GIS in Development Control Process: The Case of Development Control System for City Hall of Kuala Lumpur

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Abstract

Development control involves a complex process and tedious procedures. The due consideration given to an application for planning requires a tedious process as it will have to go through several committees and technical evaluations. Generally, a planning application will be assessed in terms of current development scenario, land information, planning requirements and planning design. Issues concerning development control process include delay of planning approval, lack of consistency in decision making, comprehensive and updated information apart from effective public participation. Given the benefit of IT, it is imperative that the procedures of development control be improved to cater for increasing development rate. Development control and approval, which involves the process of analyzing the appropriateness of planning applications, requires various data from the relevant agencies. Apparently, an information system is necessary not only to keep and display data pertaining to planning application for the purpose of administrative functions but should also be designed to facilitate planning at strategic level. The step taken by the Planning and Development Control Department (JPKB), City Hall of Kuala Lumpur through the development of an integrated development control system is seen as an innovative approach to urban planning. The system was designed to cover all the necessary work process involved in development control and approval supported by Geographical Information System (GIS) application. The developed system which integrates seven sub systems including planning authorization, building control, enforcement, geospatial and planning information, information kiosk, meeting presentation and documentation processing, incorporates the use of GIS for planning and monitoring purposes. With its powerful capacity for spatial data management, spatial analysis, and visualization, GIS provides planners with tools to implement their work more efficiently especially with support of the interactive and user-friendly interface developed to ease the use of the sophisticated system without the need of advanced technical skill. In addition, web-base GIS applications were developed to provide meaningful public participation apart from better data integration and sharing through effective data dissemination techniques. Computerization of crucial procedures help to cut cost and time consumed apart from minimizing the process of bureaucracy throughout the development control process. The system will be able to support planning and decision-making because it offers relatively quick response to analytical questions and monitoring issues. This paper will explain GIS application in Development Control System by CHKL as well as benefits and drawback of the system.

1.0   INTRODUCTION

Local authorities are the key players in the planning process, as decision makers and also as service-providers. Development control was an activity to determine how planning principles should be applied (Zainol, 2000). The local authority is expected to also perform include a) provides infrastructure for the efficient operation of cities; b) provides services which develop human resources, improves productivity and raises the standard of living of residents; c) regulates private services that affect community welfare and the health and safety of the urban population; and d) provides services and facilities that support productive activities and allow private enterprise to operate efficiently.

Given the dynamic nature of planning and management carried out at local level, it is not surprising that the local authorities become one of the largest users of GIS in advanced and developed countries. In Malaysia, only a small number of District Councils and Municipalities have already invested in GIS. However, the previous reluctance of local authorities to accept the challenge to embrace the technology due mainly to lack of support from the management level, the lack of in-house expertise to make use of the system and the high cost of GIS has been countered by the support given directly by the Federal Government in realizing the concept of e-planning. This is a positive sign of moving towards a more transparent planning approach apart from building up a more efficient government as the implementation of e-planning would very much speed up the overall conventional planning process. The step taken by the Planning and Development Control Department (JPKB), City Hall of Kuala Lumpur through the development of an integrated development control system is seen as an innovative approach to urban planning. The system was designed to cover all the necessary work process involved in development control and approval supported by GIS application.

The paper will further explain the relevance of GIS application in the process and procedures of development control in the City Hall of Kuala Lumpur (CHKL). This will be followed by the discussion of benefits and drawback of the system.

2.0   ISSUES IN DEVELOPMENT CONTROL PROCESS

Development control and approval, which involves the process of analyzing the appropriateness of planning applications, requires various data from the relevant agencies. A planning application will be assessed in terms of current development scenario, land information, planning requirements and planning design (Yaakup *et al.*, 2002a). Consideration given to an application requires a tedious process as it will have to go through several committees and technical evaluation. This raised a number of drawbacks as follows:

i.   Delay related to the overall process of development control process and procedures. This may be divided into (a) consultation-caused; (b) planning committee-caused and (c) applicant-caused (Larkham, 1990).
ii. Lack of consistency in making decisions due to personal judgment and lack of comprehensive information.
iii. Lack of transparency in decision making process. Transparency means that decisions taken and their enforcement are done in a manner that follows rules and regulations. It also means that information is freely available and directly accessible to those who will be affected by such decision and by enforcement. It also means that the information provided is in easily understandable forms and media.
iv. Lack of updated information. This is due to difficulties in obtaining specific data as data exchange mechanisms are not fully automated to facilitate cooperation between data holders. Data which is in hardcopy is often difficult to retrieve and at time hard to trace their whereabouts.

v. Lack of public participation in planning decision making process due to the lack of readily available information.

