

## Chapter 10. Critical Analysis of the Pilot Project Based on Questionnaire 2

### 10.1 The Proposed Physical Changes

#### Some of the relevant data from previous questionnaires:

- ⇒ 90% of users would welcome a zone protected from noise pollution. (Preliminary paper 1)
- ⇒ 80% think that there are not enough roofed over walkways at campus. (Preliminary paper 1)
- ⇒ 76.9% think that measures are needed to make walking more convenient at campus. (Questionnaire 1)
- ⇒ 79.8% would agree to a silent zone at a wider area around the library. (Questionnaire 1)
- ⇒ 78.5% think that the university should build roofed over walkways. (Questionnaire 1)
- ⇒ 77% think that there are not sufficient public chairs, benches and other seating facilities. (Preliminary paper 1)
- ⇒ 80% think that there are not sufficient public meeting points and salas. (Preliminary paper 1)
- ⇒ 77% think that there are not sufficient public parks and resting areas close to buildings. (Preliminary paper 1)
- ⇒ 55% think that there are not sufficient pedestrian walkways along roads. (Preliminary paper 1)

As a large majority of users already opted for the creation of a silent zone on campus in previous questionnaires, this topic was addressed more specifically in regard to the use such a zone would have for everyday activities of users. Only 48% thought that a silent zone would benefit their daily activities. The only considerable deviation from this result could be established for the teacher and administration user group. Here, 66.7% and 58.3%, respectively, thought their activities would benefit from a silent zone. We at least partially attribute this to the fact, that many members of those groups have prior experience with the concept of a silent zone from their studies abroad. Comments written on the questionnaire answer sheets also point into this direction:

1. "I don't know what activities I can do there."
2. "I do not understand the concept of the silent zone, however if it is similar to the zone around the faculty of science, it should be more specific and its boundaries clearly marked and executed."

Knowledge dissemination about concepts introduced for traffic management should be initiated. In case the measure of a silent zone is taken, it is important to develop its physical appearance in accordance with user-wishes, so that the area represents an affordance in the users environmental perception. This could be achieved by emphasizing the creation of human space at the silent zone and not just empty space void of traffic. 79.7% of users would welcome an increase of greenery and human space at university and as was expressed in previous questionnaires, they would very much like to see more public chairs, benches and other seating facilities; more public meeting points and salas; more public parks and resting areas close to buildings and more pedestrian walkways along roads. 85.8% think that roofed over walkways would be a definite improvement for the traffic infrastructure. Two hand-written comments on the questionnaire stated that "these walkways should blend in with the existing geography and not create visual pollution" and that they "are needed to make the human space accessible during all weather conditions".

<b>Table 16: Proposed changes to physical environment</b>	
<b>Number of answers and per cent distribution</b>	<b>Worded questions and possible answers.</b>
<b>1.</b>	<b>Would you consider the existence of a silent zone around the main library as being useful and convenient for your daily activities on university campus?</b>
<b>180/374 = 48.23%</b>	Yes, it would increase convenience and would be useful to my daily activities at campus.
<b>194/374 = 51.87%</b>	No.
<b>374 = 100%</b>	
	<b>Answers according to user groups:</b>
<b>Yes, it...</b>	Students: 152/325 = 46.77% Teachers: 14/21 = 66.67% University employees, private employees and research assistants: 7/16 = 43.75% Administration: 7/12 = 58.33%
<b>No.</b>	Students: 173/325 = 53.23% Teachers: 7/21 = 33.33% University employees, private employees and research assistants: 9/16 = 56.25% Administration: 5/12 = 41.67%
<b>2.</b>	<b>Would you consider less concrete and more greenery and an increase in human space as an improvement to university campus?</b>
<b>298/374 = 79.68%</b>	Yes.
<b>76/374 = 20.32%</b>	No.
<b>374 = 100%</b>	
	<b>Answers according to user groups:</b>
<b>Yes.</b>	Students: 254/325 = 78.15% Teachers: 21/21 = 100% University employees, private employees and research assistants: 14/16 = 87.5% Administration: 10/12 = 83.33%
<b>No.</b>	Students: 71/325 = 21.85% Teachers: 0/21 = --.--% University employees, private employees and research assistants: 2/16 = 12.5% Administration: 2/12 = 16.67%
<b>3.</b>	<b>Would you consider a convenient weather protected system of walkways connecting faculty buildings as an improvement of traffic infrastructure at campus?</b>
<b>321/374 = 85.83%</b>	Yes.
<b>53/374 = 14.17%</b>	No.
<b>374 = 100%</b>	

	Answers according to user groups:
Yes.	Students: 281/325 = 86.46% Teachers: 16/21 = 76.19% University employees, private employees and research assistants: 15/16 = 93.75% Administration: 9/12 = 75.0%
No.	Students: 44/325 = 13.54% Teachers: 5/21 = 23.81% University employees, private employees and research assistants: 1/16 = 6.25% Administration: 3/12 = 25.0%

The silent zone, the roofed over walkways and the creation of human space are measures so closely connected, that they cannot be separated without loss in efficiency of achieved objective and user acceptance. By linking them to educational measures and recreational activities as described in the previous chapter, the approval ratings established are sufficient to seriously consider the silent zone concept as a first step in traffic mitigation at CMU, while simultaneously respecting underlying objectives and guiding principles of the pilot project.

