



Universidad Carlos III de Madrid



I European Conference on Sustainable Mobility at Universities

Universitat Autònoma de Barcelona



Universitat Autònoma de Barcelona

8, 9, 10 March 2017

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Topic: “Spanish Universities Social Councils’ perceptions on sustainability and mobility”

THIS RESEARCH WAS SUPPORTED BY THE PROJECT “RESEARCH ON ENERGY EFFICIENCY AND SUSTAINABLE TRANSPORT IN URBAN AREAS: ANALYSIS OF SCIENTIFIC DEVELOPMENT AND THE SOCIAL PERCEPTION OF THE SUBJECT FROM THE PERSPECTIVE OF METRIC INFORMATION STUDIES” (CSO2014-51916-C2-1-R). SPANISH MINISTRY OF ECONOMY AND COMPETITIVENESS (2015-2018).



The conference is in the Framework of the European Project about sustainable Mobility: U-MOB LIFE.



LIFE project number LIFE15 GIC/ES/000056 This Project is funded by the European Union. It reflects only the author’s view and the agency is not responsible for any use that may be made of the information it contains.

“Research on energy efficiency and sustainable transport in urban areas: analysis of scientific development and the social perception of the subject from the perspective of metric information studies“ (2015-2018).

1. From Ecocity to Ecocampus: Sustainability Policies in University Campuses

To analyze the experiences of:
Sustainability policies on two different campuses:

University A

Urban in a historic city
3 campuses (60%
in downtown and
the 40% is in the
external campus)

Results

It has encouraged the economic and
social development of the city.

UIGM energy indicators have better scores,
but this kind of campus has limitations
with historical infrastructure.

University B

suburban in the outskirts
of a large city
8 faculties: 7 in a suburban
campus and 1 in an urban
campus

Results

Greater autonomy with a reduce
impact in the local settlements.

Better outcomes in the water and
waste management.

Both universities need to improve
the sustainability policies of the transportation

Top greenmetrics

2. A Probabilistic Topic Model on Energy and Transportation Sustainability Perceptions Within Spanish University Students.

Hypotheses

What are the main topics within students' perceptions about renewable energy, energy efficiency, recycled materials, or bicycle use in their daily activities in the campus?

Methodology

Qualitative and quantitative
55 000 words
10 Spanish universities
Probabilistic topic model
MALLET - GEPHI

DiMaggio, Nag & Blei, 2013

Latent Dirichlet Allocation (LDA)

Splits the corpus in some "bag words" modelling algorithms that are a part of machine learning methods discovering hidden thematic structure in large collection of documents

Results

Key words

1. car - saving
2. UAM - city's future
3. Mobility
4. Train cost
5. Bikes
6. Transportation-environment
7. Expenses - gas
8. Pollution-sustainable change
9. Renewable energy-Madrid
10. Alternative energy-universities

Conclusions

It's necessary to improve a bicycle lane inside and outside of universities, to promote the use of bicycles as a mode of transportation.

Very important factors

related to the mobility topic:
comfort, independence,
and the time spent with
any mode of transportation

The majority of
the respondents thinks

Universities and government have to take effective actions and policies to remove the financial burdens that implies environmental protection today

“Spanish Universities Social Councils’ perceptions on sustainability and mobility”

