Transportation Projects in EASTS

1994-2014

EASTS: Eastern Asia Society for Transportation Studies

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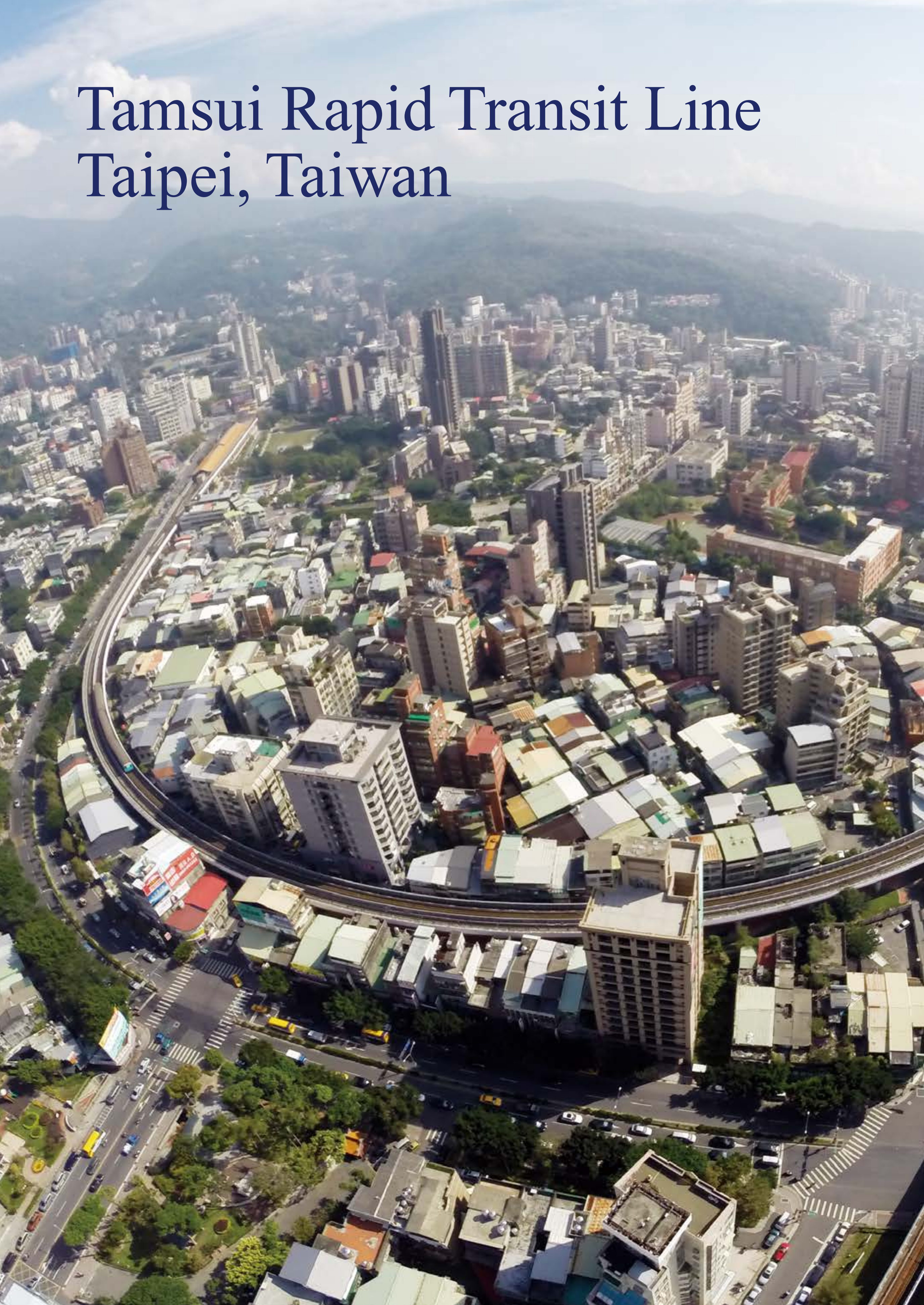
Contents

Tamsui Rapid Transit Line
Taipei, Taiwan



History

At the beginning of the 20th century, Tamsui was the main trading port for Northern Taiwan. In order to provide faster and higher capacity transport of goods taken from Taiwan to Japan, the Japanese occupation authorities at that time built the Taipei to Tamsui railway line. This line opened to service on August 25th, 1901. However, with the later reconstruction of Keelung Port, transport of goods shifted to that facility, and the principal function of the Tamsui railway changed to passenger transport. This remained the case until the 1980's , when the Government made plans for the Taipei Metropolitan Area Mass Rapid Transit System. Under this new plan, the former single track railway alignment was reconstructed into the modern, efficient and comfortable urban rapid transit line that it is today.

