



Implementing Green Transportation in University Level: a Case Study from

Bogor Agricultural University, Indonesia

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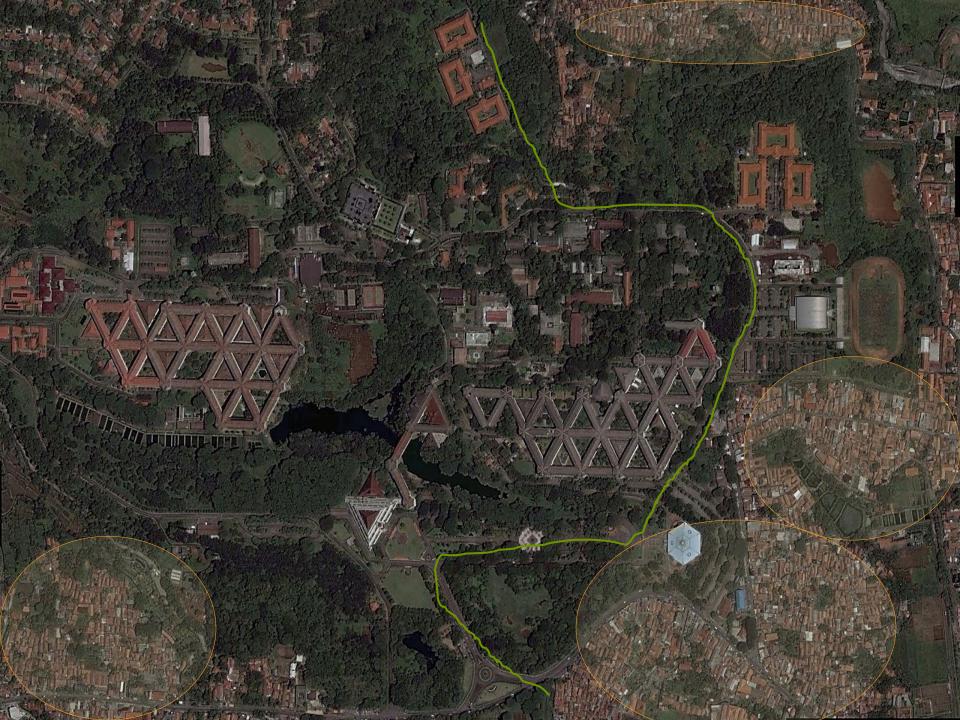
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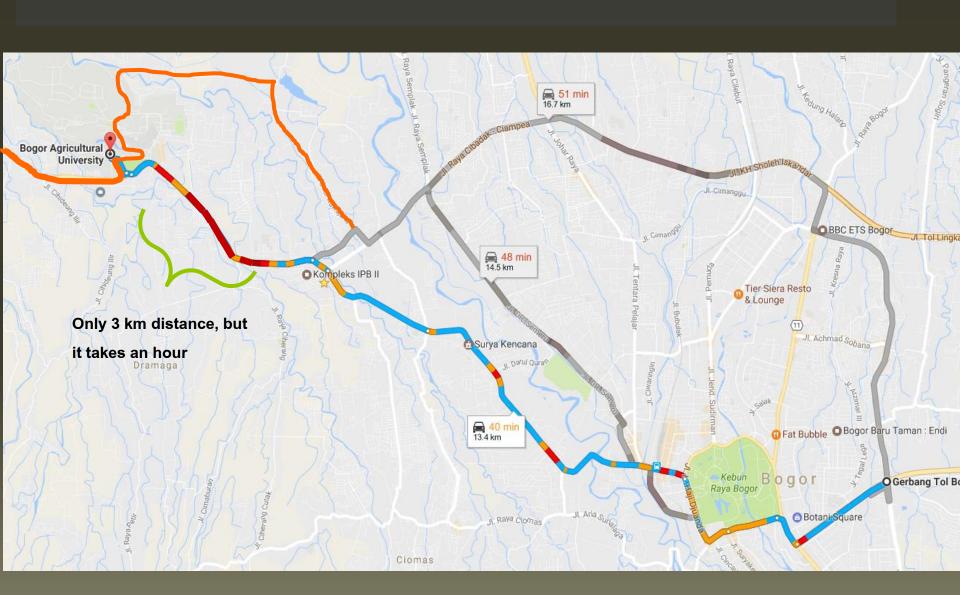






