Transportation Planning

OC Global contributes to finding solutions to traffic problems in the world based on reliability and a high quality traffic planning technology. OC Global has completed more than 200 transport system projects in 50 countries.

EXPERTISE

From master plan development to the individual project formation (traffic infrastructure development, traffic jam and accident measures)

OC Global can provide not only the solution of urban transport problem occurring all over the world but also the strategic policy and maintenance plan in national transport system planning, the implementation of the feasibility study including a demand forecast of individual traffic connection facilities and the maintenance plan, and the micro problem of the traffic phenomenon with a latest planning technology. Particularly, OC Global has higher technical solutions within the engineering sector in cooperation with an ICT latest transport technology of ACKG.

Experience and the results of several urban traffic master plans

Particularly, in the urban traffic, OC Global can propose integrated transport master plan for the resolution of various urban traffic problem including the financial resources, a legal system and institutional arrangement based on the past experience and results.

OC Global has provided the urban traffic master plan of all the countries of the world including the capital of Asian countries, such as Bangkok, Ho Chi Minh, Jakarta, Kuala Lumpur, Manila, Colombo, Dar es Salaam, and Cairo.

Providing solutions based on the latest transport technology

OC Global can provide reliability and high quality traffic plan, traffic control, traffic jam measures and safety measures including latest traffic technology such as traffic modeling (prediction technology of the traffic behavior) and traffic analysis technology (image recognition, probe technology), traffic simulation technology, understanding and future prediction of the traffic phenomenon utilizing big data.
CONSULTING SERVICES

- **National/Regional Transport System Planning**
  - Strategic Policy Planning (Inter-urban highway, railway, airport, seaport, inland waterway)
  - Inter-modal, Multi-modal Transport System Planning
  - Freight transport system planning

- **Integrated Urban Transport System Planning**
  - Strategic Policy Planning (Urban road network, urban expressway network, public transport network (railway, new transit (BRT, Monorail, AGT, LRT, MRT), bicycle and pedestrian network, Mobility Management (MM), TDM, traffic control)
  - Transport Surveys (Person-trip, road-side/passenger OD, traffic counting with image processing techniques, GPS tracking and prove data)
  - Multi-modal Transport Facility Development
  - Institutional and Financial Arrangement

- **Logistics System Planning**

- **Feasibility Studies for Transport Infrastructure**
  - (Roads & Bridges, Railways, New Transit System (BRT, AGT, Monorail, LRT, MRT), Airports, Ports, Logistics Facilities)
  - Demand Forecast (Passenger, Traffic Volume, etc.)
  - Economic Analysis
  - Financial Analysis including PPP scheme

- **Advanced Traffic Management System Planning**
  - Traffic Information, Navigation and Advanced Traffic Control System Development (Area-wide traffic signaling system, road planning)
  - Common Ticketing System for Public Transport System
  - Operation and Management System for Public Transport

- **Road Safety Diagnosis and Countermeasures**

- **Transport/Traffic Simulation (Macroscopic/ Microscopic)**
Problems addressed by the Project

Traffic congestion in the urbanized area is a severe problem facing the metropolitan region and the situation is anticipated to worsen. In 2002, the annual economic loss caused by traffic congestion in the region was estimated at Rp. 3,000 billion for vehicle operating costs and Rp. 2,500 billion for travel time. Furthermore, should there be no improvement undertaken in the period up to the year 2020, accumulated economic loss would amount to Rp. 65,000 billion which consists of Rp. 28,100 billion for additional vehicle operating costs and Rp. 36,900 for longer travel times at present value discounted by 12%.

SITRAMP addresses the question of how to deal with the aforementioned problems and examines the desirable future transportation system by identifying the present and anticipated future transportation problems. SITRAMP outlines transportation development goals to be achieved in the next 20 years and associated transport policy measures and projects for regional development and improvement of the urban transport problems for the betterment of people’s life in the region.

Service Period

The Study includes establishment of an urban transportation master plan for the Jabodetabek area. In addition four pre-feasibility studies on priority projects were conducted.

- Outer Outer Ring Road Development Project
- Busway System Development Project
- Electric Road Pricing Project
- Integrated Land and Railway Development Project along the Serpong Railway Line

Major Components of the Master Plan

The urban transportation master plan, SITRAMP, includes the following components:

- Public Transport System Development Plan
- Road Network Development Plan
- Traffic Control and Transportation Demand Management

To materialize the urban transportation master plan, SITRAMP proposed to establish metropolitan-wide administrative organization called Jabodetabek Transport Authority for transportation planning and project implementation. It also recommended to issue the master plan as a formal legal document such as Presidential Decree to get legal backing among various stakeholders. Regulatory framework is proposed for the recommended urban transport policies. Fund raising for project implementation was also proposed and this included reduction of fuel tax and creation of urban development tax.
**Sector**  Transportation Planning  

**Project Type**  National Transport Master Plan  

**Project Title**  Comprehensive Study on The Master Plan for Nationwide Transport System in the Arab Republic of Egypt (MiNTS – Misr National Transport Study)  

**Location**  Egypt  

**Client**  Transport Planning Authority / JICA  

**Project Period**  December 2009 – March 2012

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**Problems addressed by the Project**

Egypt, a country of some 80 million people is the premier country of the Arab world both historically and culturally. Although located at the north eastern tip of the African continent, it is also an integral part of the Middle East thus straddling both cultures. Review of the role of transport infrastructure in the national economy needs to be done since many roads outside the capital are congested and accident prone, and the transport infrastructure of the Nile waterway and the national railways are under-utilized today.