3.0   DEVELOPMENT CONTROL IN CITY HALL KUALA LUMPUR

In the context of urban planning, the present system of development control in most local authorities in Malaysia is by the granting or refusal of planning permission for development. The local authority is empowered to grant or refuse any planning application in its area. The recent amendment to the planning statute requires that certain planning application be accompanied by a development proposal report which include a written statement and a plan to (i) describe the present condition of the land to which the application relates; and (ii) describe the proposed development, in particular on how it would be likely to have a significant effect on the built environment (Ali, 1990). In most cases, a development proposal report involves a technique for the systematic compilation of expert quantitative analysis and qualitative assessment of the proposed project's land use and development viability, including its effect on the surrounding area, and the presentation of results in a way which enables the importance of the predicted results, and the scope for modifying or mitigating them, to be properly evaluated by the relevant decision making body before a decision on an application is rendered (Yaakup, Johar and Dahlan, 1997). Information required for a development proposal report would therefore include the following major aspects:

i.   Status of land and restrictions;
ii. Land use analysis and intensity of development – this includes land use zoning, population density zoning, height limit, plot ratio, plinth area, predetermined public area;
iii. Analysis of issues and potential of sites – this includes site location, existing drainage system, topography and slope, existing road system, existing land use, natural features which must be preserve and development potential;
iv. Analysis of surrounding development – this includes infrastructure, type, intensity and facilities available in the surrounding area;
v.   Structure Plan and Local Plan policy, if available.

In addition, a planning proposal report should also observe the planning standards or other policies which may be imposed from time to time.

For CHKL, all application for any development will have to be submitted to the City Hall for approval. Depending on the type and scale of development, these applications will be processed and considered by either one of the following committee: (i) Town Planning Committee I; or (ii) Town Planning Committee II. Town Planning Committee I chaired by the Mayor looks at proposals for comprehensive and large-scale development, layout plans, change of use of land and increased density, and the application for the use of government land. This committee comprises the Director General of City Hall, Deputy Secretary to the Minister of Federal Territory, and all the directors of the technical divisions. Before an application is reviewed by this committee, it will have to go through all the technical departments for comments and recommendations, based on which decision is derived whether to approve, approve with conditions or reject the proposed development, after which Development Order will be issued by the Mayor. Meanwhile, Town Planning Committee II looks into the applications for development of shop houses, detach houses, mosques, industrial building, etc. The procedure adopted by Town Planning Committee II is similar to the former committee, except that 'Development Order' will be issued by the Director General (Yaakup, 2003).

3.1 Development Control System (DCS) Concept

Based on the requirement of system development for JPKB, CHKL, development control concept was designed base upon these criteria:

- **Fast and accurate data retrieval**
  Every decision can be retrieved online by employees without physical file. Base on this central database, user may not have to search physical file for checking and reference. The distributed systems also allow retrieval from more than one user at one time.

- **Friendly user interface**
  System interface should have a high level of friendly user interaction. It was designed to ease users especially for staff involving in updating and retrieving data from database. The features includes viewing arrangement based on workflow display, appearing of information needed and reduction of typing function.

- **Monitoring progress of work and increase productivity**
  The development of this system should assist the management in monitoring the staff progress of work. The system will also allow the upper management tokeep tract of the movement of the officers. These changes should increase the level of efficiency of the staff.

- **Spatial information references**
  Unlike other system development, this system integrates the spatial information with their attributes. Therefore, planning evaluation can be determined based on the physical aspects of the proposal which include development of surrounding area, zoning, height, plot ratio, plinth area and density.

- **Evaluation of proposal**
  Assessment of development will be based on guidelines used by respective departments according to their specialization. At present there is no established procedure in evaluating proposal, thus each department may be furnished with different format of reporting. The system allows standardization of procedures and each department should have a common set of guidelines and references.

- **Data sharing and integration between Technical departments outside CHKL**
  Data sharing and integration between stakeholders involve in the development process is a feature of the system which will improve the relationship between parties which have interest in the process. This means that data format has to be standardized to ensure the smooth running of the system.

3.2 Development Control System for City Hall of Kuala Lumpur

The automated Development Control System implemented by the Planning and Development Control Department, City Hall of Kuala Lumpur, is one of the ICT applications undertaken to facilitate the procedures to control and monitor the city development. In general, the Development Control System encompasses seven main sub systems that execute specific functions at the same time has the ability to interact between each other(**Figure 1**). The subsystem are:

i. Planning Authorization Sub System
ii. Building Control Sub System

iii. Enforcement Subsystem
iv. Geospatial and Planning Information Sub System
v. Information Kiosk Sub System
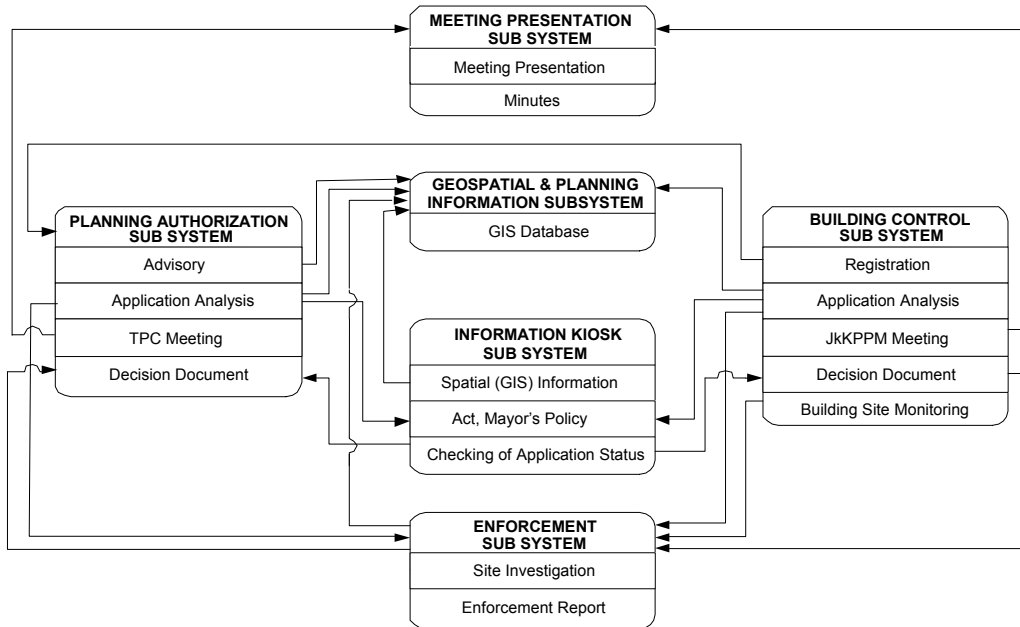vi. Meeting Presentation Sub System
vii. Documentation Processing Sub System

Figure 1: Sub Systems Interaction

Planning Authorization Sub System

The planning Authorization Sub System operates to process planning application, beginning from the submission of an application until the Policy Approval or Development Order is issued. This sub system allows user to comply with the policies and spatial information while evaluating the planning applications and observe the planning requirements. Apart from saving time and space, it helps to minimize workload and reduce the use of paper. Besides, the data-sharing concept will minimize overlapping in the database development and thus, increase the quality and productivity of work.

Building Control Sub System

The Building Control Sub System is established as a support for the building approval process. This sub system begins from the submission of building plan approval applications to the process of producing Certificate for Occupation. The features are similar to the Planning Authorization Sub System, which include graphic and interactive interface and enable interaction between sub systems. This sub system will assist the Building Control Division in managing their activities.

Enforcement Sub System

The Enforcement Sub System is an aid for the Planning and Development Control Department in planning enforcement actions. This includes reports on site investigation (**Figure 2**), warning notices, control actions and reports on certain decision made by the Planning and Development Control Department.
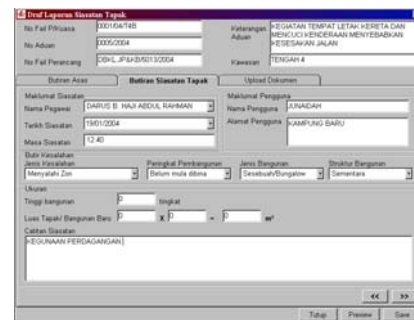

Figure 2: Site Investigation Draft Report Interface

This sub system also helps the public to file complaint and receive feedback from the local authority. Beside, it also facilitates the management in receiving investigation reports faster so as to act in a more effective and timely manner.

Geospatial and Planning Information Sub System

The Geospatial and Planning Information Sub System serves as the GIS interface within DCS and provides direct access to the GIS database. It was developed to provide a complete spatial database along with the attribute data, which also recorded the Development Order Approval, Building Order Approval, and Building Occupation Order. This sub system will enable the management to make decision more systematically and rationally. Some advantages of this sub system are that users can choose the type of information they want to retrieve. The query operation is based on land parcel, road, section and *'mukim'*. The implementation of this sub system involves the GIS database design, data collection, data conversion and updating of spatial and attribute data. The Development Control GIS also provide support for other sub systems in terms of spatial data. Therefore, the interface program will provide a link with the Planning Authorization Sub System, Building Control Sub System, Enforcement Sub System and Presentation Sub System as well as enable other divisions to retrieve any relevant information.

Information Kiosk Sub System

The Information Kiosk Sub System was built for the internal users as well as the public to gather information through the Planning and Development Control Department web site (**Figure 3**). This sub system has detail information on Kuala Lumpur, Planning and Development Control Department, Development Control and Enforcement. With the development of the sub system, users can retrieve information related to City Hall of Kuala Lumpur as well as obtain certain forms. The sub system also allows the City Hall to announce relevant issues to the public.

Meeting Presentation Sub System

The Meeting Presentation Sub System is meant to ensure the smooth progress of a meeting through facilities for displaying related information including plans, GIS related data and other associated information. This sub system enables display of information and related matters being discussed such as documents, maps, plans and so forth (**Figure 4**). As location plans, site images, perspective diagrams and proposal plans can be illustrated with a clearer image compared to conventional procedures, meetings should be able to run smoothly since the information needed can be retrieved promptly.