Overview

Theoretical background

Methodology

Results

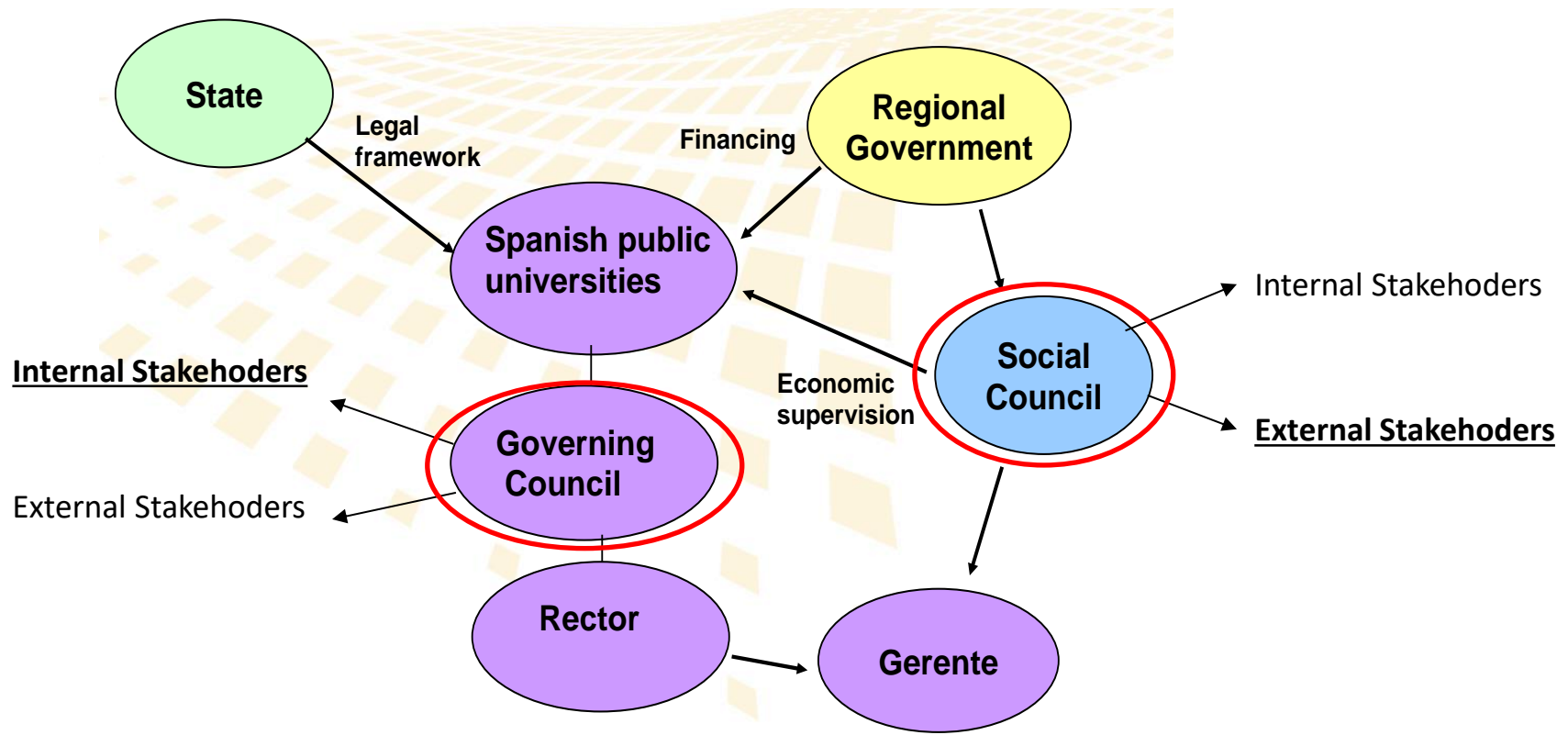
Conclusion

The aim of this study:

To know the opinion of the members of the Social Council - as the main body for participating in society and responsible for overseeing economic activity- about the effort the university should make in the field of environmental sustainability.

Theoretical background

Governance structure of Spanish University



Research Method

Larrán, M. et al (2014);
Benayas, (2011);
Barañano, (2012);
Alba Hidalgo, (2016)....

Questions were created from
common themes

General
values

Survey

Management
strategies

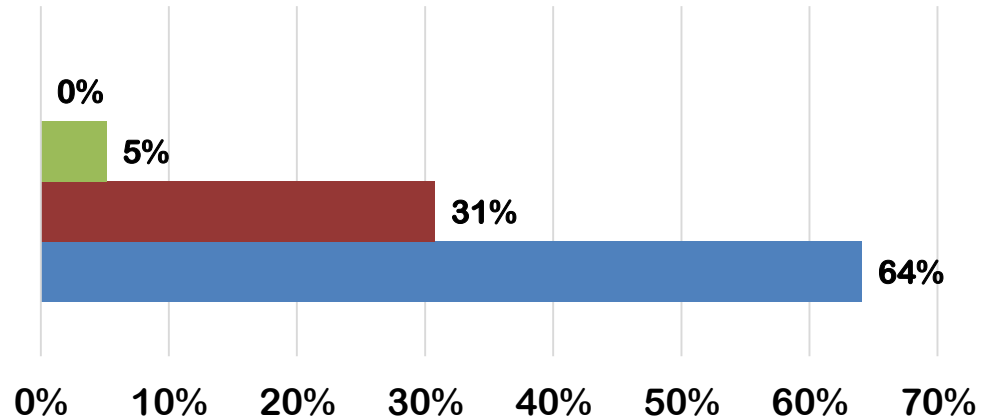
Research

Educational

78 responses
Spanish Social Councils members.