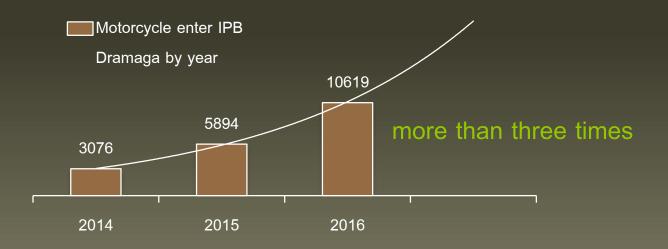
IPB Campus Dramaga as shortcut

Bogor Main Street often has heavy traffic jam, commuter attempt to find alternative road



IPB Campus Dramaga

Motorized Vehicles that enter the campus has increased significantly from 3,076 motorcycle (2014) to 10,619 motorcycle (2016);



Green Transportation

Based on Letter of Decree by Rector of IPB No 240/IT3/LK/2015 on article of the Implementation of Green Transportation.





Mass transportation system

Commuter Bus

- Five buses owned by IPB & 1 Rented Bus.
- Five Corridors (Fixed Routes) around Campus.
- Custom seat; standing passenger in the middle of the bus.
- Service Charge IDR 1,000 (0,07 USD) per passenger per trip.







Mass transportation system

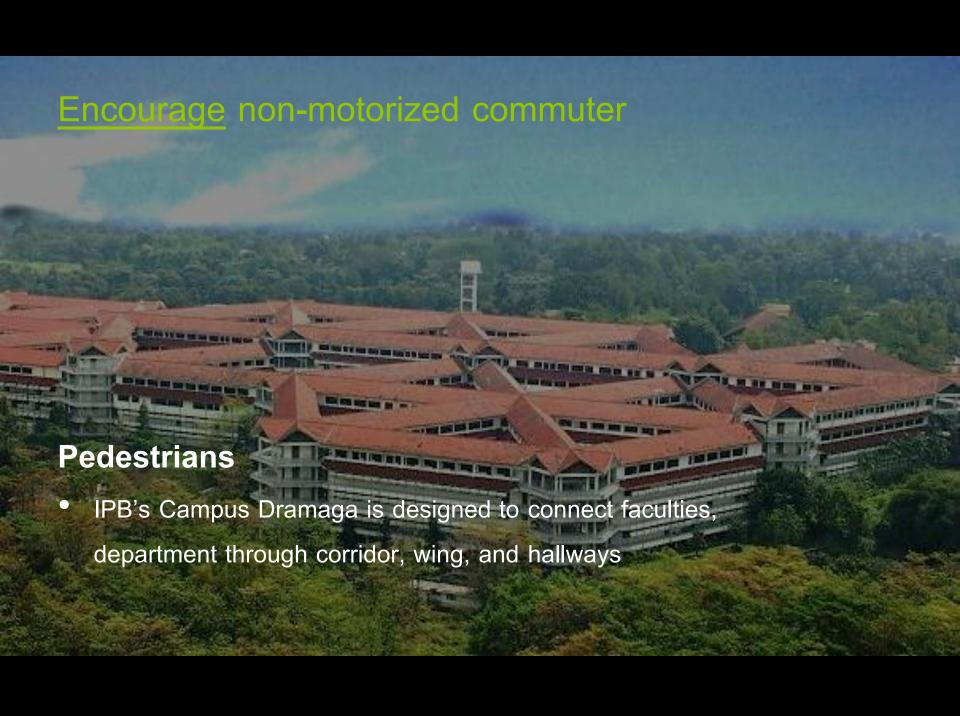
Electric Carts

- On the beginning designed to support bus in corridor system.
- Now Electric cart may serve to wherever destination requested by passengers as long as still within the campus areas
- Electric cart is an interesting transportation, and gain popularity among students











IPB's Green Transportation Program

Encourage non-motorized commuter

Rental Bicycle

- The borrower must leave a student identity or an employee card in the shelter
- The number of bicycles in IPB's Campus is relatively sufficient to cover the needs
- The average of borrowing of bicycles by November 2016 reached 78 units of bicycle per day, or about 15% from the available bikes





Heading to IPB Green Campus 2020.

