MVA
Rail Demand Forecasting & Station Planning
MVA is a global transportation specialist and leading market research consultancy specializing in traffic engineering and transport planning and operations.

In 1978, MVA commissioned its regional head office in Hong Kong. It is now the largest specialist traffic and transport consultancy firm in Asia, with other permanent offices in Shenzhen, Beijing, Shanghai, Singapore, Bangkok and a project office in Ho Chi Minh City. To date, MVA has approximately 300 permanent staff operating in Asia among the various entities.

MVA offers a complete range of consultancy services for traffic, transport and pedestrian aspects. Working closely with governments, NGOs, operators, financial institutions, developers, architects, planners, engineers and contractors, in both public and private sectors, MVA is experienced in providing consultancy services from initial concept stages, through to planning, feasibility, design and construction.

MVA has been assessed by Hong Kong Quality Assurance Agency and registered as meeting the requirements of the international quality systems standard ISO 9001: 2008. The scope of the Company’s registration includes the provision of consultancy services in transportation planning, land use planning, traffic engineering and management environmental engineering, business, market and social research for projects in Hong Kong and China.
Many major cities around the world and especially in Asia have, in recognition of growing demand, invested heavily in public transport systems. Suburban rail, metro LRT and BRT systems have been designed and implemented in a number of the regions’ capitals. MVA plays a key role in the development and enhancement of such public transport networks. We advise governments, operators and financial institutions on rail system strategies, forecasting, planning and operations. We are involved in station and interchange designs for inter-urban and urban railways, and integration with property development. MVA also provides specialist advice to bus operators to rationalise their operations and services to integrate with the new railway extensions. Our experts also help to modernise ferry and tram services, and provide advice on cable car and people mover systems.

**Services**

- Strategy Development
- System Design and Implementation
- Service Planning & Operations
- Passenger & Revenue Forecasting
- Financial & Economic Appraisal
- Investment Planning
- Station, Interchange & Terminal Design

India

**Mumbai MRTS**
Traffic management and station access planning and design for Mumbai’s first modern mass transit system

Thailand

**Bangkok Transit System**
Patronage forecasting, station access issues and integration with bus and other feeder modes

China

**Shanghai Jiading Railway Line 11 Muyu Station Transport Hub Detailed Planning Study**
Comprehensive transport planning, architectural design and landuse planning. Also provide technical feasibility and market research

**Guangzhou Railway**
Guangzhou near term railway development review

Australia

**Sydney CBD Metro**
Best practice review on railway strategy and walking/interchange/multi-modal system to guide the planning and design of the first and pioneering metro in Sydney

Korea & Taiwan

**High Speed Rail**
High speed railway forecasting & integration planning

Singapore

**Bus/MRT Integration**
Design and implementation of an integrated automatic fare collection system for bus and rail services
Hong Kong

The Second Railway Development Study

Transport study to develop a long term strategy for the development of the railway system for future decades.

Vietnam

Bus Rapid Transit (BRT) Studies for Hanoi and Ho Chi Minh City

Feasibility Study and Preliminary Design for a BRT system in Hanoi, financed by World Bank. In Ho Chi Minh City, MVA studied a BRT pilot system as part of a bus restructuring study for the city.

Pakistan

Lahore Rapid Mass Transit System

Network masterplan study for Govt of the Punjab, and Feasibility Studies for the first two priority MRT Lines.

Vietnam

Hanoi Railway Multimodal Model

Prepare a multi-modal model to assess options for the proposed railway system in Hanoi.

Ho Chi Minh City Metro Rail Study

Review the proposed urban Metro masterplan for the city, and then to proceed with full feasibility studies for the priority line. Studies included planning, engineering, alignment, systems, EIA, resettlement & social studies, project implementation, institutional strengthening and financing.
MVA is unrivalled in its experience of station design and especially access design having worked on nearly every major rail station projection Hong Kong and many crowd the world.

The most recent example of such MVA projects is the preliminary design of the China high speed rail southernmost terminus to be located in Hong Kong, known as the West Kowloon Terminus. The terminus is due to open in year 2015 and set to handle a throughput up to 200,000 passengers a day. The station comprises 15 platforms at level 23m, Customs/Immigration/Quarantine at 4m and ticketing at +5m. MVA in collaboration with architects and engineers (including Systra) developed a whole integrated package of traffic and pedestrian schemes both internal and external to the station.
Lok Ma Chau Terminus & Associated Works Detailed Design

- Lok Ma Chau Spur Line, the second mainland boundary rail crossing with a function to relieve the first congested rail crossing, involving CIQ layout design and detailed passenger computer simulation modeling.

- South Island Line, the suburban rail line linking the southern populated areas to the CBD, involving the simulation modeling of a mega 4-line railway interchange with a throughput at some 124,000 passengers per hour.

