City Development and Transportation Policies

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Objekttyp: **Article**

Zeitschrift: **Schweizer Ingenieur und Architekt**

Band (Jahr): **116 (1998)**

Heft 48

PDF erstellt am: **27.04.2024**

Persistenter Link: https://doi.org/10.5169/seals-79603

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Hu Xing, Kunming

City Development and Transportation Policies

The Director of the Construction Commission of Kunming, China, talks on basic ideas of development, transportation policies – and on the Swiss-Chinese partnership

Kunming is situated in the middle of Yunnan Province; surrounded by mountains on three sides with Lake Dianchi right on its south. It is at an elevation of 1890 m. Kunming is the political, economic and cultural centre and the hub of transportation and communications of the province. It is the only large central city in Yunnan Province, historically and culturally famous, and a developing tourist city. It has human-made relics, natural resources and a favorable climate with perpetual spring. To date, the built-up area of the central city of Kunming is 135 km^2 with a population of 1.3 million. It is in a monocentric pattern with a radiant road network.

Kunming is a city under rapid development: Infrastructure such as roads, transportation and environment, etc. has been improved at a high speed. The central area has become the hot point for redevelopment; the 2nd ring road rapid traffic system, three east-west and four north-south arteries, five exits, and more than 20 flyovers have been constructed, thus having formed an embryo of modern road and transportation network.

Moreover, prominent achievements have been made in city water supply and drainage, power and gas supplies, postal service and telecommunications, greenery and afforestation, environmental protection and housing construction. But there is still a gap to the standards of large cities abroad. Nowadays, we are in search of a way of effective protection, saving and utilization, a reasonable development, which can lead to the coordination of the economy, environment and society. Kunming will further meet the demand of modernization.

To secure the strategic goals of sustainable development, on the basis of lots of analyses and studies, Kunming City has proposed the basic concepts for the development in next century:

- Kunming shall become an international trade and tourist city; functions of the city must be improved and strengthened
- The core position of Kunming in the economic zones and city clusters shall be strengthened
- A city structure in the network style of the Greater Kunming will take shape within 50 to 10 km consisting of Kunming proper and secondary cities and satellite towns along the transportation arteries (mainly railways)
- The development scale of the city proper, which is in the upper reach of Lake Dianchi, is restricted; the pattern of the city proper will take a finger shape and between finger-shaped development areas are ecological spaces - green belts, river, etc.
- A modern central business district will be constructed; the historical and cultural characteristics of the central old town will be preserved and endowed with flourishing economic vitality. To support the realization of the above-mentioned blueprint, the transportation development of Kunming City shall rely on the national and interregional transportation framework and play its role as the provincial transportation centre and external transportation hub; modern and efficient highway and railway networks will be constructed; depots, terminals and other facilities for passenger and freight transportation will be improved, thus formulating an interregional traffic and transportation network. «The vehicle-oriented» will be gradually changed to «the human-oriented». The transportation system will be endowed with economic characteristics and efficiency, shall meet the demand of social and economic development, promote the improvement of ecological environment, and will finally connect Kunming region with a compact and highly efficient entity and support the realization of the strategic goal of a sustainable development.

The basic ideas of urban transportation policies of Kunming are the following.

- **The transportation system shall support the formation of a reasonable city pattern and structure**

The transportation system must provide conditions to make the central city get rid of «sprawling», support the finger-shaped development along public transit arteries. Highly efficient, convenient, rapid transportation connection between the central city (specially the core area of the city) and satellite towns will be established. More urban development space will be obtained by shortening time duration.

- **The fundamental role of a transportation system is to move people and goods highly efficiently**

Giving most transportation spaces and traffic priority to «vehicles» is absolutely wrong. This is a conceptual mistake which causes traffic vicious in many cities. The substance of transportation is moving «people and goods», not vehicles.

- **While pursuing high system efficiency, attention should be given to the pluralism of the system**

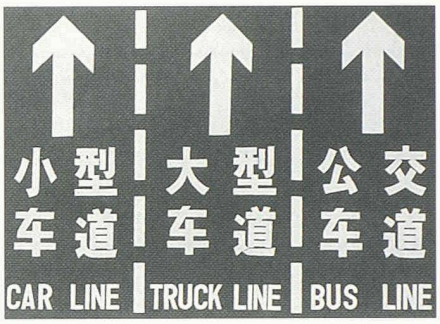
In a city, especially in the central area of a city, city functions are highly concentrated, spatial resources are limited and roads cannot be constructed ceaselessly. To realize the optimum balance between city functions, spatial resources and transportation activities, the fundament approach is to greatly develop public transportation, to practice priority for public transportation, so as to moving most people within least space. The polymorphism of city activities inevitably results in a pluralistic demand to the public transportation system. Every mode has its own advantages and disadvantages. No mode can meet all transportation needs alone. Elements of a transportation system should complement mutually, appropriately play their roles and be coordinated.