## 10.2 The Proposed Organizational Environment

### Regarding the Polluter Pays Principle:

(The following text was included in the questionnaire:) The Polluter Pays Principle uses fees for traffic management. Those collected fees can only be used for traffic measures and management and must result in the creation of traffic alternatives for users. It requires those users at campus that create more pollution than others to pay a higher fee.

### Some of the relevant data from previous questionnaires:

- ⇒ 64% of campus users would agree to an infrastructure fee-system in one form or another. (Preliminary paper 1)
- ⇒ 72.7% of users think that a university traffic management system should have the right to collect user fees if they are used for directly for traffic management and related infrastructure, only.
- ⇒ 92% think that a central transportation management system is needed to regulate traffic at CMU campus. (Preliminary paper 1)
- ⇒ 61.67% think that a control agency should be installed in case CMU introduces user fees. (Questionnaire 1)
- ⇒ 76.88% of users would be willing to pay at least one Baht/day as user fee to improve traffic at CMU. (Questionnaire 1)

The approval ratings for both, suggested traffic management objectives (78.1%) and guiding principles (89.6%) speak for themselves. They demonstrate clearly that users generally see traffic as part of the environment and that its management should preserve that environment as much as possible in a healthy and convenient state.

Table 17: Objectives and guidelines for traffic management

Number of answers and per cent distribution	Worded questions and possible answers.
1.	<p>Would you agree to the following objectives to university traffic management?</p> <ul style="list-style-type: none"> <li>• Provide an increase in human space over traffic space.</li> </ul>

	<ul style="list-style-type: none"> <li>• Provide a traffic environment that has less air-, noise-, and visual pollution.</li> <li>• Decrease the number of vehicles at campus.</li> <li>• Promote walking as the general form of short distance commuting.</li> <li>• Implement PPP/UPP.</li> </ul>
292/374 = 78.07%	Yes.
82/374 = 21.93%	No.
374 = 100%	
	<b>Answers according to user groups:</b>
Yes.	Students: 244/325 = 75.08% Teachers: 21/21 = 100% University employees, private employees and research assistants: 16/16 = 100% Administration: 11/12 = 91.67%
No.	Students: 81/325 = 24.92% Teachers: 0/21 = --.-% University employees, private employees and research assistants: 0/16 = --.-% Administration: 1/12 = 8.33%
2.	
	<p>Would you agree to the following guiding principles for traffic management at campus?</p> <ul style="list-style-type: none"> <li>• Unless it creates direct contradiction to or conflicts with the underlying objectives, always put the user convenience within the traffic environment first.</li> <li>• Traffic measures should consider all user groups equally.</li> <li>• Traffic measures should give all user groups sufficient time to prepare for their impact.</li> <li>• Utilize people participation as much as possible.</li> <li>• Traffic measures should always have an educational effect.</li> <li>• Always promote the environmentally more efficient form of transportation.</li> </ul>
335/374 = 89.57%	Yes.
39/374 = 10.43%	No.
374 = 100%	
	<b>Answers according to user groups:</b>
Yes.	Students: 286/325 = 88.0% Teachers: 21/21 = 100% University employees, private employees and research assistants: 16/16 = 100% Administration: 12/12 = 100%
No.	Students: 39/325 = 12.0% Teachers: 0/21 = --.-% University employees, private employees and research assistants: 0/16 = --.-% Administration: 0/12 = --.-%

Regarding the creation of a central body for traffic management at university, 67.4% were in favor of a management unit that has representatives of all user groups present. On the other hand, a clear majority of 64.7% and 61.5% did not want this body solely responsible for decisions on the user fee rates or traffic measures and fee usage, respectively. The result to this group of questions is in line with findings of the study through SSI and other interviews:

- ⇒ Users think a centralized management body would improve the handling of traffic issues. But users also
- ⇒ Want more control over final decisions regarding their traffic environment.
- ⇒ Users do not necessarily trust management decisions of a single institution, even if they can send representatives.
- ⇒ Users do not think that the university can actually manage traffic without negative impacts for the way they have organized their everyday commuting.
- ⇒ Users are skeptical that traffic management at university is capable of taking more than rudimentary measures and approach the traffic problem wholeheartedly and on a broad basis.