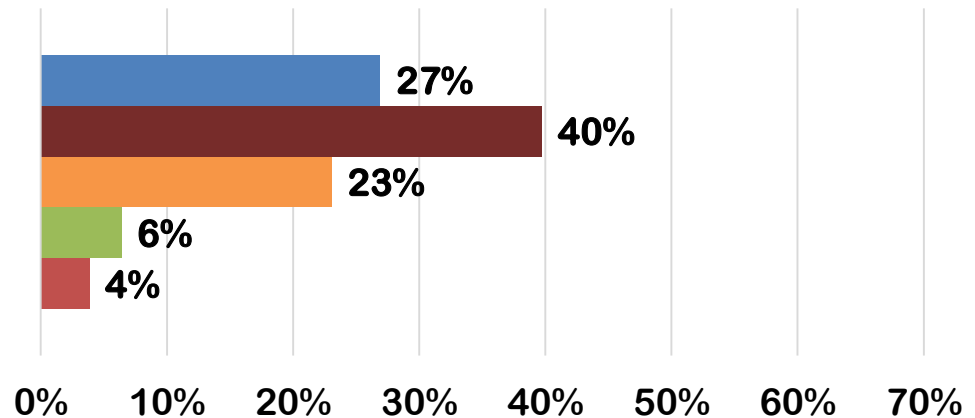
1.1 What is the importance about the university being involved in environmental sustainability?