- Shatin Central Link, which contains the 4th rail harbor crossing, and taps into the South East Kowloon Development which is set for redevelopment after the airport relocation from Kai Tak to Chek Lap Kok.

MVA takes a commercial approach to maximize returns from fare box and associated airspace development working together with project owners, operators, architects, engineers and rail system specialists including Systra.

MVA applies “state-of-the-art” passenger forecasting procedures usually based on CUBE by Citilabs, road traffic simulation (SATURN, VISSIM) and passenger movement simulation (STEPS, VISPED, LEGION).
MVA is a world leading transport and revenue advisor to Governments, private investors, operators and financial institutions for transport investment projects. MVA has provided advice on many prestigious projects from conception to implementation and operation, including intensive support on IPO, valuation, placement and securitisation exercises. We can link our design and forecasting expertise with operational experience to secure viable and practicable projects.

**Services**

- Project Screening & Identification
- Traffic & Revenue Forecasting
- Freight Forecasting
- Operating Strategies & Costs
- Financial & Economic Evaluation
- Toll & Fare Collection Systems
- Bid Preparation & Strategy
- Facility Planning
- IPO / Valuation / Placement / Securitisation Advisory Support

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**Thailand**

**Skytrain / Blue Line**

Transport and revenue advisor to lead finance arrangers for urban mass transit in Bangkok

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**Taiwan**

**High Speed Rail / Metro**

Patronage and revenue advisor for a 345-km BOT HSR project between Taipei and Kaohsiung, and Kaohsiung MRT / Airport Rail Link bids

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**Vietnam**

**MRT Masterplan and Line 2 Feasibility Studies**

Review the planned MRT masterplan for HCMC, and to undertake feasibility investigations for the priority lines. MVA developed and applied detailed forecasting models.

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**China**

**Compilation of Beijing Metro Line Projects**

Beijing Metro Line 4 and 5 extension and ridership forecasts, Beijing Metro Line 5 ridership forecasts, Beijing Metro Line 4 Patronage and ridership forecasts

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**Malaysia / Singapore**

**LRTs**

Traffic and revenue advisor for the second fixed link between Singapore and South Malaysia, and other major LRT studies in Malaysia

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**Philippines**

**Urban Rail**

Traffic review various metro studies for urban transit in Manila

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**Metro Star Express**

Patronage, revenue forecasting and analysis of alternative fare strategies. Fare structures were evaluated, and advice provided to potential investors.
China

Metros

Transport advisor in support of sponsors, lenders and acquisition / placement / refinancing exercises for many metro studies for sponsors in major cities

Macao

Transit Rail Link

Traffic and revenue advisor for a pre-feasibility study of a rail link across Macao

Australia

High Speed Rail

Traffic revenue advisor for Mitcham Frankston Freeway bid and Sydney-Canberra HSR

United Kingdom

Greengauge 2000 UK High Speed Rail Network Study

Routes were defined in each corridor, estimates were developed for capital and operational costs, and the impact of the route on the environment was assessed, to develop and support an overall national high-speed rail strategy.
MVA is at the forefront of technical applications for transport and offers recognised expertise in advanced modelling and IT development and applications.

**Transportation Software**

Citilabs, an MVA JV company, is one of the world market leaders in transportation planning software development. Products include: the CUBE suite of VOYAGER, DYNASIM, and other market leading programs such as TRIPS, TP+, VIPER, ACCMAP, TRANPLAN and MINUTP.

MVA is also an expert user of PARAMICS, EMME/2, VISSIM and SATURN.

**Multi-modal Interchange and Station Planning**

MVA takes a commercial approach to maximizing returns from fare box and associated airspace development, working together with project owners, operators, architects, engineers and rail system specialists including Systra.

MVA applies “state-of-the-art” passenger forecasting procedures usually based on CUBE by Citilabs, road traffic simulation (SATURN, VISSIM) and passenger movement simulation (STEPS, VISPED, LEGION).

**Training**

Training forms an important component of improving knowledge, experience and value of staff in any organisation. MVA has provided training in many formats, particularly in computer software applications and in technical applications. We are able to provide local experts in a number of fields to match clients’ needs.
Hong Kong

**MTRC West Kowloon Terminus**

**MTRC West Kowloon Terminus Preliminary Design - Inter-modal Interchange and Station Planning**

Lok Ma Chau Spur Line

**Lok Ma Chau Terminus & Associated Works Detailed Design, involving CIQ layout design and detailed passenger computer simulation modeling**

**West Kowloon Integrated Transport and Development Hub**

**Hong Kong**

**MTRCL Patronage Study for Domestic and Cross Boundary Rail Network**

Network-wide ridership/forecasts studies in support of viability and design investigations for MTRCL network
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