



# Evaluation of Urban Freight Transport Operations in Surakarta City

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# INTRODUCTION

The growth of urban economy is highly dependent on reliable supply of goods and commodity logistics supply.

Freight  
Transport



Dispensation  
License

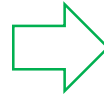


Transport  
Regulation



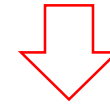
## ❖ The Fact

Traffic violations by freight vehicles against the provisions of existing regulations in the Surakarta City are **relatively high**

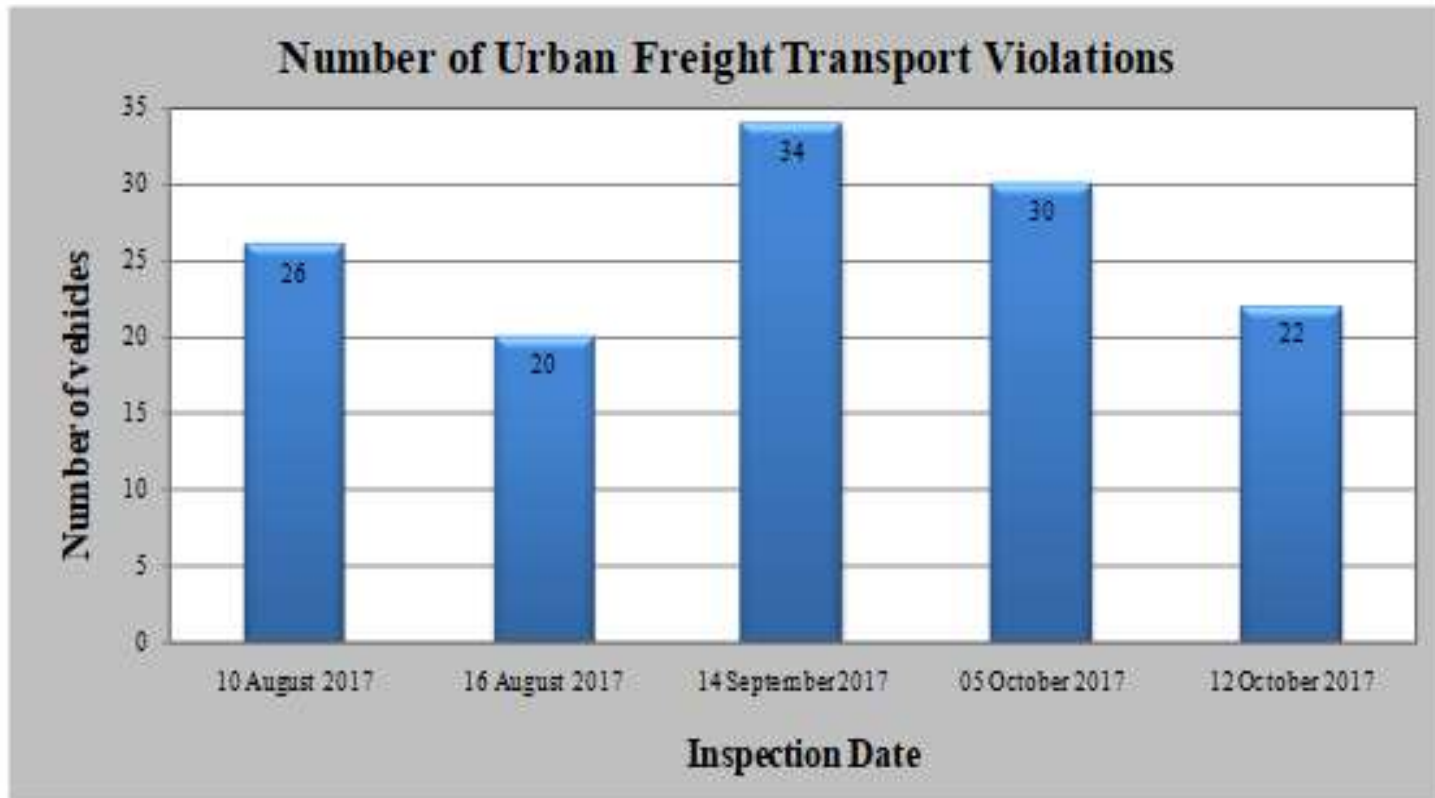


Impact:

A potential to decrease the level of safety, road service and environmental sustainability (GR No. 43 Year 1993)