■ Nothing important ■ Less important ■ Fairly important ■ Very Important

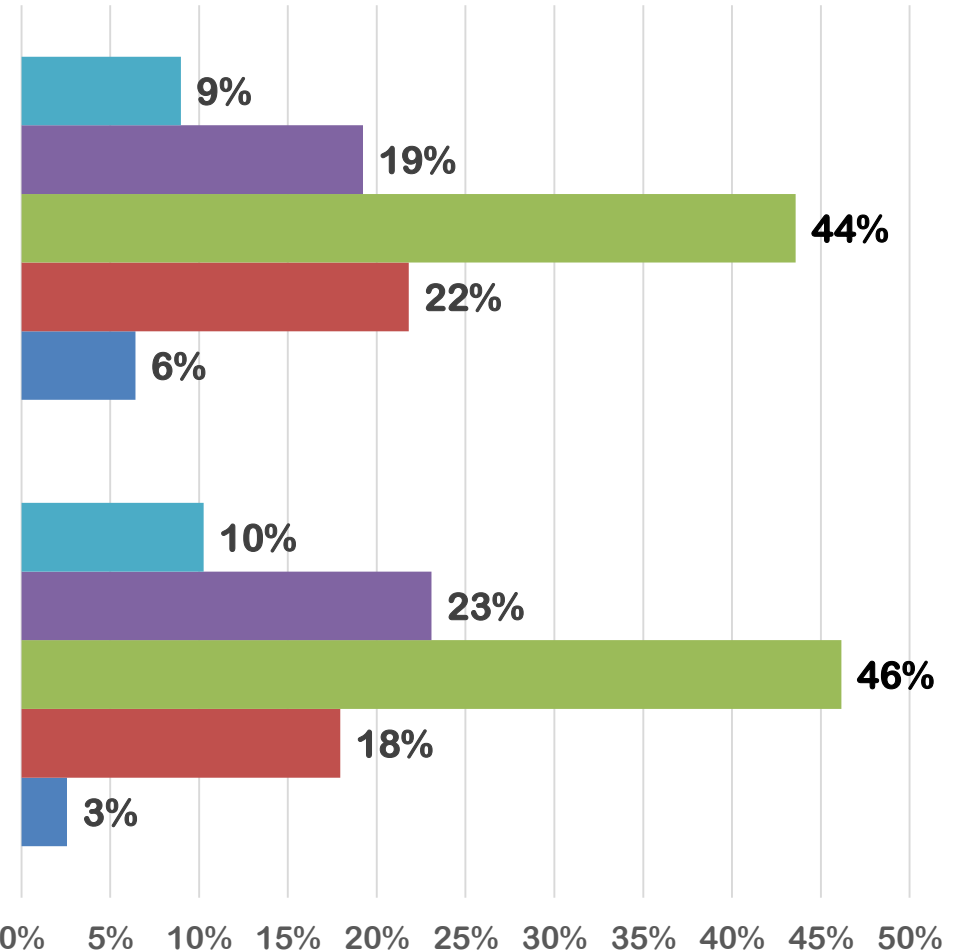


1.2 Environmental sustainability should be a priority, with its corresponding budgetary effort, from the university.

■ Strongly Agree (5) ■ Slightly Agree (4) ■ Neutral (3) ■ Slightly Disagree (2) ■ Strongly Disagree (1)



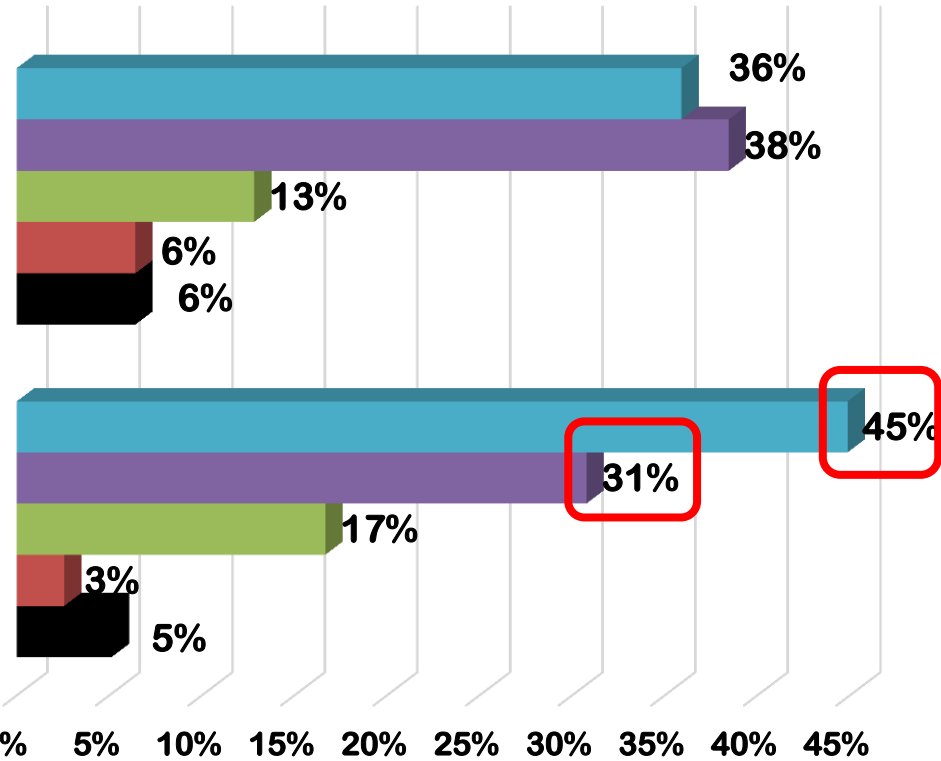
2.1 What is the degree of knowledge of your university related to the development on this field?



