Research on Development Status of "Multiple-plan Integration" and Urban Comprehensive Transportation Planning

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Abstract. The Central Committee of the Party and the State Council attach great importance to the work of Multi-plan Integration, and explicitly request that the work should be promoted at many meetings. As one planning of "Multiple-plan Integration", the coordinated development of urban comprehensive transportation planning with Multi-plan involves many links such as planning, construction, operation and management. At present, there are some problems between urban comprehensive transportation planning and Multiple-plan, such as insufficient content interaction and collaboration, lack of effective communication and feedback. On the basis of fully understanding the theory of Multiple-plan and urban comprehensive transportation planning, the paper sorts out and analyses the development status of the above two and the reasons for the existing problems, combines with relevant domestic urban cases, studies and puts forward the related requirements of "Multiple-plan Integration" on urban comprehensive transportation planning, which provides a theoretical basis for the further development of urban comprehensive transportation planning.

1. Introduction
China is in the period of rapid urbanization and motorization. Highly concentrated urban transportation, logistics and transportation flow will exert an unprecedented pressure on urban road transportations and land uses. Urban over-development, transportation congestion and environmental pollution are becoming serious increasingly. Practices have proved that the basic premise of urban developments is to maintain the healthy state of land resources and other ecological resources. The urban comprehensive transportation planning is not only a directional and strategic special planning for urban comprehensive transportation constructions and developments, but also an important way to optimize urban spatial structures and guide urban land use layouts. The relationship between urban comprehensive transportation planning and urban planning has moved from "Special Coordination" and "Coordinated Development" to a higher stage of development. The concept of "Transportation Guiding Development" takes transportation and land use as a whole for overall planning and comprehensive coordination, and is implemented in the overall urban planning and the urban comprehensive transportation planning. To sort out and study the development status of urban comprehensive transportation planning and "Multiple-plan Integration" is conducive to further strengthen the interactive development of transportation and urban planning, land, and is of great significance for achieving the sustainable development of cities and transportations.
2. Understanding of "Multiple-plan Integration"

The "Multiple-plan Integration" originates from the Three-plan Integration, which refers to the comprehensive planning of ecological construction, transportation, education and health based on national economic and social development planning, urban and rural planning and land use planning. It coordinates and resolves the conflicts and contradictions between "multiple plans", comprehensively arranges the deployment of urban and rural spatial resources, builds a "map" of urban and rural planning and management, and forms a working base map of spatial management of various departments.

The "Multiple-plan Integration" is a planning type with Chinese characteristics. The "Multiple-plan Integration" is conducive to the rational layout of urban and rural space, the effective allocation of land resources, the promotion of land conservation and intensive use, and the improvement of the administrative efficiency of the government. It is an important means to solve the problems of urban space management and improve the ability of urban governance at this stage, and it is also an important direction to explore the reform of spatial planning system in China[1].

| Legal Name                         | Effective Date | Relevant Contents with "Three-plan Integration"                                                                 |
|------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------|
| Land Management Law                | 2004           | Article 22 stipulates that the overall urban planning, village and market town planning shall be connected with the overall land use planning. The scale of construction land in urban master planning, village and market town planning shall not exceed the scale of construction land in cities, villages and towns determined in the general land use planning. |
| Urban and Rural Planning Law       | 2008           | Article 5 stipulates that "the compilation of overall urban plan, overall town plan, township plan and village plan shall be based on the national economic and social development plan and shall be connected with the overall land use plan". |

2.1. Difficulties of Multiple-plan Integration

The difficulties of "Multiple-plan Integration" lie in coordination which is among different planning and departments. Some of the reasons for the difficulty of integration of multiple plans are technical problems, some are mechanism problems, and some are common reasons. Most of the views tend to be mechanism problems.

Technically, the legal basis and technical standards for the formulation of various plans are different, and there is no independent legal basis and technical norms for "Multiple-plan Integration", and it does not possess the characteristics of statutory planning.

From the mechanism point of view, the government management system is divided into blocks, the interests and value orientations of central and local governments are different, the government's institutional reform is difficult, and the top-down administrative mechanism of various departments is difficult to change in the short term[2].

