEAL\,\,CITY:\,\,What\,\,would\,\,you\,\,imagine\,\,to\,\,be\,\,the\,\,ideal\,\,city,\,regardless\,\,of\,\,what\,\,might\,\,be\,\,'realistic'?\,\,Describe\,\,it\,\,using\,\,three\,\,adjectives.}$



The graphic shows results grouped in different categories, and font sizes reflect repetitions of the same adjectives. The results show that students value above all a city which is convenient, joyful and sustainable. Natural, fast and clean were also important qualities mentioned.

Over all, answers tended to focus mainly on issues of functionality, personal experience and ecology, and less on cultural or social / political issues.

 ${\bf 2.\ IDEAL\ TRANSPORTATION:\ What\ forms\ of\ transportation\ do\ you\ dream\ as\ ways\ of\ moving\ around\ your\ city\ or\ neighborhood?}$

RAISING URBAN MOBILITY AWARENESS IN DAEGU SURVEY: IDEAL URBAN TRANSPORTATION

ELEVATED MONORAIL TRAIN	3.22%	
SUBWAY	12.9%	
CAR	6.45%	
WINGSUIT	3.22%	
FLYING BICYCLE	3.22%	
FLYING CAR	19.35%	
TRAIN	9.67%	
WATER BUS	3.22%	
CABLE CAR	6.45%	
TRAM	3.22%	
POD CAR - P.R.T.	3.22%	
BICYCLE	16.12%	
LIGHT AIRCRAFT	6.45%	
ELECTRIC CAR	3.22%	

DAEGU ON THE MOVE!

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The preferred transportation systems were a 'flying car', followed by the bicycle and subway on the third place. As secondary options came the automobile, the cable car and a small airplane. Other interesting choices were a wingsuit, a water bus and a pod car – PRT.

Overall, the survey shows a preference for private transportation systems, even though other than the automobile. Also and surprisingly enough, there is a tendency towards 'flying' systems, such as the flying car, flying bicycle, wingsuit, small aircraft and cable car.

These may reflect the lack of custom to use the subway, relatively recent in Daegu and with limited reach, plus frustration with traffic congestion on the streets –therefore the desire to fly. Interestingly enough as well is the lack of mention of buses, widely used due to their extensive network, operation hours and price; or of taxis, also very common and quite affordable. There is no mention either of walking as a transportation system.

- 3. DREAM CITY: Which three cities would you mention as 'Dream City', either as an ideal or as an anti-ideal?
- Explain what drives your decision.



The most voted cities were Curitiba, Bern, Paris and Tokyo. Other important choices were Singapore, Seoul, Sydney, Stockholm and New York. In terms of regions, the results show a massive preference for cities in centre / northern Europe: Frankfurt, Paris, Bern, Stockholm, Freiburg, Düsseldorf, Copenhaguen...

It is noticeable as well the mention of more cities in the East-Asia / Oceania context than in the whole American continent, and the lack of choices in Africa.

The main preference for the choice were cities in harmony with nature and the landscape, represented by Sydney, Vancouver, Singapore, Monaco and central and northern European cities such as Vienna, Copenhagen, Stockholm, Bern, Amsterdam, etc. Secondly, many students choose cities with a preserved historical character, such as Paris, Rome, Vienna or Amsterdam. A similar amount of choices were made according to perceived convenience of transportation, with examples such as Bern, New York, Paris, Tokyo and Los Angeles –this last choice was a surprising one in the context of the workshop, given the limited public transportation systems in the city.

Other important variables taken into consideration when choosing the 'dream cities' were general cleanliness—with examples such as Singapore, Frankfurt, Osaka, Stockholm and Interlaken-; the existence of a sustainable transportation system—Curitiba was the biggest reference-; and cities in a country with a public welfare system, again favoring central and northern European cities such as Vienna, Stockholm and Bern.

To summarize, the most voted cities are preferred because of the following reasons:

- Curitiba: Sustainable transportation.
- Bern: in harmony with the natural landscape; with a public welfare system; clean and with a convenient public transportation network.
- Paris: preservation of historical features; convenient transportation; 24-hour activity;
- Tokyo: 24-hour activity; clean; convenient transportation; technologically advanced.