**Service Period**

Although the project was undertaken (from Dec 2009 to Mar 2012) during a period of great turbulence in North African society, the Arab Spring, we managed to successfully complete the Master Plan on schedule.

MiNTS was established for comprehensive objectives to understand and make recommendations on the interplay between society and transport infrastructure. A vision was developed for Egypt that linked policy and strategy together in a framework linking facilities, technology and human resources.

**Actual Project Works**

MiNTS devised a strategy of infrastructure improvement along each of the nominated transport corridors whilst at the time encouraging a modal shift to the under-utilized modes of inland waterway and rail with the gradual removal of fuel subsidy.

MiNTS has proposed a total of 103 initiatives, with an estimated implementation cost of 320 billion LE (current price). These include both upgrading of existing assets plus realization of new projects/programs. The MiNTS Transport Master Plan is staged over three consecutive five-year periods: namely, short-term (present to 2017), mid-term (2018-2022) and long-term (2023-2027).

Tools were developed for this via the enhancement of a geographical information system integrated into transport modelling. However these tools require skill to operate, therefore there was a significant effort was made in job training.
Problems addressed by the Project

The transport demand has increased remarkably over the past few years, especially in the Colombo Metropolitan Area (CMA), which consists of the Colombo Municipal Council (CMC) and the adjacent areas. Due to the increase in traffic demand, the speed of vehicles on the roads has declined resulting in higher vehicle operating costs for vehicle owners and environmental deterioration on the entire community. These impacts negatively affect the economic development in the CMA as well as the country. The major problems addressed are as follows:

1. Low Level of Public Transport Service: The level of service of the public transport in CMA has deteriorated causing a shift to private modes of transport.
2. Insufficient Road Network: Road network capacity is not sufficient and has not caught up with the increase of private vehicle ownership. The road density in suburban area, in particular, is still low and requires road widening and new road construction.
3. Increased Number of Vehicles: The number of vehicles increased 2.5 times since the year 2000. In particular, motorcycles and 3-wheelers showed a significant rapid increase.
4. Future Transport Demand Increase: Due to the population increase and increase of expected real household income, traffic demand made by private modes of transport is anticipated to grow rapidly and will result in further traffic congestion and related problems.
5. Anticipated Modal Shift: If no effective actions are taken, shift to private modes of transport would be made and the share of public transport would decrease from 58% in 2013 to 41% in 2035.

Service Period

The CMA, therefore, requires improvement and development of the transport system to solve the problems. In order to develop the transport system, the following services are provided by the project.

1. To prepare reliable transport data that can be utilised to evaluate and formulate transport development plans/projects in a scientific manner by conducting an area-wide transport survey.
2. To formulate a comprehensive Urban Transport Master Plan for the CMA with the justification of selected priority/leading projects for short-term, mid-term, and long-term implementation.

Actual Project Works

The following processes are taken to formulate the Urban Transport Master Plan for CMA.

- Transport Survey including home visit survey with 36,000 household, screen line survey, OD interview survey, and land use survey
• Examination of the socio-economic condition including population growth trend, population distribution, current land use pattern and urban structure, economic condition (i.e. GDP, GRDP) and motor vehicle registration
• Examination of present urban transport problems and planning issues
• Identification of CMA boundaries, and Forecast of socio-economic framework including population and economic growth, and urban structure including envisioned urban centres and urbanised area
• Specifying the planning issues, objectives, and policies for the transport master plans and evaluation of the development scenarios and strategies

Finally, the urban transport system development plan was formulated with both of public transport network and road network. In addition, their implementation plan and institutional arrangement were proposed.
Background and Issues to be Addressed

Myanmar is strengthening its economic policies to take advantage of the social and economic growth potential of an open market economy. The transport sector has a key role in fostering this economic growth. Especially, infrastructure development will be strongly needed to capitalize on regional trade opportunities. These policy reforms are important to realizing this growth potential, but success will also require the coordinated and sustained upgrading of the country’s transport infrastructure, facilities, and skilled human resources. To support domestic reforms in the transport sector, Myanmar is looking forward to 2015, when the ASEAN Community is economically integrated. Myanmar is eager to seize upon the growth opportunities provided by integration. The scale of growth in the region and the increase of foreign investment possibilities and infrastructure financing are helping in this regard. Myanmar's strategic location in the ASEAN region by its proximity to Bangladesh, China, India, Lao PDR and Thailand, leave no doubt that Myanmar will play an important role in generating significant levels of regional GDP in the future. However, the possibilities for such growth mean that development of the country’s transport sector should be an infrastructure priority that will require investment in international airports, deep seaports, inland waterways, strategic rail and highway networks, along with improvements in cross-border infrastructure and regional connectivity.

Against this backdrop, the MYT-Plan was formulated to show key steps toward improved transport systems, providing policy guidance for Myanmar to capitalize on new opportunities and emerging trends in the transport sector until the year 2030.

Services Provided

The OC Global consultant team managed all the processes in formulating the MYT-Plan and some feasibility studies on projects justified in the plan. MYT-Plan consists of analysis, findings and identification of issues on transport planning; recommendations for the national transport system; and physical and institutional action plans by sector. As part of the MYT-Plan project, two feasibility studies and one pre-feasibility study were carried out, all of which were selected through discussions with the Joint Coordination Committee. These were:

- Feasibility Study on the Rehabilitation and Modernization of Yangon – Mandalay Railway
- Feasibility Study on Inland Water Transport Facilities Improvement and Development Project
- Pre-Feasibility Study for the East West Economic Corridor Relevant Roads Project

Intensive technical workshops and seminar were held in this project to disseminate the MYT-Plan and to improve understanding/skills of day-to-day implementation work under MYT-Plan.