## ► Sudden operation of urban freight transport



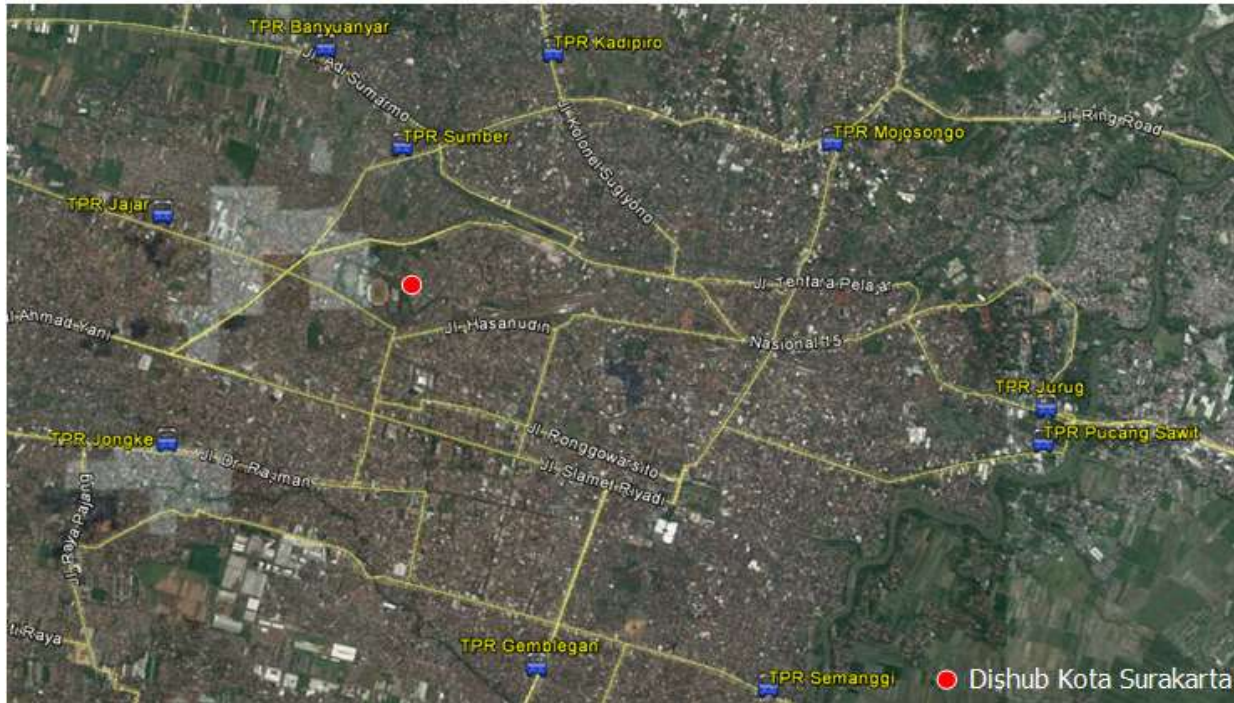
### **OBJECTIVE:**

To evaluate and improve the current system of monitoring and control of urban freight transport related to the provision of the dispensation license for freight vehicles through the inner-city road in Surakarta City.

# RESEARCH METHOD

- Data collection
- Analysis:
  - identifying the characteristics of urban freight transport movement,
  - the road bearing capacity of road networks,
  - the performance of road networks and
  - the violation of urban freight transport regulations;
  - determining urban freight transport routes through the inner-city road in Surakarta City for vehicles with a certain weight;
- Updating the urban freight transport dispensation license administration system in Surakarta City