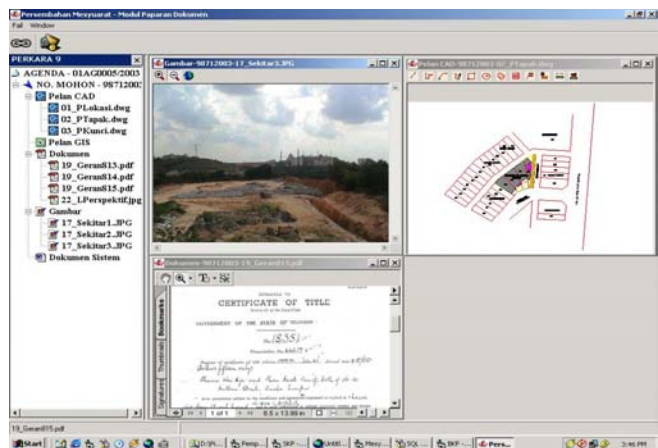**Figure 3**: Information Kiosk Interface

Figure 4: Sub system for facilitating presentations in meetings

Documentation Processing Sub System

The Documentation Processing Sub System is designed to enable storing and retrieving of all documents in a more systematic manner. This may solve the problems of storing physical files and locating files. The documents will be transformed from hardcopy to softcopy. Hence, user can manage the document more efficiently and simply as and when the document is needed.

4.0   GEOGRAPHICAL INFORMATION SYSTEMS FOR CHKL

Geographical Information System is seen as the most suitable solution to support the handling of spatial information throughout the planning process especially in development control process. The advent of GIS has created a large field of opportunity for the development of new approaches to the computer processing of geographically referenced data obviously needed in supporting decision-making processes. Some of the important functions include the ability to retrieve information rapidly and efficiently, model different scenarios and evaluate alternative solutions generated by various modeling procedures. Hence, a more effective solution to various spatial-related problems including those associated with planning and development matters can be achieved. An information system is necessary to not only keep and display data pertaining to planning application for the purpose of administrative functions but should also be designed to facilitate planning and development control at strategic level. The control of development which involves the process of analyzing the appropriateness of planning applications requires various data from the relevant agencies. A planning application will be assessed in terms of current development scenario, land information, planning requirements and planning design (Yaakup et al., 2002b).

The relevance of the functions of GIS to the development control process can be simplified in the following table (**Table 1**).

Table 1: Development control process and functions of GIS

Stages	Activities	Function of GIS
Initial Discussion	Consultation to owner/ developer regarding potential, planning requirement, policies involved in the area	Data Retrieval: a) Existing development b) Development status c) Development Plan d) Planning policies
Processing of Planning Application	- registration - site visit - gathering data from various departments - identifying planning issues - preparing technical report - analyzing the application	- identify potential land for development - translate policies formulated into spatial context - identify development pressure area
Consideration by Technical Sub Committee	- comment on technical requirement - recommend the technical amendment to applicant	- data retrieval from various agencies - facilitate technical evaluation
Consideration by Town Planning Committee	- formulate and review planning policies - considering planning application	- assist in analyzing the development strategy - provide information to evaluate the planning implication

4.1   GIS Database Design

Database design must be based on the planning and development control process to be implemented. Based on conceptualized GIS application for planning and development control, there will be several data layers in the database. They are meant for retrieval, analysis and conformed to technical requirements for any planning application.   There are eight main elements in the GIS database designed for JPKB which are:

i.   **Administrative** – contain base map, plot coordinate, map series, locational relationships and spatial entity at land parcel level with assigned ID and land information (parcel no., district, section and status).
ii.   **Planning requirement and regulation** – includes development plan, planning policy, current land use, committed land use, plot ratio, development status, plinth area and height control.
iii. **Building** – use of building, condition, height, walkway, etc;
iv.   **Utilities** – electricity (overhead cable and transmission), telecommunication (cable line, public phone and transmitter), water (pipeline and pump station), sewerage (sewerage line, sewerage tank and treatment plant) and waste disposal.
v.   **Hidrography** – lake, river, reservoir and drainage
vi.   **Transportation** – present, proposed and dedicated road, bus stop, taxi station, LRT and rail
vii. **Relief** – contour (topography), slope
viii. **Imagery** – aerial photo, standard sheet

GIS database for planning and development control will have to be maintained and planning information will have to be updated continuously. Once the decision is made, both the spatial and attribute database should be updated.

4.2   Use of GIS Database in Development Control

The GIS database developed could be used by many parties involve in the process as reference point in evaluating a planning submission. Having access to the database will provide the flexibility in assessing a development and deciding on the overall urban growth management program in the most cost-effective manner. This ensures transparency and consistency in the development control procedure. The database developed is expected to enhance the overall process of planning and building approval through providing appropriate information for the specified purposes, while at the same time support strategic planning and rational decision making (Yaakup *et al.*, 2002a). The development of Geospatial and Planning Information Subsystem consist of eight main data element, which contain 40 layers. The development of these subsystems will support other subsystem process (**Figure 5**).

