

REVIEW ON BANDUNG TRANSPORTATION PLAN POLICY

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ABSTRACT

Transportation service is a derive demand, it means a demand what it need to reach a specific aim. Cause of that, the basic step on the transportation system planning should follow these steps: Formulation of goals and objectives, Data collection, Analytical methods, Forecasting, Formulation of alternative plans, Evaluation and Implementation. The Sustainability of a transportation system has to consider: The transportation existing condition, financial condition, people opinion, government policies, social-economics constraint, and the physical condition of that area. By comparative method between Bandung transportation problems and the strategic plan of the Bandung transportation system which has written on the RTRW (Masterplan) of Bandung 2010-2030, can be concluded that transportation system plan policy has not clear as an explicit plan which it need by the city of Bandung, cause it is not fully following the basic steps of transportation system planning and did not looked to the constraint of the transportation system plan. We recomendate to compose the transportation system plan as derivate, which more clear the criteria and target aims.

Keywords: Derived demand, basic steps of the plan, plan constrain, transportation system

INTRODUCTION

Transportation is moving passanger/ goods/ services from a place to another. Transportation will work if the 4 elements of transportation (Morlok, 1978) are fulfill, these are: thing or goods (including passanger), medium, vehicle and operating plan. When one of these element is not fulfill, the transportation system will not work well. Transportation is the derived demand, it means a demand which needed to reach a certain aim. So that if the demand of transportation is not fulfill, thus the true aim of transportation services can not be reached.

The factors which have to attend from the goods is the location factor or place where is the thing or goods, or passanger exist, or in other word the distribution of that goods location, the goods

characteristic etc, number of goods and time when that goods are needed. The factor of medium is the choice of medium, it can be air, water (sea, river, lake), and/ or land (roadway, railway), the availability of networking system of the medium, etc. For the vehicle factor have to attend the vehicle availability, appropriateness, capacity, capability and the technology which will be used. Meanwhile the factor of operating plan will cover operating schedule, institutional, supporting rule etc.

Thus to plan a transportation system for city, village or region, has to do by planning that four elements in an integrated and harmonize system.

OBJECTIVES

If that factors is the basic steps which have to attend and done for transportation planning, so how about the Bandung transportation plan? Is the transportation planning system has already exist on the master plan of kota Bandung could answer the transportation problem of Bandung? Is it has followed the procedure of urban transportation plan? If not yet, what the local government has to do?

BASIC THEORY

To reach integration and harmonism on the urban transportation system, the basic steps which need to be carried out (John Black, 1989), are:

1. *Formulation of goals and objectives:*

The formulation of goals can be done by identified the transportation problem, as like is the problem only around the traffic problem?, or have shift to transportation problem?, as like constrain on goods flow, highly transportation cost etc. Including in the formulation of that aim is the determining of the planning scope which will be reached, its only “problem solving” that is shortterm solution, or goes to “planning” as longterm strategic solution.

2. *Data collection:*

After problem identification and goals formulation, the next step is data collection. In the urban area, there is internal flow and external flow, there is flow what we call as basic access and non basic access, there is freight transport and also passenger transport vehicles have different characteristic. Passenger transport influenced by travel behavior of the citizen in transportation. Appropriate to the result of the problem identification, thus for the problem relate to the traffic problem of course have to collect data relate to the traffic data problem, it is: traffic volume, speed, traffic density or traffic flow. If the transportation problem relate to the certain transportation data as like origin and destination flow, transportation infrastructure data etc.

3. *Analytical methods:*

In the analytical process, important to understand the relationship among Activity system, Flow system and Transportation system. By synthesis the problem identification and goals formulation which have done, can be determined what is the problem will be finished by plan on Activity System (Spatial) or by plan on Flow System or direct to the Transportation System.

Also in this analytical process, it need to determine the performance indicator what will use as measuring tools for this plan. There are three performance indicators which commonly used, there are: *Traffic*, *Mobility* and *Accessibility*. Accessibility is the ultimate performance indicator of the transportation system, it relate with the supply and demand of transportation system.