# DATA COLLECTION, ANALYSIS AND RESULTS



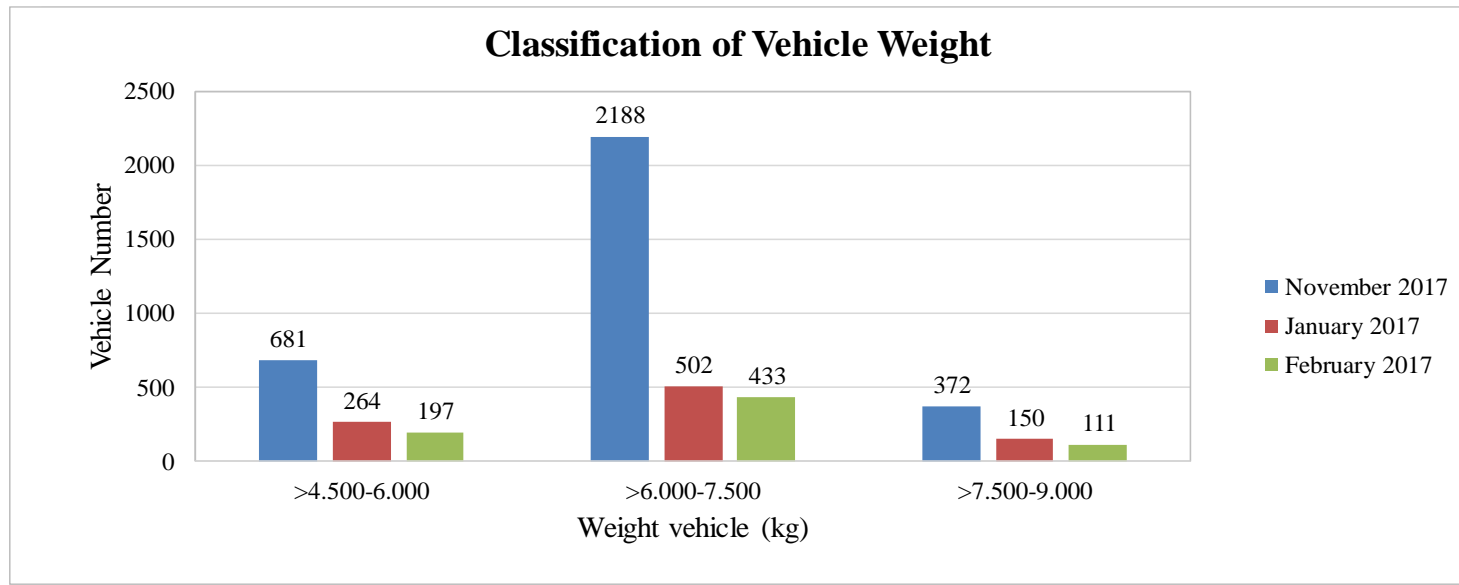
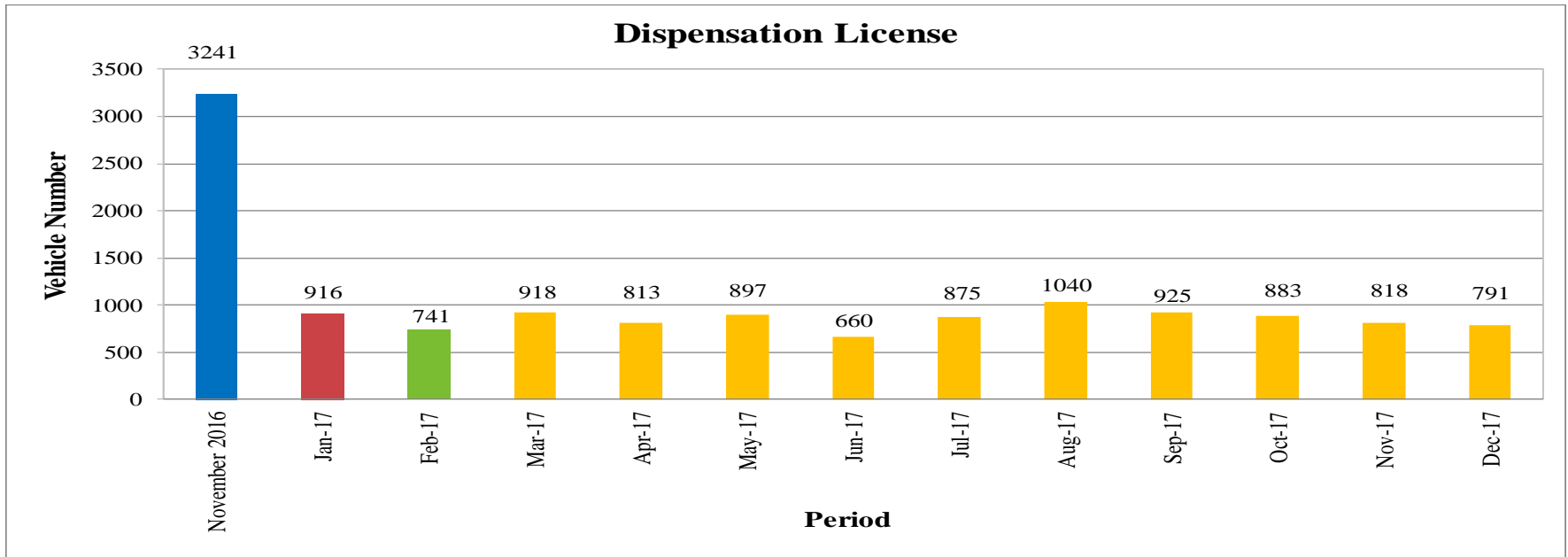
Levies Collection Place :

1. Banyuanyar
  2. Gemblegan
  3. Jajar
  4. Jongke
  5. Jurug
  6. Kadipiro
  7. Mojosoongo
  8. Pucang Sawit
  9. Semanggi
  10. Sumber
- Dot Office