2.2. Methods of Multiple-plan Integration

The idea of "Multiple-plan Integration" is to achieve the coordination and consistency of various "quasi-spatial planning" in planning objectives, planning area, planning duration, basic data, technical standards, approval process and supervision and management.

Under the existing social and economic system and legal framework, the main work of "Multiple-plan Integration" is to straighten out the relationship between various aspects of planning in the process of planning preparation and implementation management, effectively defines the planning control boundary, unifies the technical content, innovates the planning implementation and feedback mechanism, establishes the information planning management means, and realizes a multi-level, all-round integration. Its essence is a planning coordination work. In the process of work, "Multiple-plan
Integration" is not to redesign a new plan. In terms of management, "Multiple-plan Integration" will not replace any statutory planning.

2.3. Practical Exploration
In recent years, some cities have carried out the work of "Multiple-plan Integration". Cities that have already carried out the work of "multi-integration" mostly aim at achieving sustainable economic, social and environmental development, and establish methods and platforms for urban overall development by means of forming a blueprint for urban and rural planning. For example, through the integration of planning and land sector organizations, three cities including Shanghai, Wuhan and Shenzhen have coordinated the synchronous compilation of the two planning to achieve a blueprint umbrella covering urban and rural overall planning, and to resolve some problems such as confusion in the compilation of spatial planning, multi-head management, unclear responsibilities and powers. Guangzhou has completed the "one planning coordination work "through "Three-plan Integration". Pingshan New District of Shenzhen has made a comprehensive development planning exploration; Xiamen City is also carrying out from "Multiple-plan Integration" to the preparation of innovative space comprehensive planning[3].

3. Development Status of Urban Comprehensive Transportation Planning

3.1. Conceptual Connotation
The urban comprehensive transportation planning refers to the complete urban transportation planning, which combines the external transportation and all kinds of transportation within the city with the urban development and land use layout for a systematic and comprehensive study. It refers to a long-term plan to make comprehensive and reasonable arrangements for all kinds of transportation within the city (including urban and suburban areas). The urban comprehensive transportation planning is the process of determining the development goal of urban transportation, designing strategies to achieve the goal and implementing plans.

The urban comprehensive transportation planning is an important programmatic document for the government to guide the construction of urban transportation system, regulate and control resources to promote economic and social development, and is the general outline of urban transportation development. The urban comprehensive transportation planning is designed to coordinate urban transportation development and urban development, allocate transportation resources scientifically, and rationally arrange the relationship between urban transportation subsystems. From the technical point of view, the urban comprehensive transportation planning is to provide comprehensive layout and overall planning for the construction and development of various transportation land, transportation facilities and transportation projects in a longer period of time, and to make comprehensive evaluations by forecasting the development of urban transportation demands. From the macro level, urban comprehensive transportation planning refers to the process of establishing the development mode of future urban transportation system and designing a series of strategies and actions of system construction under certain social and economic conditions and under the guidance of the overall goal of urban development [4].

3.2. Development Characteristics
At present, the compilation of the urban comprehensive transportation planning has four outstanding characteristics:

(1) Adhering to the problem-oriented approach, starting with solving realistic transportation problems, and realizing the sustainable development of urban transportation through systematic sorting and deployment.

(2) Intensifying the integration with urban development, making a long-term plan based on the overall urban planning, and giving feedback to the land use planning.
(3) Emphasizing on quantitative analysis, carrying out comprehensive transportation survey, establishing transportation models, predicting transportation demands, and evaluating planning schemes.

(4) Implementing people-orientation, and planning attaches importance to public transport, pedestrian and bicycle priority concept.

4. Problems and Reasons

4.1. Possible Problems

(1) The planning system is not perfect and the planning formulation is not standardized.
At present, the status and role of the urban comprehensive transportation planning in the urban planning system is not clear, and there is no unified system for the urban comprehensive transportation planning, which is not standardized and cannot be feedback and coordinated with the urban planning system. In compiling urban comprehensive transportation planning, most cities attempt to cover all the technical content through a comprehensive planning, which results in too scattered objectives.

(2) The planning concept is out of touch with the actual action.
In urban comprehensive transportation planning, the problem of disconnection between planning concept and implementation scheme is widespread. For example, the planning concept emphasizes people-oriented, while the planning plan is car-oriented, planning wide roads and elevated roads, which has a split effect on urban development. The planning calls for the implementation of public transport priority strategy, but it cannot be reflected in the plan, lack of road rights protection, nor put forward the level of public transport service requirements.