Table 18: Traffic management unit	
Number of answers and per cent distribution	Worded questions and possible answers.
1.	<b>What do you think of the following statement? University should create a traffic management unit that has an equal number of representatives from all user groups, which are students, teachers, faculties, university personnel, administrators.</b>
<b>252/374 = 67.38%</b>	Yes.
<b>122/374 = 32.62%</b>	No.
<b>374 = 100%</b>	
	<b>Answers according to user groups:</b>
Yes.	Students: 218/325 = 67.08% Teachers: 17/21 = 80.95% University employees, private employees and research assistants: 7/16 = 43.75% Administration: 10/12 = 83.33%
No.	Students: 107/325 = 32.92% Teachers: 4/21 = 19.05% University employees, private employees and research assistants: 9/16 = 56.25% Administration: 2/12 = 16.67%
2.	<b>(Please answer, even if you did not agree with the previous question) What do you think of the following statement? This traffic management unit should be the only body that can decide on the rate of user fees.</b>
<b>132/374 = 35.29%</b>	Yes.
<b>242/374 = 64.71%</b>	No.
<b>374 = 100%</b>	
	<b>Answers according to user groups:</b>
Yes.	Students: 109/325 = 33.54% Teachers: 9/21 = 42.86% University employees, private employees and research assistants: 7/16 =

	43.75% Administration: 7/12 = 58.33%
No.	Students: 216/325 = 66.46% Teachers: 12/21 = 57.14% University employees, private employees and research assistants: 9/16 = 56.25% Administration: 5/12 = 41.67%
3.	(Please answer, even if you did not agree with the previous question) What do you think of the following statement? This traffic management unit should be the only body that decides on how traffic user fees are employed at campus and what traffic measures are taken.
144/374 = 38.50%	Yes.
230/374 = 61.50%	No.
374 = 100%	
	<b>Answers according to user groups:</b>
Yes.	Students: 118/325 = 36.31% Teachers: 12/21 = 57.14% University employees, private employees and research assistants: 8/16 = 50.0% Administration: 6/12 = 50.0%
No.	Students: 207/325 = 63.69% Teachers: 9/21 = 42.86% University employees, private employees and research assistants: 8/16 = 50.0% Administration: 6/12 = 50.0%

**Regarding People Participation:**

The general belief, as found in the SSI and other interviews, that CMU does not perceive traffic and its related issues from a user friendly point of view and needs more input from the concerned user groups, is expressed in the large majorities of

- ⇒ 96% that think the role of user groups in traffic management should increase, and
- ⇒ 84% that think CMU should organize a public forum on traffic with all user groups present, and
- ⇒ 91.2% that think such a forum should have an opportunity to present a traffic management plan to the university.

Table 19: People participation

Number of answers and per cent distribution	Worded questions and possible answers.
1.	Do you think that the role of user groups in traffic management should increase?
359/374 = 95.99%	Yes.
15/374 = 4.01%	No.

<b>374 = 100%</b>	
	<b>Answers according to user groups:</b>
<b>Yes.</b>	Students: 310/325 = 95.38% Teachers: 21/21 = 100% University employees, private employees and research assistants: 16/16 = 100% Administration: 12/12 = 100%
<b>No.</b>	Students: 15/325 = 4.62% Teachers: 0/21 = --.-% University employees, private employees and research assistants: 0/16 = --.-% Administration: 0/12 = --.-%
<b>2.</b>	<b>Do you think that university should call a public forum on transportation to discuss its policy regarding traffic management?</b>
<b>314/374 = 83.96%</b>	Yes.
<b>60/374 = 16.04%</b>	No.
<b>374 = 100%</b>	
	<b>Answers according to user groups:</b>
<b>Yes.</b>	Students: 273/325 = 84.0% Teachers: 18/21 = 85.71% University employees, private employees and research assistants: 13/16 = 81.25% Administration: 10/12 = 83.33%
<b>No.</b>	Students: 52/325 = 16.0% Teachers: 3/21 = 14.29% University employees, private employees and research assistants: 3/16 = 18.75% Administration: 2/12 = 16.67%
<b>3.</b>	<b>(Please answer, even if you did not agree with the previous question) Do you think that such a public forum should have the opportunity to propose a traffic management plan worked out by all participants to the university?</b>
<b>341/374 = 91.18%</b>	Yes.
<b>33/374 = 8.82%</b>	No.
<b>374 = 100%</b>	
	<b>Answers according to user groups:</b>
<b>Yes.</b>	Students: 295/325 = 90.77% Teachers: 19/21 = 90.48% University employees, private employees and research assistants: 16/16 = 100% Administration: 11/12 = 91.67%
<b>No.</b>	Students: 30/325 = 9.23% Teachers: 2/21 = 9.52% University employees, private employees and research assistants: 0/16 = --.-% Administration: 1/12 = 8.33%