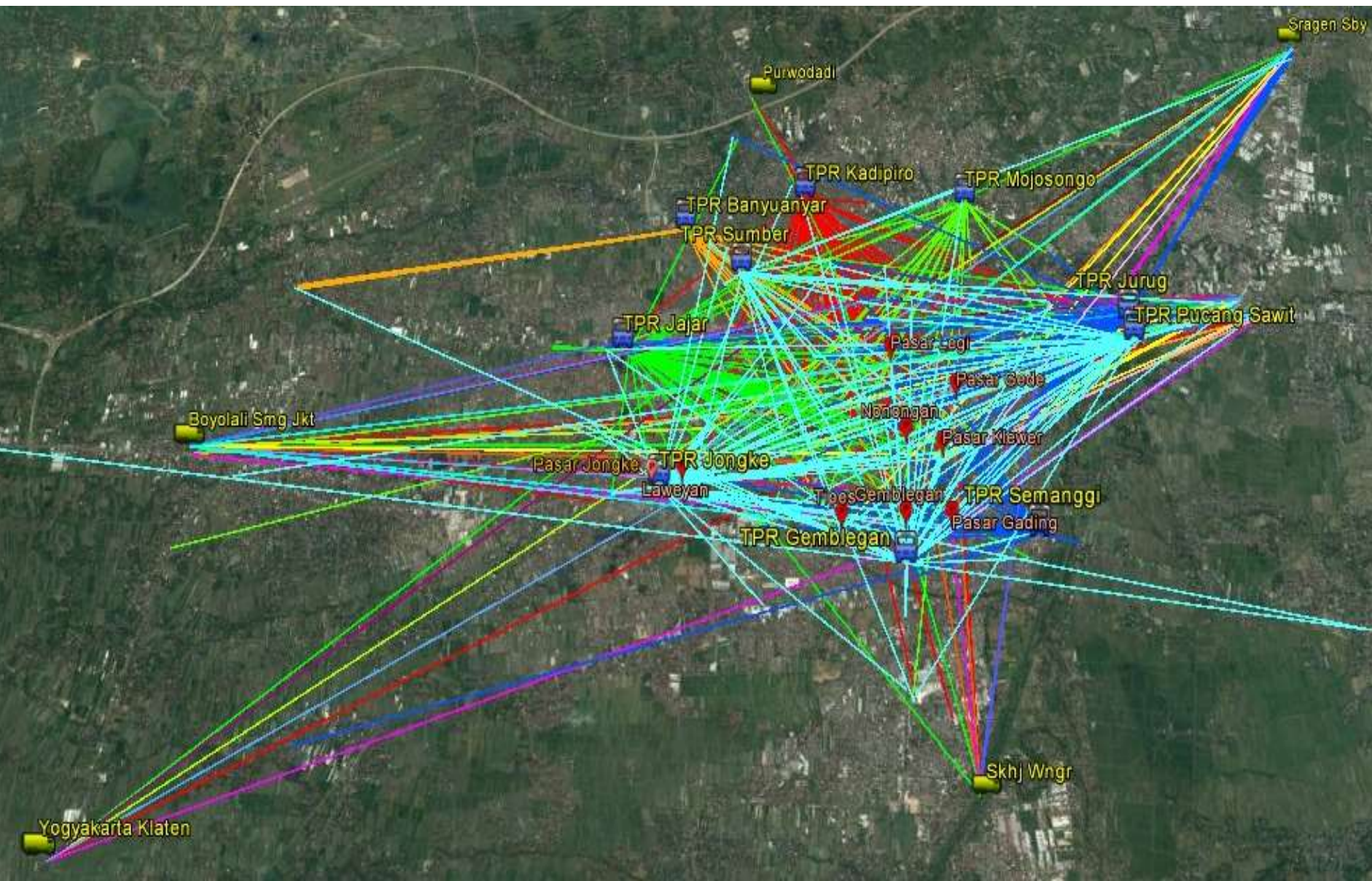
Data collection is done in two conditions:

1. All LCPs and DoT office function for data collection of the dispensation license (November 2016).
2. Only LCP Kadipiro, LCP Semanggi and DoT office function for data collection of the dispensation license (January and February 2017)