The other else for this analysis is the presence of public transport and private transport, what can be a special characteristic on the compete between supply – demand side for the transportation system in the urban area. The choice of government side on demand side will coloring the implementation of the transportation plan what will be chosen.

4. *Forecasting:*

Forecasting or prediction such as apart of analytical process.

Appropriate with the spirit of planning which oriented toward to the future, so that forecasting is a crucial point, what is the next transportation planning has to do or not.

Forecasting is showing also the consequence, even the plan has been done or not for the final condition, or the goals of the planning, or what transportation planning system will be proposed.

5. *Formulation of alternative plans:*

In the formulation of alternative plans, all choices suitable with the result of analysis and forecasting which has been done, as like, did the problem will be finished by the planning on Activity System (spatial), or by movement planning (flow) or direct to the Transportation System. The choice on the basic concept of transportation system which its suitable with the forecasting result of the supply – demand of transportation, that is “Predict and Provide” or “Predict and Prevent”. In the *Predict and Provide* approach, the choice of transportation plan aimed to “fullfill” all of the result analysis and the forecast of the supply – demand transportation. Meanwhile on the *Predict and Prevent* approach, the choice of the planning action more than to the effort on “controlling” the *supply – demand* of transportation in order to decrease the worst condition what will be occurred appropriate with the result analysis and forecast, or obstruct the accelaration of what bad condition will be ocured.

6. *Evaluation:*

Evaluation here means as *Decision Making Process*, from numbers of planning alternatives then choose one of the best planning action, by consider the good and bad condition, benefit-cost, big-small impact from that choosen planning. Evaluation better to be done in quantitative and qualitative manner, thus all factors, it is right tangible or intangible can be valued in good and right track.

7. *Implementation:*

After get one or more plans, the next action is to execute that choosen plan. Include in this implementation process is organizing, staging or schedulling till funding that planning.

The above describes can be drawn as on the Diagram 1, as below:

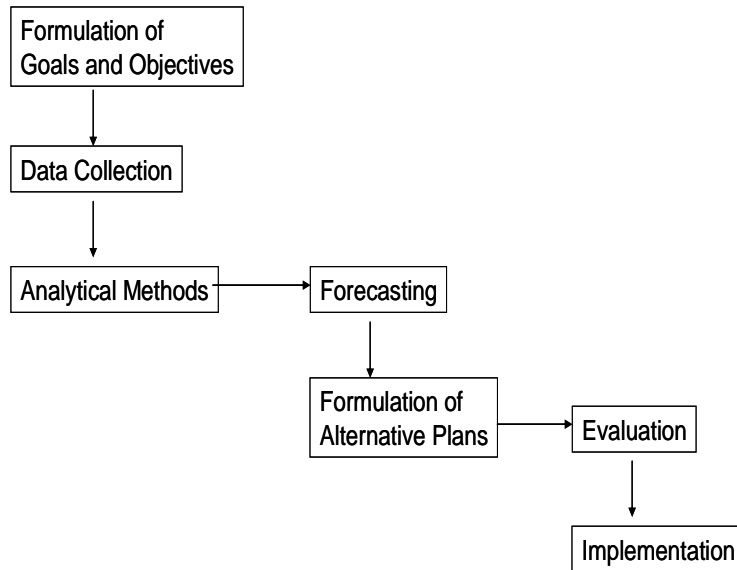


Diagram 1
Transportation Planning System Approach

As shown on Diagram 1, the steps to formulate alternatives as part of *Formulation of Alternatives Plans*.

The Alternatives formulation of plan is a more artly process. It caused many judgment factors must be done by a planner, otherwise experience and knowledge factor mostly influencing to the result of planning.

The alternatives formulation of plan is the most crucial stage on producing a good plan, it caused in this stage will be raised smart ideas. Without brightly ideas in this stage, it has been guest that result of plan nothing special, so that is clear the soul of innovative by a planner is very necessary.

Although in this stage more colourful by judgment and art, it doesn't means the stage of alternatives formulation on planning can't be analysis systematically. In other word perhaps one of a push thing be reached a good result of a transportation plan is to

formulate alternative plan by systematically and analytically.

