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Towards A Communicative City : Enhancing Urban Planning Coordination by the Support of Information and Communication Technology. Case Study Bandung Metropolitan Area, Indonesia

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Abstract

Communicative city leads to the understanding of enhancing urban development performance by encouraging better interactive communication among development actors. This idea not only tries to provide better planning management in terms of governance system, but also planning engagement among development actors in terms of people centered development. This paper learns the preparedness of local governmental officials as forefront in planning decision making process, especially to utilize mobile technology in order to perform better planning performance. By emphasizing to the context of coordination in spatial planning process, appropriate technology in terms of mobile phone and internet connection have significant role in metropolitan’s spatial planning process. Survey has been done to the governmental planning employees throughout regencies and autonomous cities within metropolitan Bandung, and found out that appropriate technology like mobile phone and internet connection plays as spatial planning support system and still can not be implemented to resolve spatial planning conflict in the spatial planning process that combine local and metropolitan governance concerns.

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1. Introduction

Planning is a continue process to formulate decision making or alternatives to allocate resource, to reach specific planning objective in the future (Conyers and Hill, 1984). Planning can be seen as a communicative and interactive process among stakeholders in the context of public decision making process (Friedman, 1987; Innes, 1995). It is important for planner to understand values and needs urban stakeholders. On the other side, planners also have to identify public concerns through participatory planning practice in terms of planning process towards decision making process (Healey, 2003 in Silvae, 2010: 3).

The role of information communication and technology comes into action when Silva’s said that it could encourage the effort on formulating demands and needs of urban stakeholders (Silva, 2010). While in the larger context, it is a part of effort in performing better urban governance.

2. Theoretical Review

The effort on information and communication technology usages in planning practice began when the advance on computer technology occurred (Klosterman, 1992). Actually the role of information and communication technology to support planning process has been introduced since 1960s when computer is assumed play the important role in compiling and recording planning data time to time, to describe existing and future condition by considering best planning identification in all possible options (Harris and Batty, 1993; Brail, 2001). The usage and development of the first land use computation technology model began at the beginning 20th centuries in terms of supporting planning decision making process as a part of general planning practice (Yigitcanlar, 2010).

According to Cullingworthand Nadin (2006), spatial planning issues related have to deal with coordination of integration of spatial and sectoral policies. The Internet usage to daily life will provide planning efficiency and knowledge for decision-makers as well as planners. ICT usage is based on the assumption that people usually behave in a sensible manner that they consider the available information and implicitly or explicitly consider the implications of their actions as called the theory of planned behavior (Ajzen, 2005:118). Based on this theory, there are three basic determinants that affect local government in terms of ICT usage, namely:

- **Attitude towards behavior**
  - Are personal factors such as a positive or negative evaluation of individuals who are assumed to influence the attitudes/beliefs of behavior (behavioral beliefs).

- **Social pressure**
  - An individual's perception of social pressure to perform or not perform the behavior under consideration.

- **Perceived control**
  - Likely to account for some of the realistic constraints that may occur which they should provide useful information.

There are several types of people in the decision-making context. In the context of organizational and simplest non-computer office work environment it can be identified as a person sitting on a chair (a symbol of the role of the organization) with a stack of business decision-making on the table (the symbol of an agenda). Another context is the decision of a committee or a group of people surrounding a larger table and explaining the issues to be discussed and resolved wherever possible.

3. Method

This paper is a part of thesis research on ICT usage to enhance Regional Spatial Planning Coordination in Metropolitan Bandung (Wulandari, 2013) which is done by qualitative research. The data collection method is done by structured interviews. Structured interviews (structured interview) is a question given to respondents to a particular answer category/limited (Denzin & Lincoln, 2009:23). In order to get a clearer picture of the ICT usage in the level metropolitan development by the local governmental planning employees, semi open questions is used. Respondent’s selection is done by using purposive sampling. Data Analysis Method

- It uses descriptive statistic with the objective to describe the ICT usage in the context of spatial planning coordination. The variables focus on the usage of two ways communication tools such as telephone and internet connection. Then, the result are analyzed and compared among local autonomous administrative territories (kabupaten and kota/city) to understand how coordination among local autonomous administrative territories within metropolitan Bandung occurred (based on Government Regulation No. 15/2010 concerning spatial planning
The selections of indicators in this study are based on the relevance of indicators for the spatial planning process. Indicators used in this study were associated with steps that are used in the planning process (Anderson, 2005), namely: problem identification, goal setting, goals and priorities, collect and interpret data, prepare a plan, a draft program for the implementation of the plan.