# ❖ Characteristics Of Urban Freight Transport



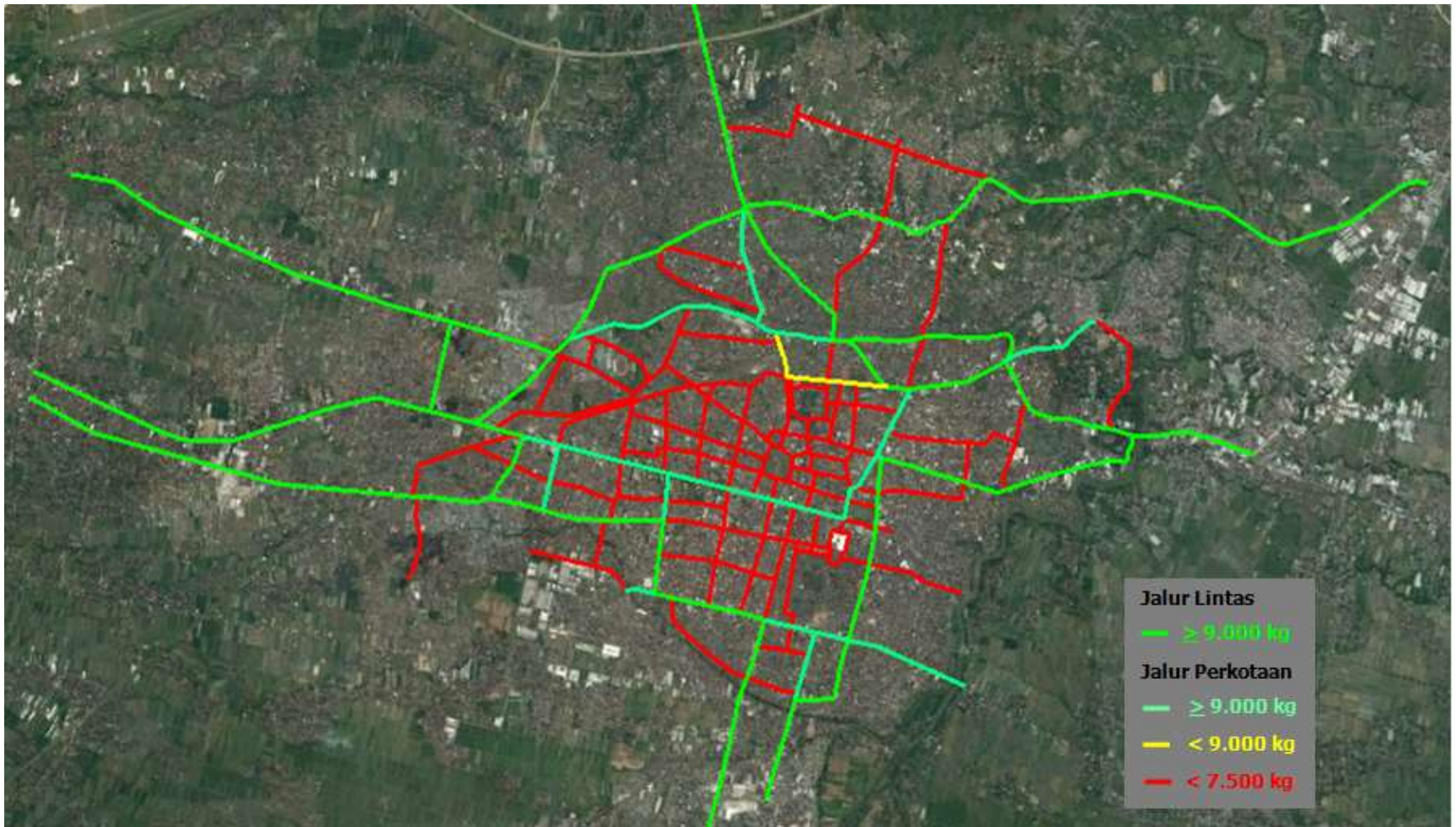
# Distribution patterns of urban freight transport movement in Surakarta City