The design of GIS database is based on the procedure and process which involved the following stages:

i.   Initial discussion
ii.   Registration
iii. Invitation for objection
iv.   Development control process
v.   Consideration by the Urban Technical Committee
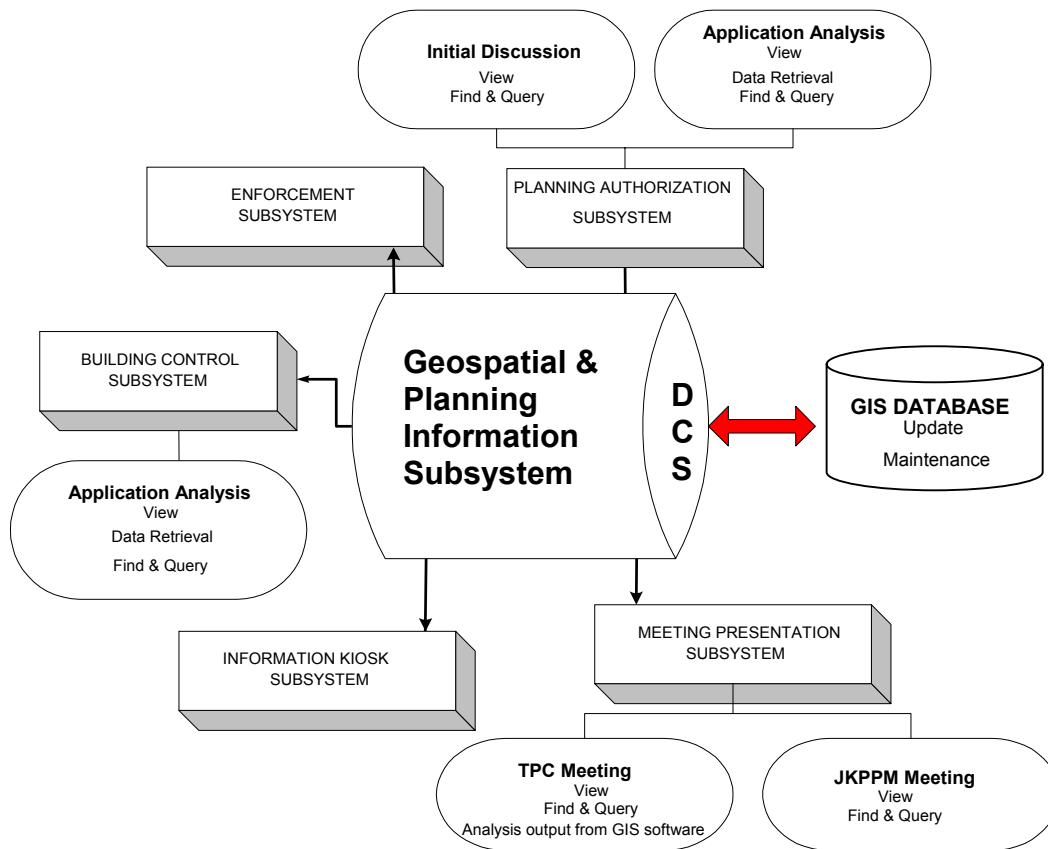vi.   Consideration by Urban Planning Committee
vii. Updating
viii. Web based GIS

Figure 5: GIS function in Development Control System Subsystem

Initial Discussion

This is the initial stage of the development control procedure whereby the applicants hold a discussion with the planners concerning the proposed development. Planners are expected to give advice on the feasibility of the application. This requires planners to have information on current development strategies, status of development, provision of development plan, planning restrictions and so forth relating to proposed site. Presently, planners need to sieve through a lot information before such information can be obtained and this can be time consuming and tedious. At this stage, GIS can easily provide current development scenario and planners can anticipate the feasibility of the proposed development.
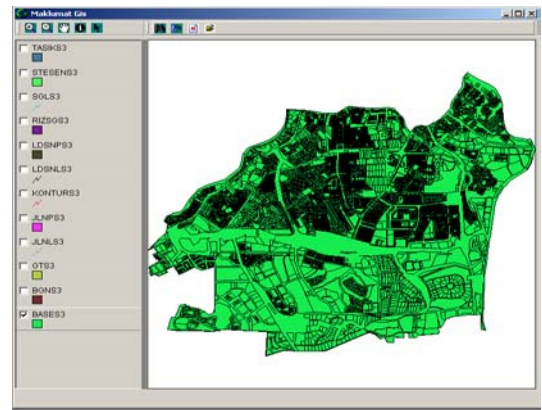

Figure 6: GIS Information for initial discussion

Registration

Every formal planning application is registered and reviewed by the Administration Section. Information from new application will be keyed in while spatial data in the application have to be consistent with the base map.