The Project

With a length of 22 kilometers and 20 stations, construction started on the high capacity Tamsui Rapid Transit Line in 1988, and train operations between Taipei Main Station and Tamsui began in 1997. This first rapid transit line had underground sections in the central area of the city, elevated sections in the suburban areas, and at-grade facilities toward the outlying low density areas. Upon completion of the line, the surrounding corridor experienced rapid urban growth as people began to recognize the benefits of the transport services. The experience gained from the Tamsui Line gave Government the confidence and perseverance to continue with the investment and development of the Taipei Metropolitan Area Rapid Transit Project, which now has grown into a network of over 130 kilometers.

Photo：Chinese Institute of Transportation (CIT)

Marikina Bikeways
Marikina City, Philippines

Photo：University of the Philippines, National Center for Transportation Studies (UP-NCTS)

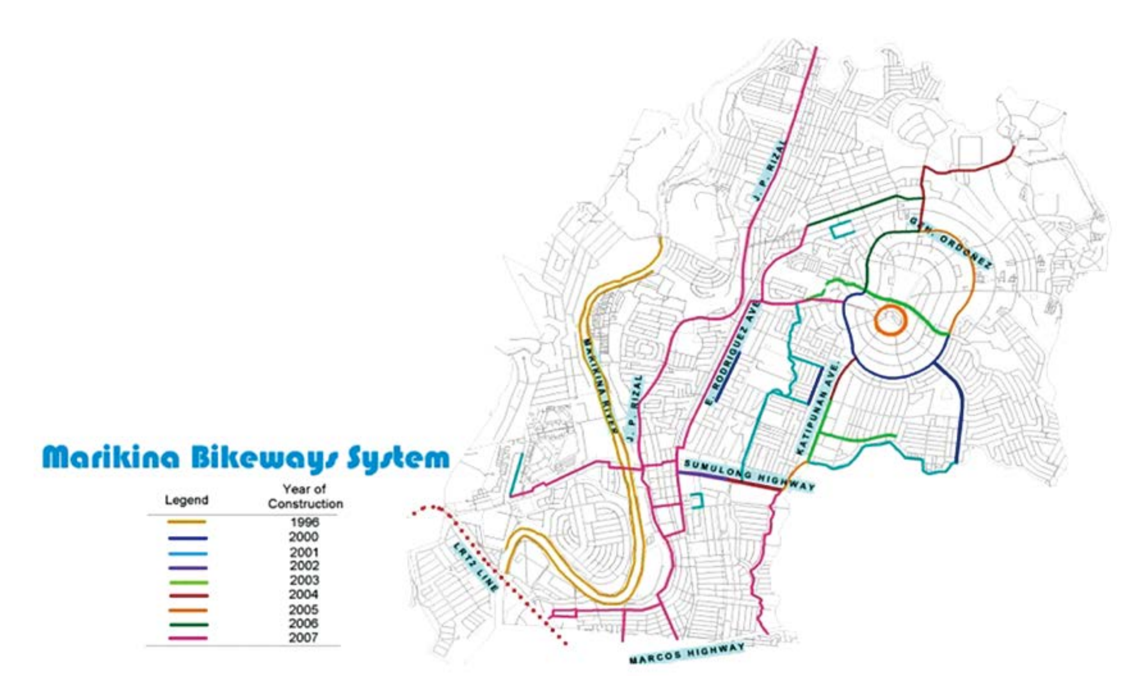
Marikina is a chartered city at the eastern edge of Metropolitan Manila, Philippines The city occupies a land area of approximately 2,150 hectares, and a population of 424,150 in 2010. In 1996, about 10,500 daily trips (2.9% of all trips) were made by bicycle in the City. In comparison, approximately 160,200 trips were made by bicycle in the whole of Metro Manila at that time.

As early as 1992, government officials began the city's physical reform and social reorientation. Physical reforms in Marikina involved the sidewalk clearing operation and improvement of public places. In 1999, the City Government of Marikina commissioned the University of the Philippines to conduct a feasibility study of the Marikina Bikeways.

Although a feasibility study and a network design study have been prepared for the bikeways project when it commenced, there was a problem of acceptance from the city engineering office and the city council in designating and declaring certain roads as bikeways. This was due to the perceived constraints that the new facility will impose on the city's narrow roads, limited road parking spaces and reduced road capacity for motorized traffic. The Marikina Bikeways network construction was gradually implemented adopting an "experimental approach" wherein the city engineers deployed what was only workable and acclimatized them to inevitable specificities. The intent was to allow opportunity of evaluation and adjustment in the course of the bikeway construction.

The project followed the three major components given in the feasibility study as enumerated below, along with its sub-components:

Component 1: Allocation and delineation of bikeways in suitable existing roads;
Component 2: Identification and construction of parking facilities for bicycles;
Component 3: Upgrading of existing riverside bike lanes and their extension through construction of new bike lanes to cover the entire stretch of both riversides;



Through these changes, the city was chosen for the implementation of a pilot project aimed to promote the NMT component of the Metro Manila Urban Transport Integration Project (MMURTRIP) that started in 2001. The World Bank noticed the dedication and effective management of local administrators and offered the facilitation of a USD1.3 million grant from the Global Environment Facility (GEF).