As a curiosity, we contrasted these results against the 'Most Liveable Cities Index', a list published yearly by British lifestyle magazine Monocle. The list presents the 25 most preferred locations in terms of their quality of life based on aspects of crime, international connectivity, climate, quality of architecture, public transportation, tolerance, environmental issues and access to nature, urban design, business conditions, pro-active policy developments and medical care. This year's list is, by order: Helsinki, Zürich, Copenhagen, Munich, Melbourne, Vienna, Sydney, Berlin, Tokyo, Madrid, Stockholm, Paris, Auckland, Barcelona, Singapore, Fukuoka, Hong Kong, Portland, Honolulu, Vancouver, Kyoto, Hamburg, Lisbon, Montréal and Seattle.

As we can see, the student's choices were not far off from this selection. The biggest differences were the inclusion by students of cities that have become representative in terms of mobility and sustainability issues, such as Curitiba or Bogotá. This may respond to an over-eagerness by the students to come up with 'a good answer' in the context of the survey and workshop.

PROGRAMATIC			attract business to Daegu to improve economy ban cars in the city preserve historical elements, control street esthetics ensure equality of opportunities for citizens	create urban farms to prevent heat island effect integrate nature with the city re-vitalize underutilized spaces between bldgs.	adopt intelligent transportation management systems improve connections to neighbor cities create a shared, rental private transportation system	

The answers are shown grouped in different categories: programmatic measures, issues related to city image and public awareness, improvements in public transportation, policy, open space and infrastructural improvements. The main tendencies are:

- Enhancing citizens' awareness and civic responsibility, ensuring equality of opportunities.
- Strengthening public transportation systems, making them more usable, extending their range and operational hours and making them more integrated. At the same time, limiting the use of private transportation and favoring bicycle and pedestrian paths.
- Improve the system of open spaces in the city, by establishing green corridors along streams and rivers, investing in urban farms and green roofs to decrease heat island effect and reutilizing leftover spaces. Program festivals and activities for different groups of people that activate those spaces.
- Improving the image of the city by preserving historical structures, controlling street signage and overall aesthetics.
- Adopting measures to attract business and improving regional relationships.

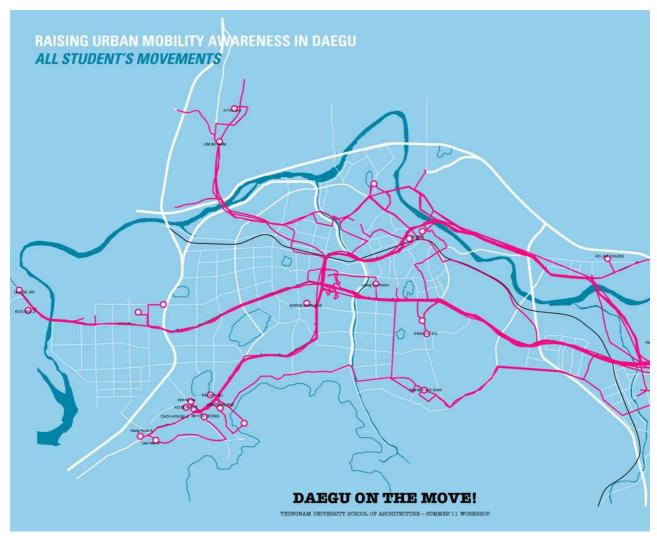
In general, these measures reflect the need to enhance the city's competitivity in the face of a perceived unbalanced growth towards other regions, especially the capital. They also reflect a lack of green spaces in the densely populated city, and the transition from an urban model based on private transportation during the years of rapid economic growth towards a hybrid model where public transportation plays a more important role.

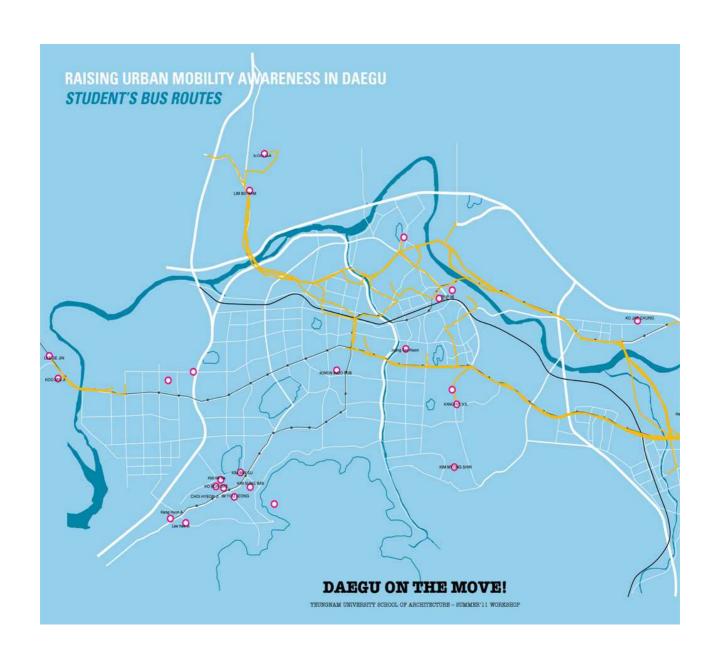
One very specific proposal has been to reduce the heat in the streets of the city in summer. Daegu is known for being the hottest city in South Korea, and maximum temperatures in July and August can reach 35°C with high levels of humidity, and several students suggested to make the city streets livable during the summer time so they could be more used.