An important thing which need considered by a transportation planner in formulate an alternative of planning is to identified the existing barriers, especially the barriers which will influencing the result of planning. The barriers of planning which have to attend are:

- a. Existing condition of Transportation
Existing condition need to be benchmarked, cause its uncommonly if the existing infrastructure of transportation is none, and all start newly.
- b. Financial condition
Need to remember that transportation planning usually use unsightly fund at implementation. Considering the present condition of fund and at the future in order to choice the right planning alternative.
- c. Citizen Opinion
In the information era and openness like present day, citizen opinion is one of important input to formulate the plan of transportation sistem. The resulting plan wished appropriate with citizen aspiration.
- e. Government Policy
The government policy offcourse relate to the policy of transportation sistem, right for existing policy eventhough for the next government policy will be implemented in the future. The aim is no clash of interests from prediction aspect view or other aspect view.
- e. Socio Economic Obstacles
The result of transportation planning wished not to emerge chaos on social and economic, but it can give equal chance for all group of citizen to use that transportation system.
- f. Physical Condition of the Area
Commonly physical factor of the study area is the mainly obstacle for planner. Physical factor which it means covering: Physic Fisiografic, geografic, topografic, hydrology, basic soil etc.

METHODOLOGY

This review did firstly by comparing between the issue of the Bandung transportation problem and the planning of transportation which have written on the masterplan (RTRW) of kota Bandung 2010 – 2030. It did to look, is the transportation plan which described on the master plan of kota Bandung could answer the transportation problem of kota Bandung?. Then, by valuing all of the planning alternatives has described on the masterplan documen through the basic steps of the urban transportation system as have mentioned on the basic theory at the abobe

Secondly, base on the above result review we can propose the update plan appropriated with the main barrier of planning facing by kota Bandung.

ANALYSIS AND RESULTS

The revise result of the Masterplan of Kota Bandung 2010 – 2030 has mention that the goals of spatial planning of Kota Bandung is to realize a city with spatial efficiency, sustainability and oriented toward to public utility with branding kota Bandung “Bermartabat”. To describe that goals breakdown to the objectives as the target of Spatial Planning which will have to reach as below:

1. Supporting to the function and role of development of the city by services the citizen of the Cekungan Bandung area;
2. Preparing transportation system and city infrastructure by quality and standart equal with metropolitan standart;
3. Harmonizing the conservation area and functional are equal fairly and sustainable, and preparing green area minimum 30% of city area;
4. Preserved area and buildings become as city identity
5. Preparing save, comfort and effectively of the public space
6. Control spatial form in clearly and directly.

The masterplan of Kota Bandung 2010 – 2030, has mentioned

clearly that one of the strategic issue to be faced by kota Bandung is Transportation system which valuing have not yet optimal performance and sustainable, thus to reach good transportation system and sustainable, has to prepare transportation system with clearly, directly, safely, comfort and reachable so that the performance of socio-economic of the citizen will better, more productive and sustainable. But that masterplan also mention the basic reason which transportation system become as strategyc issue, that is:

- Low road level of service occurred by decreasing road space effective and roadside disturbance to the traffic, its cause many activities use road space, and problem inrelationship terminal and pedestrian facilities.
- Mass public transport services has not yet optimal, people level of accessibility to the transportation infrastructure relative badly.
- Using two wheel motorcycle approximately 60% and indanger to accident.
- Road wide network ratio at 2005 only 2,32 % from the total wide area (ideal ratio for a city, about 15% to 20%).
- Cikuda Pateuh Railstation and Andir not yet functionality as feeder for road network.
- Road performance not appropriate with the function.
- Road network form not yet in good shape (road dimation, *bottle neck*).
- Inequilibrium on demand growth (vehicle $\pm 11\%$ per annum) and supply growth (road network only $\pm 2\%$ per annum).
- Less parking infrastructure for commercial, education and health care area.
- Less quality and quantity for pedestrian facilities.