Invitation for Objections

Every application involving a change of use or density will have to go through the process of objection by neighboring landowners. The adjacent landowners to which the application relates will have to be identified and notice served, inviting them to voice their objections to the proposed development, if any. At this stage, GIS is able to list the adjacent landowners and capable of displaying the changing development scenarios of the related area to be used as a platform in considering the objections.

Development Control Process

Before the Technical Committee can decide on the application, planners have to inspect sites, verify the planning evaluation report submitted to them and prepare their own evaluation report. Such report can be done efficiently if the planners can get access to the relevant data, such as road systems, land status, etc. which, presently, are kept by various departments. GIS therefore was designed to enable easy access to that information and facilitate data analysis in determining the potential and constraints of the proposed development and enable to assist planners in generating development alternatives. In evaluating planning permission application, GIS data layer will be used as tool in decision making especially in preparing Planning Evaluation Report. Data listed below can be retrieved to assist in evaluating a proposal :

- Development location and surrounding area information
- Current and committed land use.
- Current planning policies.

Consideration by the Technical Committee

At this stage, the Technical Committee, which comprise the representatives from the various departments will meet to review the proposed development. GIS is be able to display the relevant data from the various departments to facilitate those representatives to give their comments. GIS is capable to indicate the implications of the proposed development and thus provide "early warning systems" if such development can adversely affect the city growth. For example, the proposed floor space should be able to indicate the traffic generated by the development, thus the committee can decide whether the current road system in that locality can accommodate the additional traffic. "What-if" analysis should also be part of the exercise to generate suitable development features based on different assumptions and criteria instead of rejecting the application outright.

Consideration by the Town Planning Committee

The Town Planning Committee plays a crucial role in the whole development control process. The Committee has to formulate development strategies and outline planning policies, taking into account the national policies and Cabinet directives which have to view in spatial contexts. They also reviewed development strategies contained in the Kuala Lumpur Structure Plan and policies that have been implemented. GIS is able to give them adequate information to facilitate decision making to the proposed development (**Figure 7**).

Figure 7: GIS database facilitate decision making in meeting presentation.

Updating

GIS for development control will have to be maintained and planning information will have to be updated continuously. Once the decision is made, both the spatial and attribute database should be updated.

Web based GIS

The Information Kiosk Sub System provided the GIS functions through web-based technology for public user to view and retrieve spatial information related to land use and building development using query operation base on lot number, street name, building type and area. State of the art Web-based GIS are built on integration of multi-related technologies that include Object-Oriented Language, GIS package and language, HTML, CGI, ASP and the theories about Public Participation GIS (Chang, 1997). The implementation of Web-based GIS is more towards inviting public participation apart from providing information in the form of maps and data for public access, and paving the path for data sharing with agencies having the same interest. The implementation concept base on global data sharing permits users to acquire and implement activities of interest the same way as implementation of application through the local area network. The Information Kiosk provides the GIS functions for public users to retrieve spatial as well as attribute data. These functions operate by linking features in the GIS database to the attribute data in the external database. A layer will be chosen through matching related information found in the SQL server database provided. Basically, the GIS architecture in this sub system is as illustrated in **Figure 8**.
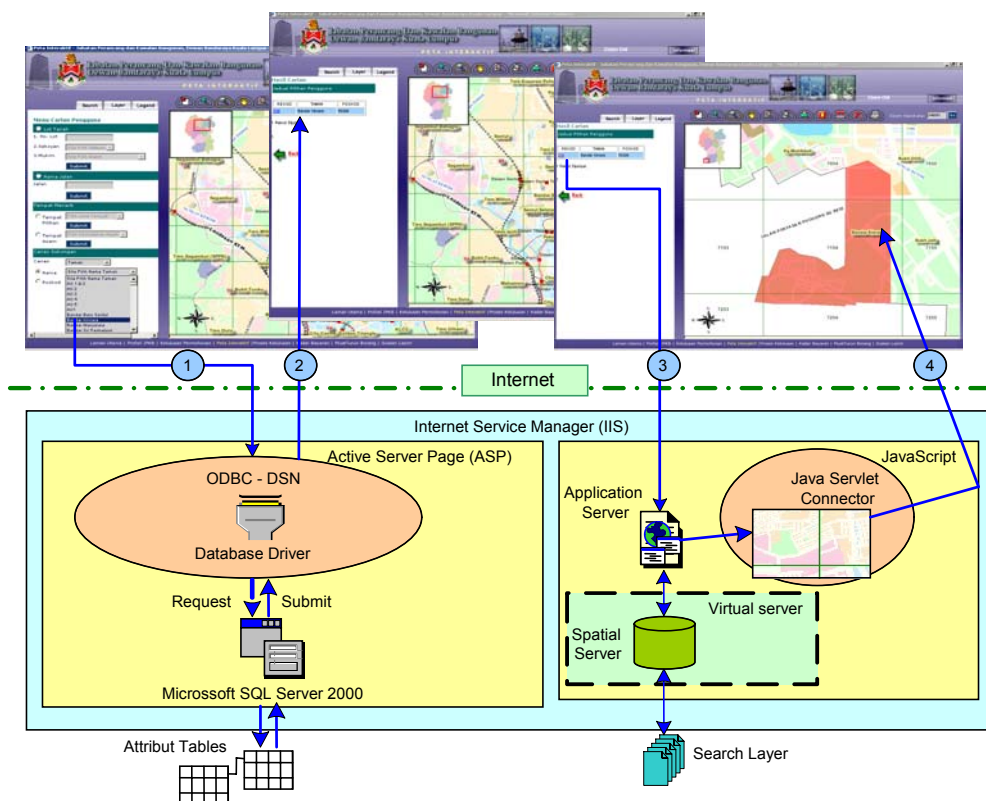
Figure 8: Web GIS Architecture within the Information Kiosk