### 10.3 The Proposed Psychological Environment

#### A selection of relevant data from previous questionnaires:

- ⇒ 25.42% think that the tram should receive preferential support in campus infrastructure layout. (Questionnaire 1)
- ⇒ 79.2 % think that traffic law enforcement should be stricter at campus. (Questionnaire 1)
- ⇒ 59.8% think that traffic law enforcement should introduce fines. (Questionnaire 1)
- ⇒ 67.29% think that in case user fees are collected, CMU should introduce some kind of public transportation to campus. (Questionnaire 1)
- ⇒ 65% think that the current traffic problems are due to a lack of strict traffic measures. (Questionnaire 1)
- ⇒ 73% of users think that there is a general lack of respect towards traffic rules and regulations. (Questionnaire 1)
- ⇒ 91.9% think that university should build a better relationship between guards and campus users. (Questionnaire 1)

A majority of 63.6% thinks that traffic management would improve, if PR activities and campus-user tutoring regarding the guards and their role in traffic management at campus were introduced, but only 45.5% think that an increase in the number of guards at campus would improve traffic itself at university. Users seem to perceive the current traffic problems as only partly originating in the admitted common lack of traffic discipline and lack of respect for traffic rules and regulations. To solve traffic problems at university, its management needs to introduce measures on a broader basis, not only focusing on the user and his/her behavior, but also on the type of physical traffic management that is created.

In spite of the small number of only 25.4% that think the tramline should receive preferential support in the infrastructure lay out, a total of 48.4% of users think that an increase in lines and frequency of runs of the current rudimentary tram system would be an improvement to traffic management. A remarkable 46.3% of users would even consider such an improved tramline as an alternative to their currently practiced form of transportation. If this potential is fully realized, almost half of the current individual traffic would disappear, which would greatly alleviate traffic congestion during university rush hour and probably solve most of the current traffic problems.

Table 20: The proposed psychological environment

Number of answers and per cent distribution	Worded questions and possible answers.
1.	If the university initiates PR activities and campus-user tutoring regarding the guards and their role in traffic management at campus, do you think that would be an improvement to the current traffic management?
238/374 = 63.64%	Yes.
136/374 = 36.36%	No.
374 = 100%	
	<b>Answers according to user groups:</b>
Yes.	Students: 198/325 = 60.92% Teachers: 17/21 = 80.95% University employees, private employees and research assistants: 13/16 = 81.25% Administration: 10/12 = 83.33%



No.	Students: 127/325 = 39.08% Teachers: 4/21 = 19.05% University employees, private employees and research assistants: 3/16 = 18.75% Administration: 2/12 = 16.67%
2.	<b>Would you consider an increase in traffic guards to ensure a more strict traffic law enforcement as an improvement to traffic management at campus?</b>
170/374 = 45.45%	Yes.
204/374 = 54.55%	No.
374 = 100%	
	<b>Answers according to user groups:</b>
Yes.	Students: 141/325 = 43.38% Teachers: 13/21 = 61.9% University employees, private employees and research assistants: 10/16 = 62.5% Administration: 6/12 = 50.0%
No.	Students: 184/325 = 56.62% Teachers: 8/21 = 38.10% University employees, private employees and research assistants: 6/16 = 37.5% Administration: 6/12 = 50.00%
3.	<b>Would you consider an increase in tramcars and lines in combination with a higher frequency of runs as an improvement to traffic management at campus?</b>
181/374 = 48.40%	Yes.
193/374 = 51.60%	No.
374 = 100%	
	<b>Answers according to user groups:</b>
Yes.	Students: 150/325 = 46.15% Teachers: 17/21 = 80.95% University employees, private employees and research assistants: 9/16 = 56.25% Administration: 5/12 = 41.67%
No.	Students: 175/325 = 53.58% Teachers: 4/21 = 19.05% University employees, private employees and research assistants: 7/16 = 43.75% Administration: 7/12 = 58.33%
4.	<b>Would you consider such a tramline system as an alternative to your current, main form of transportation at campus?</b>
173/374 = 46.26%	Yes.
201/374 =	No.

<b>53.74%</b>	
<b>374 = 100%</b>	
	<b>Answers according to user groups:</b>
<b>Yes.</b>	<b>Students: 142/325 = 43.69%</b> <b>Teachers: 17/21 = 80.95%</b> <b>University employees, private employees and research assistants: 10/16 = 62.5%</b> <b>Administration: 4/12 = 33.33%</b>
<b>No.</b>	<b>Students: 183/325 = 56.31%</b> <b>Teachers: 4/21 = 19.05%</b> <b>University employees, private employees and research assistants: 6/16 = 37.5%</b> <b>Administration: 8/12 = 66.67%</b>