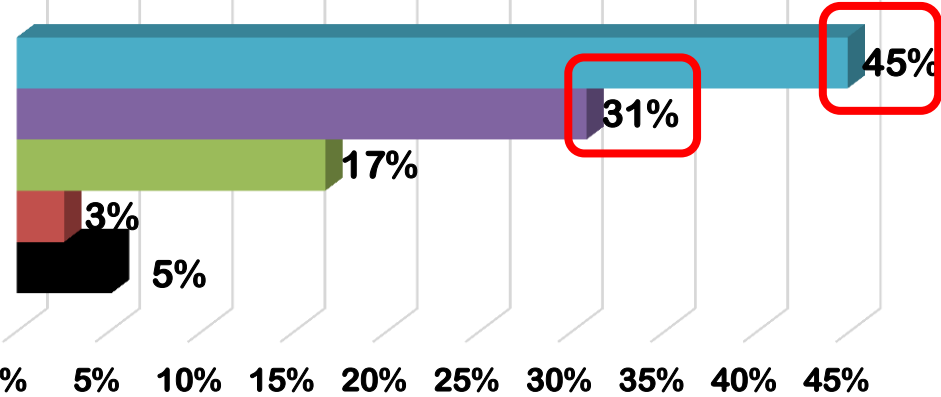
■ Very High(5)
 ■ Above Average (4)
 ■ Average (3)
 ■ Below Average (2)
 ■ Very Low (1)

Environmentally sustainable management of university resources.

4.1. How important is to have a center, institute, office (ecocampus) or unit that focuses its work on the sustainability / environment of the campus?

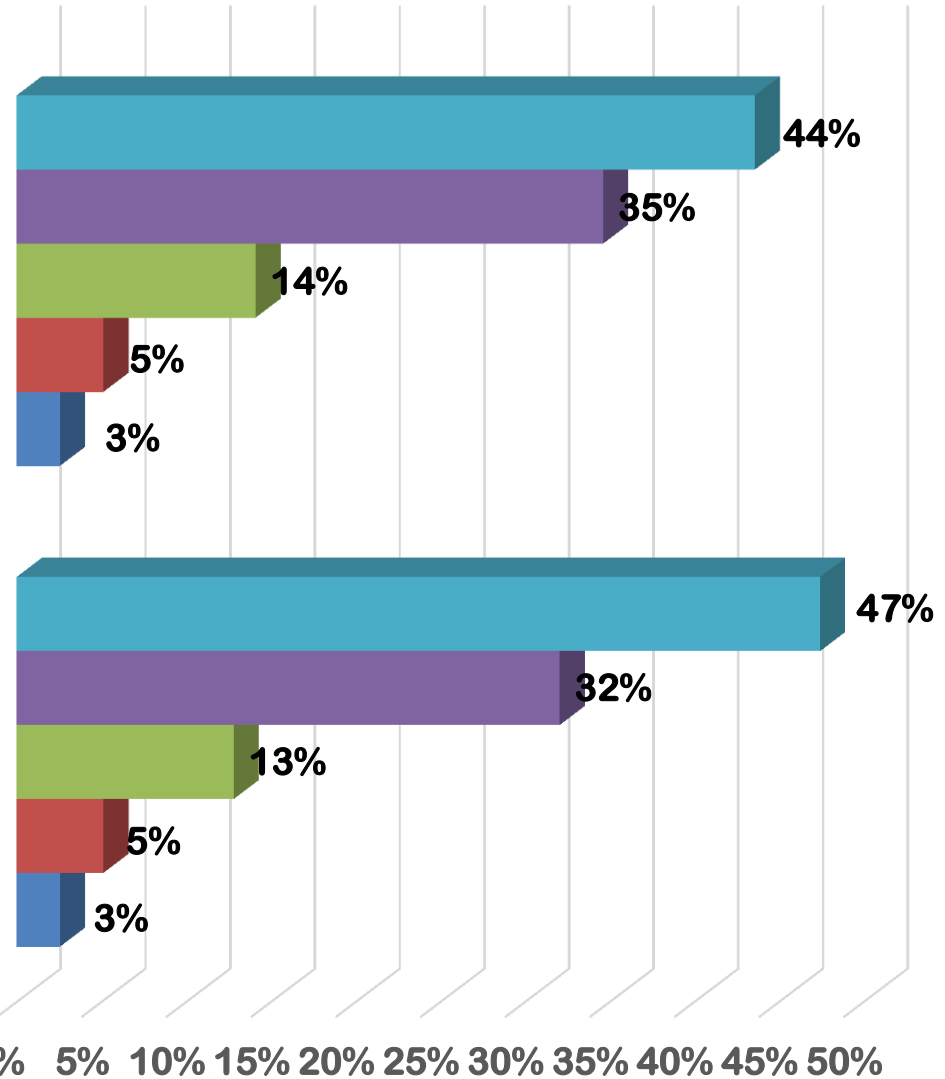


4.2. How important is to have a sustainable transportation plan for your university?



■ Very High(5) ■ Above Average (4) ■ Average (3) ■ Below Average (2) ■ Very Low (1)

3.4 A public document of accountability should be created that includes environmental or social aspects.



3.5 In the strategic plan and in the scorecard there should be indicators of environmental sustainability of the university.