4. Analysis

This paper focuses on coordination among local governmental planning institution related to spatial planning (based on Government Regulation No. 15 2010) which are described below.

4.1. Coordination within Local Administrative Territories (Kabupaten and/or City/Kota Level)

Such coordination is can be categorized based on inter institutions within one local administrative authority organization (OPD=organisasi perangkat daerah) and among OPD in terms of spatial planning process:

- Problem Identification. The idea is to understand general problems in spatial planning process at the local administrative territories within metropolitan area. So far, coordination at the local administrative territories level (inter institutions among OPD) is done by face to face (meeting) coordination.
- Goal, Objective, and Priorities. The identification of goal, objective, and priorities are intended to understand how bottom up planning input are made. Coordination is made through face to face meeting and also by short message service (sms) and telephone. Every local governmental institution at the kabupaten and kota level, for instance: Physical Section at the Local Planning Development Board has a cooperation with monitoring and evaluation section at the Local Statistical Office, also with Socio Cultural and Economic Section at the Local Planning Development Board. Spatial planning section, is one of local governmental institution that has an authority in terms of spatial planning at the local administrative territories level (kabupaten and Kota level) within Metropolitan Bandung.
- Data Gathering and Interpretation. Data plays important part in understanding spatial planning field. Every section and local governmental administrative territories have different data for planning coordination base on their regional function and development phases. Physical Section at the Local Development Planning Board needs demographical, social, cultural, and economical data. The ordinary planning coordination is done by attending every local governmental office, having official meeting and using email to send and receive data. Spatial planning section compiles and interprets data: development goal at the local level of (Kabupaten/Kota), regional long term development plan (RPJPD), regional mid term development plan (RPJMD), Regional Spatial Plan at the Kabupaten/Kota level, infrastructure system development, transportation system, and other infrastructure network system.
- Preparing Spatial Planning Formulation. The coordination is done by several means, such as: using email to send and receive data, and website to inform spatial plan. The focus of spatial coordination is on intersection plan. In this case Physical section at the Local Development Planning Board is having serial meeting and using email to send data. Other concern is to perform spatial planning coordination through meeting and email for sending data

4.2. Coordination among Local Administrative Territories

The discussion focuses on the coordination among local governmental administrative territories (Kabupaten/Kota) within Metropolitan Bandung (the mandatory of inter regional planning coordination base on Law No. 32 2004 concerning regional autonomy).

4.3. Problem Identification

The spatial planning problem within Metropolitan Bandung mainly focuses on planning synchronization among administrative borders, and coordination concerning protection area (like north Bandung region and urban
development at the Bandung basin). The illustration of planning coordination that has been done at the Kabupaten/Kota level such as:

Kota Bandung, is intended as an urban core of the national activity center (pusatkegiatannasional=PKN), and the coordination is done by direct coordination through face to face office based meeting and coordination through sms and telephone.

Kota Cimahi, is intended as an urban core of the national activity center (PKN) with the main activities on trade and services, creative industry, high-tech industry and non-pollutive industry. The coordination is done by direct face to face office based meeting.

Kabupaten Bandung, as a part of national activity center (PKN) with six main activities, namely agribussines, industri, tourism, services, and natural resources. The coordination is done by face to face office based meeting and coordination through sms and telephone.

Kabupaten Bandung Barat, it is intended as a part of national activity center (PKN) with the main activities on non-pollutive industry, agriculture, creative industry, and high-tech industry. Coordination is done by face to face office based meeting and coordination through sms and telephone.