Various stages of users will be allowed to access the web page. The GIS web page allows user to view and use the information displayed for further processing. The web page was developed with the aim to facilitate users to acquire information in digital form. The web page acts as a source of reference in making evaluation for planning and development purposes especially where public participation is concerned.

5.0   BENEFIT AND PROBLEMS

Among the benefits of the system are:

i. Interaction between subsystem
The ability of subsystem to interact between another subsystem is a strong factor of the whole system because it allows information sharing within comprehensive and systematic workflow. In Development Control System, Geospatial subsystem will support processes of Planning Authorization, Building Control, Enforcement and Information Kiosk subsystem where spatial and attribute data in GIS database will be used for example in locating a development site.

ii. Transparent workflow
Detailed workflow of current work process is formulated to enable the flow to be transparent. Automatic task distribution in application processing should therefore reduce waiting time for files to be distributed to staff.

iii. Data recovery
Spatial and attribute data stored in the system has its own backup file. This backup will be used to recover the data in the occurrence of data lost or damage.

iv. Public Participation
Information kiosk subsystem is designed to encourage public to participate in the development process. It allows public to access the status of their application without going to the department. Web based GIS can be utilized to allow well informed public to make meaningful objections and suggestions.

The systems are also faced with problem such as:

i) System break down
Electricity break down may cause worthless system. Computer usage which require electrical supply face problems due to frequent electrical breakdown. Local Authority need to have a backup to ensure the smooth running of the systems.

ii) Legal aspect
The system designed requires that applicants submit digital planning application. However, there is no provision of digital submission in the present statue. Applicants therefore has to submit hard copy of their application as well as digital version.

iii) Data security
Data security is one of the factor that were given due consideration in system development. The departmental staff should be responsible to ensure validity of password to avoid system intrusion. Data recovery procedure have however been established to address this matter.

6.0   CONCLUSION

The system that has been developed provides planners with new tools to implement their work more efficiently especially with support of the interactive and user-friendly interface developed to ease the use of the sophisticated system without the need of advanced technical skill. In addition, the web-base GIS applications developed provides meaningful public participation apart from better data integration and sharing through effective data dissemination techniques. Nevertheless, the application of the system will inevitably influence the existing structure and practice of urban planning and management in CHKL and thus