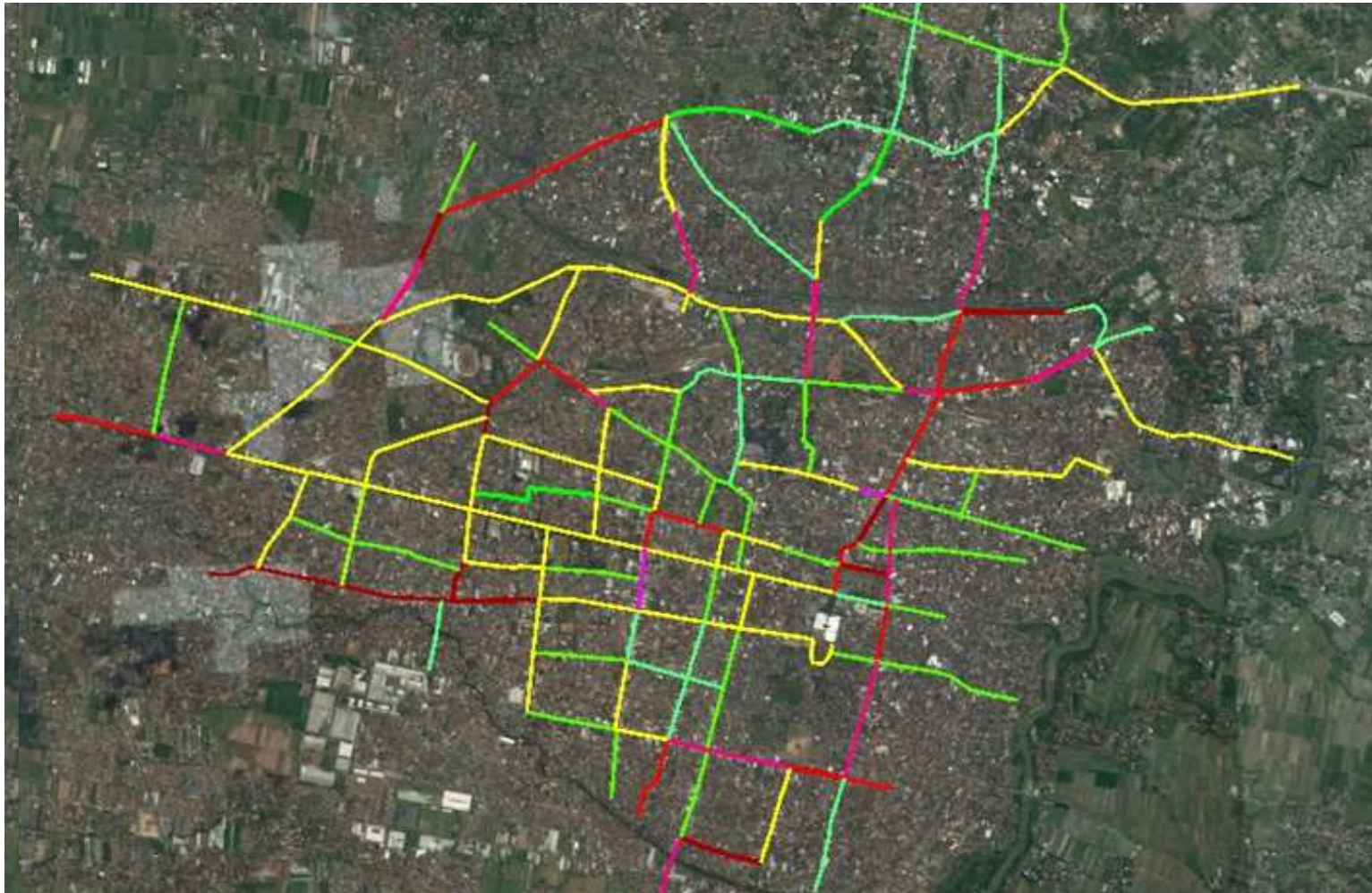
## ❖ Road Bearing Capacity

The mapping of road bearing capacity in Surakarta City is carried out to know the potential of the road usage for urban freight transport routes according to the vehicle weight.



## ❖ Road Traffic Performance

The presence of urban freight transport in traffic has an influence on road traffic performance. It is necessary to perform road traffic performance analysis to determine LOS of roads in Surakarta City.



## ❖ Traffic Violation

The violations occurred in relation to several matters including violation of the loading procedure, licensed provisions through the inner city road, un-proper parking area and loading-unloading activities.

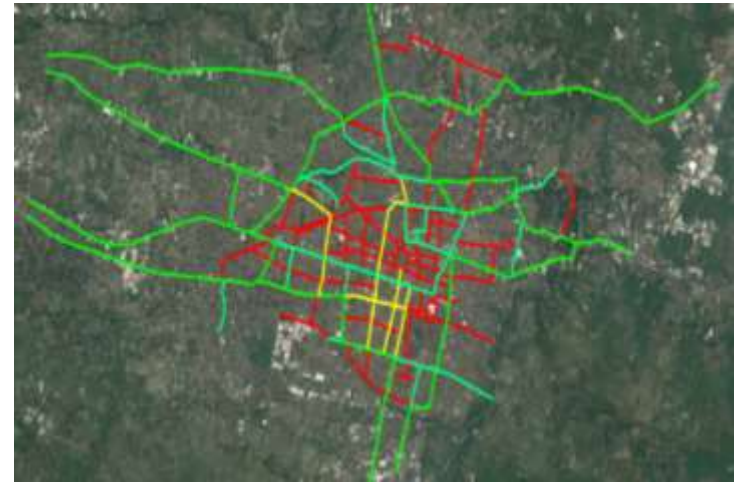


## DISCUSSION

The average decline in the number of applicants in 2017 compared to November 2016 was 73.6%. This phenomenon indicates that the non-functioning of 8 LCPs made the number of dispensation license applicants reduce significantly, so that the violation of urban freight transport entering the inner-city road increased. Needs dispensation license registration through an **online system**.