(3) Lack of evaluation links in planning implementation.
At present, the implementation evaluation of urban comprehensive transportation system planning has not been included in the prescribed procedures, nor has the specific time limit and content requirements for the implementation evaluation been clearly defined.

(4) Planning content is difficult to implement in place, and planning and construction are disjointed.
When the speed of urban development exceeds the expectation or there is any policy change, the urban transportation planning is difficult to meet the needs of urban development, lose the significance of compilation, and cannot effectively guide the construction of transportation system. The planning content often stays at the planning level and cannot be implemented in place[5].

4.2. Crucial reasons

(1) There is not any authoritativeness for transportations, which is far from being multidisciplinary.
Within the framework of current laws and regulations in our country, economic regulation, land regulation, urban planning and environmental protection planning are all statutory planning, which are guaranteed by relevant laws and regulations. The urban comprehensive transportation planning lacks the independent and systematic legal guarantee of urban transportation, which belongs to the category of non-statutory planning. It accepts the overall land use and transportation system determined by land and urban regulations but only carry out a symbolic deepening analysis and demonstration. This position directly causes some transportation planning to become formalized so as to carry out "planning for planning".

(2) The top-level design is not perfect and planning objectives are difficult to achieve.
The urban comprehensive transportation planning lacks special laws and regulations. The planning formulation is mainly based on the technical regulations of the industry. Current technical regulations mainly provide normative guidance on urban transportation system design standards, planning requirements and contents, compilation methods and processes at the macro level. The goal setting of the urban transportation system planning is too general, and there is no clear index requirement for the selection of normative schemes.

(3) The compilation regulations are obsolete and the planning technology is backward.
Technical regulations such as standards for compiling related urban transportation planning were issued earlier, which could not reflect the concept of the urban transportation planning and the development trend of planning technologies in time. Traditional transportation survey methods and models can hardly reflect any individual transportation behavior, sometimes cannot reflect or reflect the main transportation problems faced by cities in China and the main characteristics of rapid changes in the transportation flow and transportation structure, which makes the planning plan lack foresight, science and guidance.

(4) Separation of functions and powers in transportation planning and lack of coordination and management system.

The existing administrative system and power division of urban transportation intersect. The lack of a coordinated and unified whole-cycle planning and management mechanism for urban transportation planning and management, and the serious phenomenon of division and multi-head management among planning departments of various subsystems have affected the link of urban transportation from planning countermeasures to implementation planning to specific management to a certain extent [6].

5. Relevant Requirements for Urban Comprehensive Transportation Planning in "Multiple-plan Integration"

The relationship between the urban comprehensive transportation planning and the "Multiple-plan Integration" is not only a technical problem, but also a system problem. The urban comprehensive transportation planning should not only consider linking up urban, land use, ecological, environmental protection planning, but also coordinate the relationship between various modes of transportation. The following requirements are required for the compilation of the urban comprehensive transportation planning in the "Multiple-plan Integration" as follows:

(1) The "Multiple-plan Integration" requires the unified planning period and basic data processing of the urban comprehensive transportation planning.

(2) The “Multiple-plan Integration” requires that the urban comprehensive transportation planning should comply with the layout of the city determined by the spatial strategic planning and the control requirements of the control line.

(3) The “Multiple-plan Integration” requires the urban comprehensive transportation planning to put forward the scale layout of projects that have a significant impact on urban spatial layout, and to determine the control elements according to the requirements of spatial strategy.

(4) The content of intersecting space managements and controls with other departments in the urban comprehensive transportation planning should be coordinated under the guidance of space planning[3][7].

6. Conclusions

Based on a systematic understanding of the status quo of the "Multiple-plan Integration" and the urban comprehensive transportation planning, this paper sorts out and analyses the existing problems of the urban comprehensive transportation planning, and puts forward the related requirements of the "Multiple-plan Integration" and the urban comprehensive transportation planning. Through this study, it provides theoretical basis and technical supports for the better integration of urban comprehensive transportation planning and Multiple-plan, and injects the strength into the urban sustainable development.

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