Basic reason what we have mentioned offcourse will colouring the plan and policies on the transportation planning concept which have mentioned in that masterplan. If that basic reason can be said as problem identification of the transportation for kota Bandung 2010 – 2030, offcourse not yet answering the other strategyc issues what have described also in the masterplan of kota Bandung 2010-2030, it covering:

- a. Capacity and capability of the city
- b. Role and function of the city

- c. Spatial structure of the city
- d. Urban form (spatial shape of the city)
- e. Area and building preservation
- f. Public space
- g. Public facilities
- h. Transportation system
- i. Infrastructure supply
- j. Development control

If it relate to the direction of development to improve the quality of live of Kota Bandung as like:

- Air and water quality appropriate with standart
- Enough water quantity and quality (watershade, low well water, deep well water)
- Efectively and economically sewerage instalation
- Safety, comfort, productive and sustainable of city space
- Save, efficient, comfortable, reachable, and environmental friendly of the transportation system
- Environmental infrastructure appropriate with minimum technical standart level of services.
- Good recognize disasters

That problem identification can be compared with transportation system policies which have mentioned in the masterplan of kota Bandung 2010 – 2030, as like improvement the quality of services of the transportation infrastructure, base on integrated and controlling public transport. Urban transportation system policies covering policy on preparing infrastructure, public transport, investment and institution, with strategy such as below:

- Maintain and clearly again the function and hierarchy of the road system
- Improving road network capacity by roadway development and widening, traffic management, and disappear roadside disturbances.
- Developing transportation system base on public transport and prioritize to develope integrated mass public transport system.
- Preparing appropriate parking facilities and integrated with activities centre.
- Developing innercity terminal system, and terminal on the border, coordinated with arround local government.

- Improving services capacity of Husein Satranegara Airport till the replacement airport has been developed and functioned.
- Develop capacity of railway services, especially reactivated link which has already track.
- Opening investment opportunities and partnership of private and public sector on preparing transportation infrastructures; and
- Creating “city transportation board” to supervise and controlling transportation system of the city.

CONCLUSION

1. The Transportation system will work in goodshape if the four elements of transportation is fulfilled, such as: goods, medium, vehicle, and operation plan.
2. Transportation services is *derived demand*, it means a demand what it need to reach a specific aim
3. The Basic steps on the planning of city transportation system, is: *Formulation of goals and objectives, Data collection, Analytical methods, Forecasting, Formulation of alternative plans, Evaluation dan Implementation.*
4. The main barriers of plan has to attend for kota Bandung is: Existing transportation condition, Financial condition, Government policy, Physical condition of the local area especially on the landuse overlapping.
5. The plan of transportation system in the masterplan of kota Bandung 2010-2030 not yet showing clearly the transportation planning which needed by kota Bandung, it caused not composed by following full steps of the basic transportation system plan, thus it is not yet answer the real issue of the transportation problem.

REFERENCES

- Banister, D, (1995): Transport and Urban Development, E & FN Spon, London.
- Bappeda Kota Bandung (2010): RTRW Kota Bandung 2010 – 2030.

- Black, John (1989): Urban Transportation Planning, Theory and Practice, Croom Helm London.
- Edwards, John D (1992): Transportation Planning Handbook, Institute of Transportation Engineers, Prentice hall, Englewood Cliffs, New Jersey 07632
- Bourne, L.S, (1971): Internal Structure of The City, Oxford University Press, New York.
- Manheim, ML., (1979): Fundamentals of Transportation System Analysis, Volume 1 : Basic Concepts, The MIT Press, USA.
- Morlok, E.K. (1978): Introduction to Transportation Engineering and Planning, McGraw-Hill Ltd.
- TDM Encyclopedia, (2006): [Measuring Transport](#), Victoria Transport Policy Institute, April 4.
- TDM Encyclopedia, (2005): [Accessibility](#), Victoria Transport Policy Institute, May 9.
- Tamin, O Z, (1997): Perencanaan dan Pemodelan Transportasi, Bandung, Penerbit ITB.
- Tamin, O Z, (2006): Alternatif Pemecahan Masalah Transportasi Perkotaan Kota Bandung, Dewan Pengembangan Ekonomi KADIN Prov, Jawa Barat.