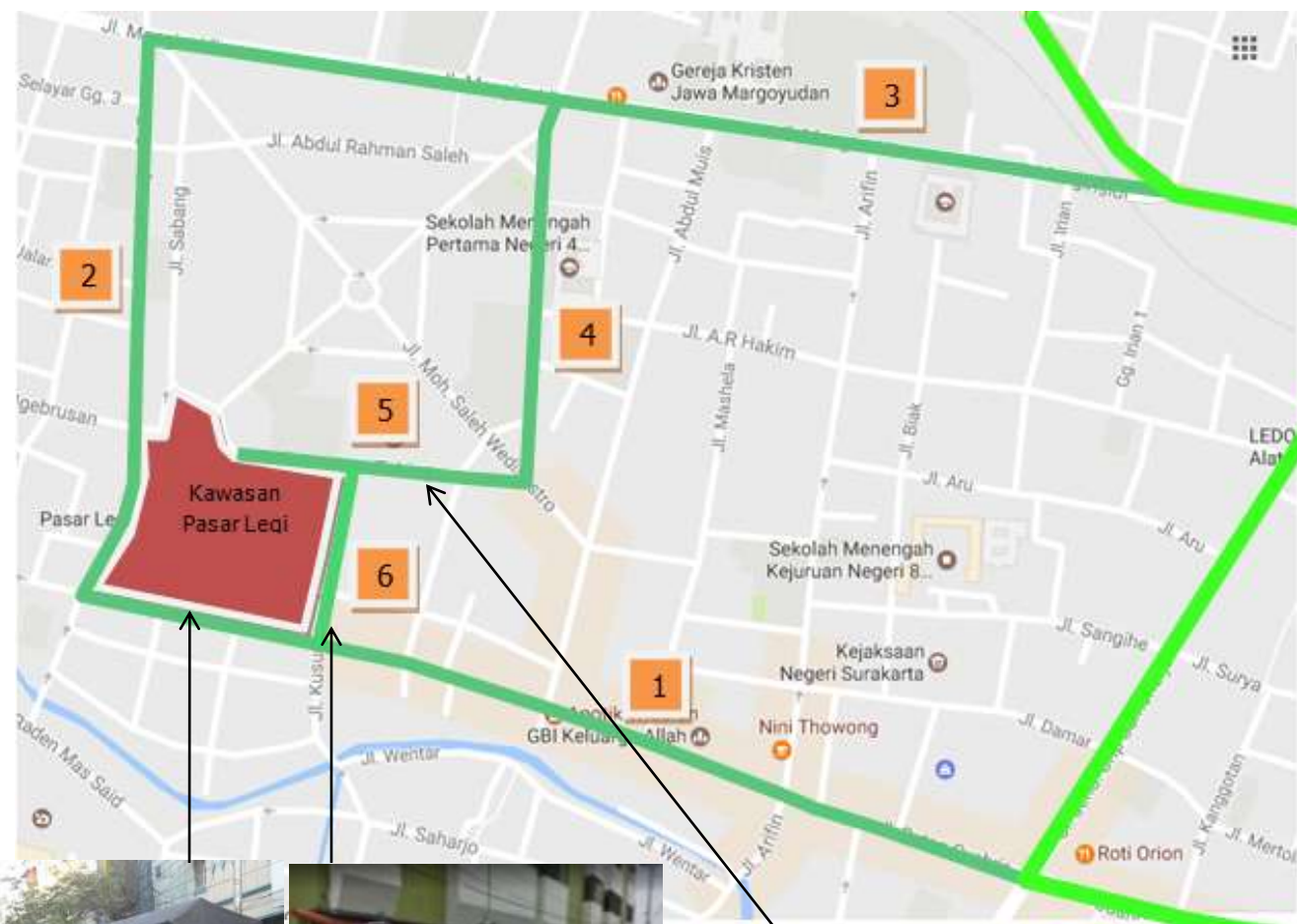
All vehicles with weight  $> 9,000$  kg do not have a dispensation license issued by the DoT because the DoT only issues dispensation licenses for urban freight transport with weight between  $> 4,500$  kg- $9,000$  kg. Therefore, the granting of a dispensation license for vehicles with weight  $> 9000$  kg needs to be enforced in **regulation**.

Most of inner-city roads have road bearing capacity of  $< 7,500$  kg. Therefore, some of the existing roads' bearing capacity needs to be upgraded in order to support the distribution of urban goods.