Limiting the use of personal motorize vehicles

Gate Verification System

- Gate Verification System System has a function to verify every vehicle that going to enter IPB's Darmaga
 Campus Area
- The purposes are to reduce unrelated vehicle enter IPB, and increasing security and minimize carbon emission

Parking System

In 2015 total parking space accommodate daily up to 2.680 motorcycles and in 2016 increases to 4.660 motorcycles.





By the end of 2016, Green Transportation has;

Successful

- Reduce the amount of Gas emission by 47%. The research finding by PPLH (unpublished; 2015) showed that the implementation of *Green Transportation* at present has reduced the amount of emission by 47%. In 2020 IPB aims to reduce the amount of emission to 70%
- Electric Cart Gain high popularity.

Need Improvement

- Cyclist not popular, The average of borrowing of bicycles by November 2016 reached 78 units of bicycle per day, or about 15% from the available bikes
- Gate verification system, has several conflict with villagers surround campus

Further Development

In IPB's Green Transportation Program

- 1. Mass transportation system (electric cars and buses)
- 2. Encourage non-motorized commuter (pedestrians and rental bicycle)
- 3. Limiting the use of personal motorized vehicles

Further Development

Increase the number of busses

From 6 unit bus up to 10 unit busses in 2017





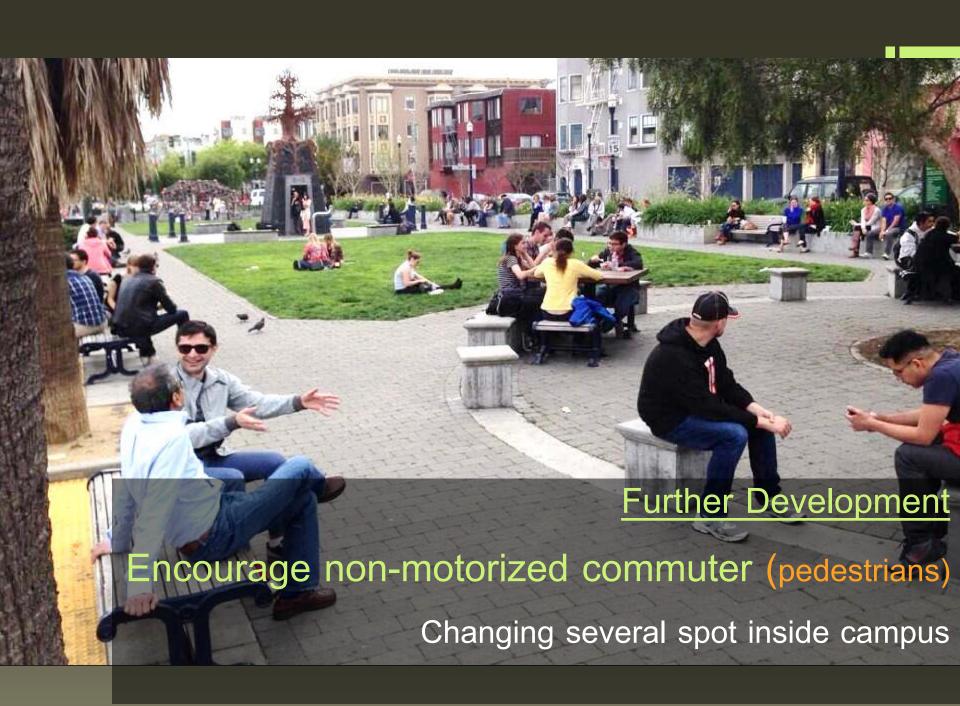
Further Development

Maximize the use electric Cart

From single source energy to two source

Using Solar cell as a backup energy for main battery







Conclusion

- Green transportation has direct impact in reduce greenhouse gas emission
- Further strong execution is needed to bringing the Campus Student and Entity to obey the decided rules.
- Thus innovative green movement method could be applied to make students aware and interested in Climate Changing Issues





Thank You

Terima kasih

TeŞekkür ederim