■ Strongly Agree (5) ■ Slightly Agree (4) ■ Neutral (3) ■ Slightly Disagree (2) ■ Strongly Disagree (1)

4. The actions that your university should take in the matter of sustainable transport:

Develop actions to reduce the need for displacement and to encourage the car sharing

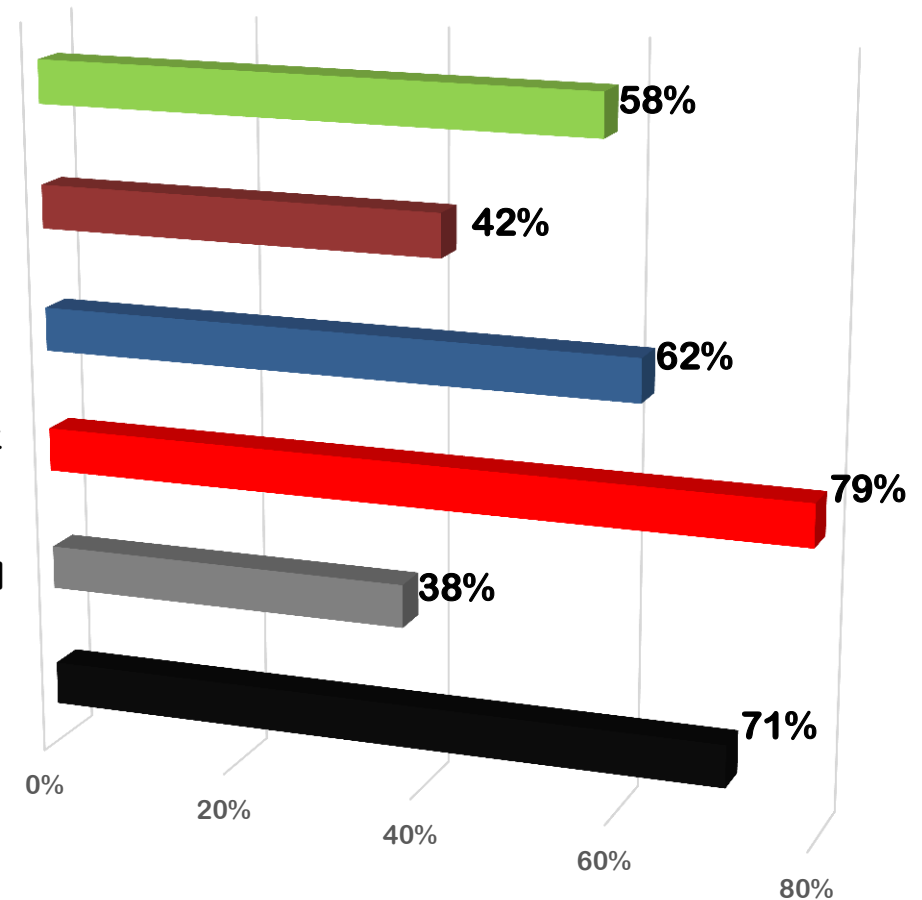
Develop actions to pedestrianize the campus

Develop actions to encourage the use of cycling on campus

Develop agreements with public transport companies in favor of sustainability

Develop actions related to parking control

Develop actions to reduce the use of the private vehicle



CONCLUSIONS

- ❖ They think that environmental sustainability at universities is very important, but not as a priority.
- ❖ They do not know well what their university does.
- ❖ They focus more about the planning with public indicators than the administrative office for execution.
- ❖ They support public transportation and car sharing to reduce private transportation to the campus.
- ❖ They encourage the use of bicycle on campus.

Thank you for your attention

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