➡ **Upgrades bearing capacity > 9.000 kg**

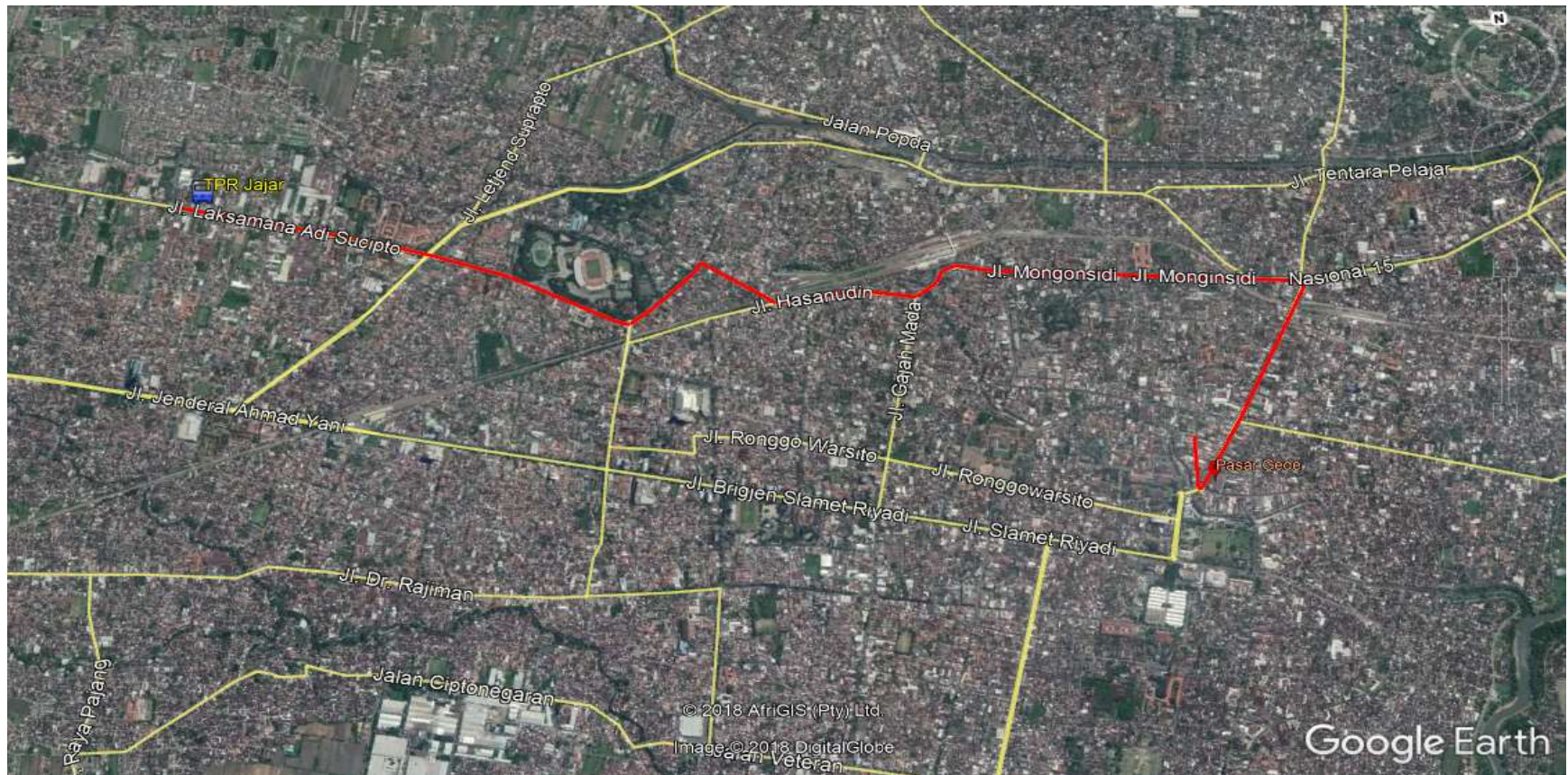
Legi Market area



- 1. Sutan Syahrir road
- 2. Letjend. S. Parman road
- 3. Monginsidi road
- 4. DI. Panjaitan road
- 5. Lumban Tobing road
- 6. Kusumoyudan road



The result of road traffic performance analysis shows that in general, the road segment that is used as an urban freight transport route, which has no restriction on vehicle weight, has low LOS (D, E, F). Therefore, the prohibition of urban freight transport entering the inner-city road, arrangement of parking and loading-unloading hours of urban freight transport for certain weights are regulated by traffic signs.

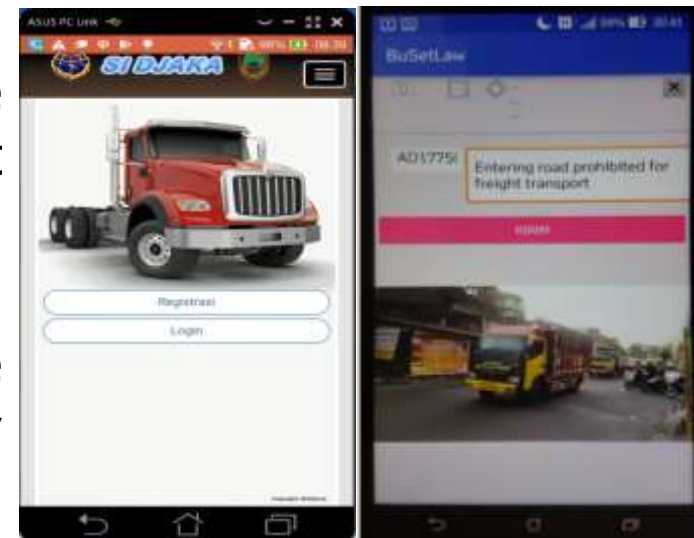


# CONCLUSION

The results of field data analysis indicate that the system of monitoring and controlling urban freight transport has some deficiencies.

Several efforts to improve the system are carried out by

- improving dispensation license requirements,
- vehicles with weight  $> 4,500$  must be licensed,
- dispensation license registration through an online system;
- law enforcement against violations of the provisions of urban freight transport dispensation license with the android system.
- All these efforts need to be regulated in the form of mayoral regulation to be legally enforceable.



THANK YOU