- **Constructing modern urban public transportation**

Experiences of large cities across the world prove that in modern times the growth of road areas cannot catch up with the growth of vehicles and traffic demands, and that greatly developing public transportation is the only effective way to solve city transportation problems. In cooperation over the years with its international friend, the city of Zurich, Kunming has combined advanced transportation theory with reality. A modern urban public transportation blueprint has been mapped out which will consist of at-grade LRT, public buses and suburban railway passenger transport. To date, Kunming has started up the modern improvement of the public bus system and is gradually transfering the blueprint into reality.

- **Keeping a channel for the development for car traffic**

The development of automobiles in China can be affected but cannot be



Im Sommer 1995 richtete Kunming zwei reservierte Busspuren von je 500 m Länge ein. Diese Sofortmassnahme diente der Erprobung neuer Verkehrsmanagementinstrumente. Die Demonstrationsbuslinie verdankt ihre Entstehung dem Erfolg dieser ersten chinesischen Busspur und findet zahlreiche Nachahmer

stopped. This process must start from the city, and transportation in cities must face heavy burdens from city traffic. In the Greater Kunming network, between city nodes and within satellite towns, development spaces with high capacity are available for cars during the process of automobile development in China. Traffic policies should be formulated and reasonable plans for transportation facilities should be worked out to lead car traffic to above-mentioned areas.

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Implementing traffic demand management in time and space

The key to realize a highly efficient and pluralistic transportation system is that traffic flows of all modes distribute reasonably in time and space. To secure this goal, demand management must be practiced to all modes in the time-space coordinate. The redistribution of transportation space and limiting car traffic volume in the central area are two core elements in transportation management.

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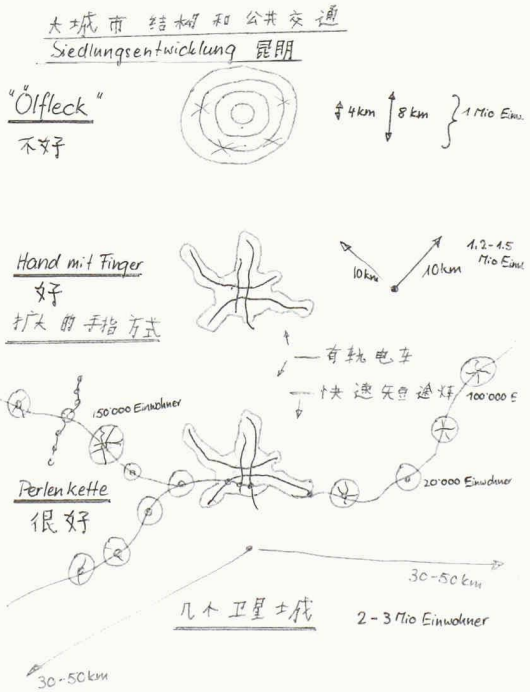
The transportation system must be economically favorable and environmentally friendly

The transportation system must be economical. Both the construction costs and the operation costs must be affordable to the city in a certain period. Moving people and goods should be realized at lowest cost. The transportation must be favorable to the environment. Compared to the improvement of environmental protection features of traffic modes, the structure of a transportation system is more important. In Kunming proper, especially in the central area of the city, transportation priority will be given to public transportation, pedestrians and cyclists.



Eine Stadtentwicklung in konzentrischen Ringen, wie ein Ölfleck, durch den öffentlichen Verkehr schlecht erschliessbar, soll in Kunming vermieden werden. Kunming strebt eine fingerförmige Siedlungsentwicklung entlang der Tram- und Buslinien an, mit grünen Trenngebieten dazwischen. Für das weitere Wachstum der Grossstadtregion werden «Perlenketten» geplant, d.h. Satellitenstädte entlang der zur S-Bahn entwickelten Eisenbahn. Nahverkehrseisenbahnen und Kleinstädte mit einem Bahnhof im Siedlungskern sind in China unbekannt

Urban transportation has become a «centenary problem» as China is marching into the 21st century and strives to city sustainable developmeny. Looking back at the development process of Kuning's urban transportation and reviewing the transportation practices of countries across the world, we know that only public transportation can take the responsibility of solving the «centenary problem» and bring the new Kunming into the 21st century in economic prosperity and with a beautiful environment. We hope the practice of the modern transportation strategies in Kunming will become a successful example for society, economy and ecology in China's cities to develop coordinately and sustainably.

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