require a systematic approach to ensure a smooth transformation for the staff of CHKL in moving towards e-government as envisioned by the Malaysian Government. With issues of smart growth and sustainability unlikely to fade, policy makers, local officials, and interested citizens will continue to look for workable approaches to understanding and directing urban growth. For this system, the implementation of GIS, however, involves far more than hardware and software decisions. Effective implementation rests on a thorough and systematic evaluation encompassing planning, operational, organizational, institutional, personnel, financial and technical aspects. To optimize GIS use, more research and attention need to be directed toward organizational and institutional issues, as well as developing GIS for planning and management purposes.
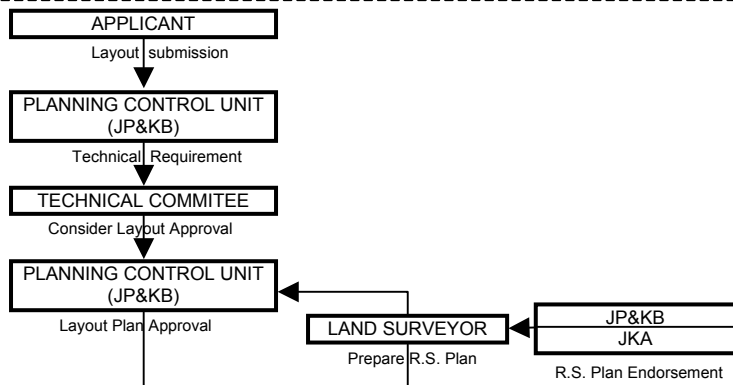
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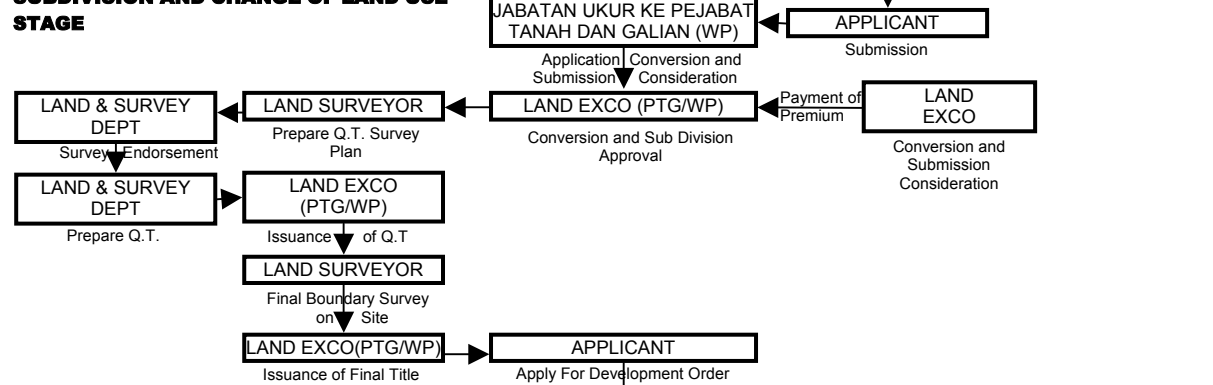
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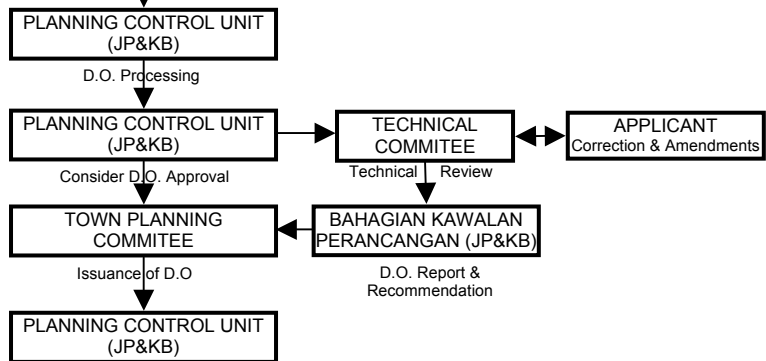
Appendix 1: Development Approval Stages

LAYOUT APPROVAL STAGE

APPLICANT
— Layout submission →
PLANNING CONTROL UNIT (JP&KB)
— Technical Requirement →
TECHNICAL COMMITEE
— Consider Layout Approval →
PLANNING CONTROL UNIT (JP&KB)
— Layout Plan Approval

LAND SURVEYOR — Prepare R.S. Plan
JP&KB JKA — R.S. Plan Endorsement

SUBDIVISION AND CHANGE OF LAND USE STAGE

JABATAN UKUR KE PEJABAT TANAH DAN GALIAN (WP) — Application Submission / Conversion and Consideration
APPLICANT — Submission
LAND EXCO (PTG/WP) — Conversion and Sub Division Approval
Payment of Premium
LAND EXCO — Conversion and Submission Consideration
LAND SURVEYOR — Prepare Q.T. Survey Plan
LAND & SURVEY DEPT — Survey Endorsement
LAND & SURVEY DEPT — Prepare Q.T.
LAND EXCO (PTG/WP) — Issuance of Q.T
LAND SURVEYOR — Final Boundary Survey on Site
LAND EXCO(PTG/WP) — Issuance of Final Title
APPLICANT — Apply For Development Order

DEVELOPMENT ORDER APPROVAL STAGES

PLANNING CONTROL UNIT (JP&KB) — D.O. Processing
PLANNING CONTROL UNIT (JP&KB) — Consider D.O. Approval
TECHNICAL COMMITEE — Technical Review
APPLICANT — Correction & Amendments
TOWN PLANNING COMMITEE — Issuance of D.O
BAHAGIAN KAWALAN PERANCANGAN (JP&KB) — D.O. Report & Recommendation
PLANNING CONTROL UNIT (JP&KB)

BUILDING PLAN & CERTIFICATION OF OCCUPATION APPROVAL STAGES

APPLICANT

FULFILLED DEVELOPMENT ORDER TERMS
- JSTKP → UNIT SANITARI (Sanitary System) / (Refuse Bin Collection Centre)
- JPPPK → JSTKK (Landscaping) / (Centers)
- JKA → JKA (Hawkers Stall) / (Earthwork & Piling)
- JP&P → JKA (Road & Drain Construction) / (Footpaths etc. Car Park Construction)
- JPB (Construct Sewer Reticulation & Sewer) / (Construct Taxi & Bus Stand)

BUILDING CONTROL UNIT (JP&KB) — Application of Building Plan Approval

FULFILLED DEVELOPMENT ORDER TERMS
- TNB → PTG/WP
- JBA → JAS
- LLM → TELEKOM
- LPS → BOMBA
- DCA

APPROVAL

BUILDING CONTROL UNIT (JP&KB) — Application of C.F.O

APPROVAL

CONSTRUCTION

PLANNING CONTROL UNIT (JP&KB)

APPLICANT

LAND EXCO (PTG/WP)