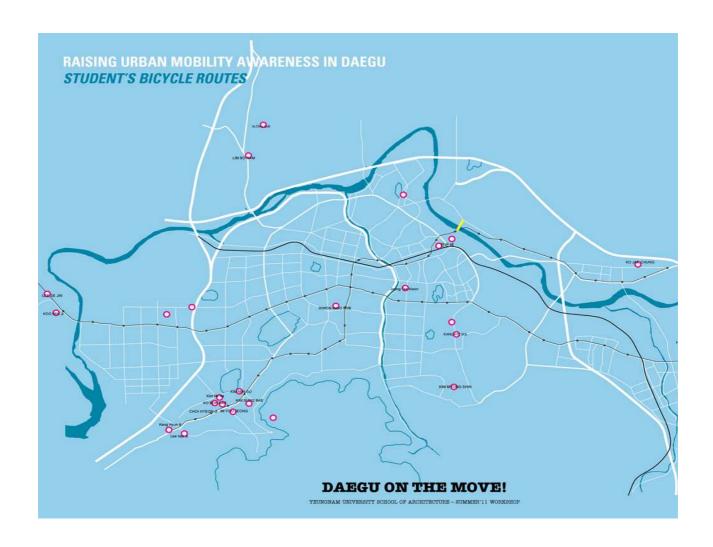
There are some interesting omissions, such as the lack of reference to the KTX (Korean fast speed train) infrastructure, very important in the city; to the elevated monorail line being implemented in the present, or the imminent hosting of the 2011 World Championships in Athletics as well. These infrastructures or events, which currently exist or area in

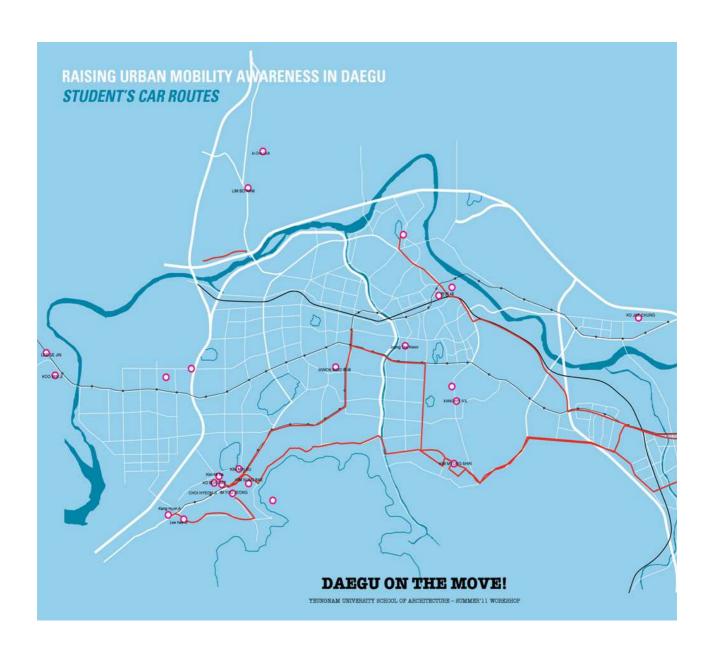
URBAN MOBILITY MAPPING:

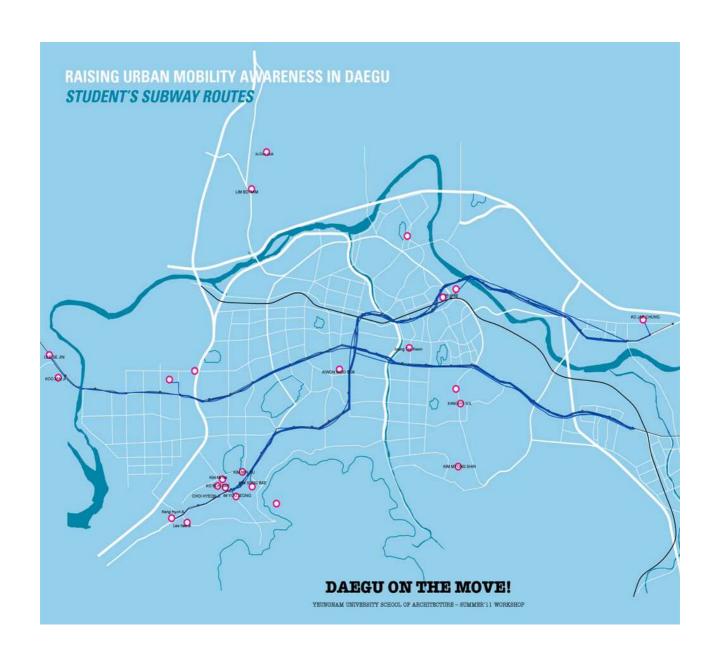
As an extension of the survey, students were asked to draw their daily routes in the city and to specify what kind of transportation they were using. Results are shown below:

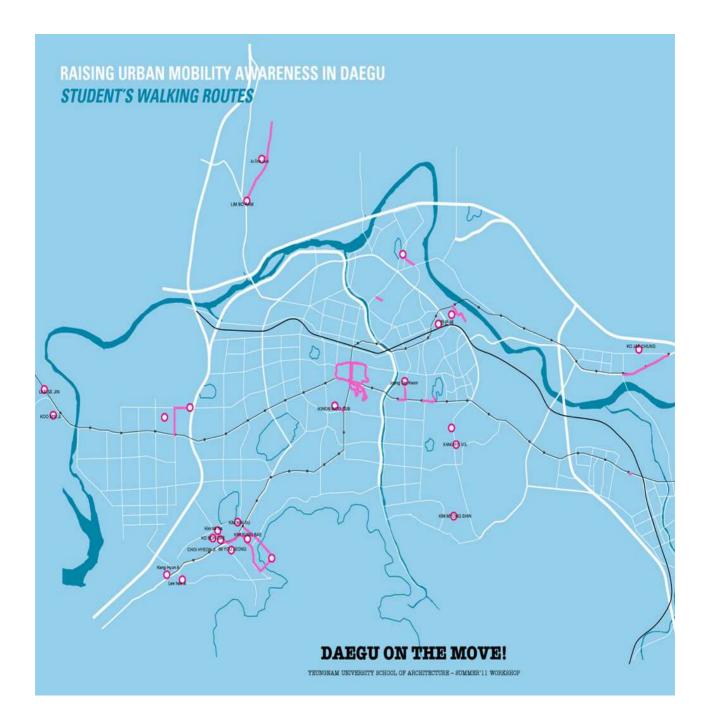












This collection of simple maps was used to illustrate students' relationship to their familiar urban environment through mobility. Some conclusions extracted were, for example:

- The subway system, still under implementation, does not have a wide reach and leaves many areas underserved. It favors also the traditional downtown where the two lines meet- as a commercial center, and east west connectivity rather than north south.
- For some unknown reason, students living in the northern half portion of the city tend to commute to school by bus, while students living in the southern half tend to drive their own car. This may have to do with the layout of the bus routes favoring certain locations over others.
 - There is a surprisingly low usage of bicycles, despite being selected as one of the most ideal means of transportation in the survey.
- Those who drive their car across the city from West to East to go to school prefer to go through the urban street network rather than taking the highway that borders the city on the northern side of the river. This may reflect a preference for a cheaper, if slower commute –as student would not have to pay for highway tolls.
- Walking activity seems to be related mostly to access the subway, or in the downtown area due to its leisure / commercial activities. There is also a relevant amount of walking in the campus around school, where an significant portion of the students reside.

The discussion generated over these maps became an interesting way to make mobility more approachable for students.

Final observations

The tutors of the seminar would like to remark the capability of the answers to juggle between dream and pragmatism in the different questions. While students did not hesitate to talk about flying bicycles and wingsuits when asked about their ideal urban transportation, they also adopted a much more grounded and realistic approach when it came to propose improvements for their city.

An interesting point to make is the realization that mobility is perceived just as another variable among others when describing ideal urban conditions or choosing an ideal city. At the same time, the attributes of this ideal are mostly qualitative rather than quantitative. The achievement of these ideals if far beyond the realm of the designer and requires a multi-disciplinar approach and encompasses all aspects of society, of which the city is a reflex.

A concluding remark at the end of the workshop pointed out the necessity to redefine the role of designers from being mere service-providers towards adopting an active voice in the decisions that affect the definition of the urban environment, and thus becoming more socially involved.