Kabupaten Sumedang, is intended to act as local activity center (pusatkegiatanlokal=PKL), it also covers higher educational center of Jatinangor, agribussines, and non pollutive industry. The spatial coordination above is done by every local development planning board at the level Kabupaten/Kota. In terms of spatial planning activities, Urban Spatial Planning Office at Kota Bandung coordinates with every local administrative territory within Metropolitan Bandung. Public Work Office at Kabupaten Bandung coordinates with Kota Bandung, Kabupaten Bandung, and Kabupaten Bandung Barat. Public Work Office at Kabupaten Sumedang coordinates with Kota Bandung.

4.4. Formulation of Goal and Objective

The type of spatial planning coordination within Metropolitan Bandung in the context of formulation of goal and objective is can be describe as followed:

Kota Bandung, focuses on direct face to face office based meeting in getting public aspiration and has been utilizing computer and LCD projector, and also coordinates using email, skype, yahoo messenger, and blackberry messenger.

Kota Cimahi, focuses on direct face to face office based meeting in getting public aspiration and also using computer and LCD projector. Kabupaten Bandung focuses on direct face to face office based meeting. Kabupaten Bandung Barat focuses on direct face to face office based meeting. Kabupaten Sumedang focuses on direct face to face office based meeting.

4.5. Data Gathering and Data Interpretation

The characteristic of data that have been used in formulating spatial planning among Kabupaten/Kota within Metropolitan Bandung are: Planning goal and objective formulations (RPJPD, RPJMD, Spatial Planning of Kabupaten/Kota), population, economic, good and services flow in the process of collection and distribution, and natural resources. Furthermore, infrastructure network plan, analysis of regional spatial plan of pattern and structure. Finally, regional profile map, physical condition map, and also administrative boundary map.

4.6. Planning Formulation

It emphasizes on preparing Metropolitan local government plans to use email to transmit data and a special website about the spatial plan.

4.7. Coordination of inter tiers governmental level

Inter tier governmental level coordination emphasizes on the relation between West Java Province and local administrative territories (Kabupaten and Kota) within Metropolitan Bandung (base on planning authorities in the Regional Spatial Plan of West Java Province).
4.8. Problem identification

Some problem emerges such as North Bandung problem as well as Bandung basin problem. On the other side, Kabupaten Bandung Barat faces the development and construction of CISUMDAWU (Cileunyi-Sumedang-Dawuan) toll road and CIKAPALI toll road (Cikopo/Cikampek-Palimanan). The coordination is done by face to face office based meeting and also by using sms and telephone.

4.9. Goal, Objective, and Priorities

The relation among West Java Province and all local administrative territories within Metropolitan Bandung are done by:

- Direct face to face office based meeting, including information sharing using whiteboard.
- Using computer and LCD projector in terms getting public aspiration.
- Non face to face meeting through email, skype, yahoo messenger, and blackberry messenger.

4.10. Data Gathering and Interpretation

Coordination is done by direct visitation to the related offices/section or to prepare meeting and also through email to send and receive data. The type of data consists of: the development goal of Kabupaten/Kota (RPJPD, RPJMD, and Regional Spatial Plan at the Kabupaten/City), population, economic, good and services pattern in the process of collection and distribution, natural resources, infrastructure network plan, transportation system and other infrastructure network system, commuting policies, current clean water system, carrying capacity of detail spatial plan (RDTR) and zoning regulation, built environment, development policies, regional profile map, spatial orientation map, physical condition map, administrative boundary map, land use map, vulnerability map, population distribution, the potential of natural resources map, and satellite image map.

4.11. Planning formulation

It began to use ICT based coordination such as using email to send data, and website to provide related spatial plan information.

5. Conclusion and Recommendation

It can be concluded that in terms of spatial planning coordination in the metropolitan and local administrative territories within metropolitan Bandung ICT only plays as technological mean in enhancing spatial planning process coordination. Still, ICT has not been utilized to replace face to face office based meeting (see table 1).

Some recommendations can be made in terms of enhancing the role of ICT in spatial planning process coordination such as:

- At the problem identification phase to promote public participation towards fast spatial planning response.
- To enhance coordination in the context of formulating spatial planning goal and objective.
- To enhance coordination among stakeholders in providing spatial planning related data.
- To disseminate spatial plan to stakeholders at all level.

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