The NMT system consisted of the following components:

- 49.7 km of segregated bikeways on existing roads, and 16.6 km of bikeways along the Marikina river, connecting to the new LRT station;
- traffic slowing and pedestrian facilities around schools and market areas, and provision of bicycle parking facilities at key interchanges;
- lighting, where necessary, to ensure safety after hours;
- a public awareness campaign;
- a bicycle safety program; and
- a rigorous monitoring and evaluation program and major dissemination effort.

The World Bank grant also paved the way for the establishment of Marikina Bikeways Office (MBO), which responsibility was to oversee and supervise in close contact the actual planning, construction and maintenance of the project. Now called the Marikina City Bikeways Office, it is a separate office that is tasked with the maintenance of the city bikeways and bicycle parking, organizing and/or coordinating City Bike events and the conduct of bicycle safety education in communities. Several NMT ordinances have already been implemented to support the sustainable existence of the bikeways.

Marikina's recent Bicycle Ownership Survey showed that 55% of families in Marikina owned or has access to a bicycle, majority of which (or 22%) is used for bike-to-work purposes. As of 2008, the city has already constructed 51.6 km. (51,638.44 m.) of bikeways. The total project cost was PhP146.8 million wherein Marikina City had allocated PhP82.9 million and PhP63.9 million coming from the Global Environment Facility grant.

The bikeways network offers a direct and safe connection from residential areas to major transport terminals, markets, schools, employment centers, commercial and industrial establishments. Early in 2008, the city government has opened a bike way connection between the established city network to the new Light Rail Transit Line 2 eastern terminal station, complete with bike parking facilities, making it possible for people to conveniently use the mass transit through biking from their homes.

In recognition of the city's efforts, the Marikina Bikeways Project was Awarded by the 'Gawad Galing Pook' last 2005 as the Outstanding Program in Local Governance. In addition, World Bank has also cited Marikina as one of the four Model Cities in the World during the World Bank's Annual Bank Conference on Development Economics in June 2006 in Tokyo.

Development funding and political will were the main drivers of the success of the project. The city government was able to maintain and sustain the physical condition of the bikeway. The city was able to reduce air pollution, noise pollution and it makes Marikina safe to live but sustainability of the project continues to be a big challenge.

All of the texts and two figures from the following source: U.P. National Center for Transportation Studies (2009) EST Casebook: Leading Practices of Philippine Cities on Environmentally Sustainable Transport (EST)

Photo : The Korea Transport Institute (KOTI)

Cheonggyecheon Seoul, Korea

Brief History

Cheonggyecheon is a stream that runs from west to east through the central part of downtown Seoul until the mid 1970's. Cheonggyecheon's 5.84 km has been restored out of the total length, 8.14 km. It used to be one of the fourteen tributaries since the Joseon Dynasty, but the construction to cover the stream had been started since 1958 because people used this stream as the sewage after the Korean War of 1950 to 1953, but the government did not have any methods to control. The construction was over in 1978, and the covered areas were used as the elevated highway. The ironic thing is that this elevated highway was the symbolic icon of Korean economic miracle.

Project Outline and Planning Process

Photo : Seoul Development Institute (SDI)

As the quality of the downtown residents was improved, they spoke up for the restoration of Cheonggyecheon. The government also agreed with their opinions because of the safety issues at the elevated highway and the aspirations of the residents. The authority decided to restore the stream in July 2003, and the demolition of the highway was complete in December 2004. The stream restoration work was finished in September 2005. Two-lane street were built on both sides of Cheonggyecheon with 22 bridges to across, of which fifteen are for the vehicles, and rest of them for the pedestrians.

The construction progressed along the following five steps. To blockade traffic from entering onto the highway was the first step to start the construction. A short-term traffic monitoring task was conducted by simulation during the first two weeks. The second stage was to launch the disassembling of highway structures with the heavy equipment such as the diamond wire saws and wheel saws. Construction companies were asked to minimize negative environmental impacts such as noise and dusts. By-products from the demolition were moved to the temporary storage sites at night when there was little traffic on the road. Next, road dismantlement was started, and the stream restoration work followed.

Successful Factors and Lesson Learned

There are many factors to revitalize the downtown, but one of the dramatic factors can be the transportation area. To enhance the competitiveness of the downtown, the transportation environment should be converted into the human-oriented and eco-friendly one from the vehicular-oriented one. The city intended to introduce a new form of mass transit system. Bus service was needed to reform into a system to manage bus flows serving the urban center in the short term. The city planned to pass the new urban and metropolitan rail systems through the Seoul Railway station, one of the closest stations near Cheonggyecheon. To improve pedestrian environment, the city needed to alleviate traffic congestion and air pollution by reducing excessive auto dependency in the downtown with transportation demand management. By mainly focusing on vehicular movement, the walking environment was so poor while downtown streets turned wider and wider to accommodate more and more cars. The most urgent task was to expand pedestrian crossings and promote side walk environment to improve pedestrian environment. By reducing traffic lanes, the main traffic corridor (Gwangwhamun) was redesigned symbolically into a pedestrian-oriented plaza.

It is commonly said that the opening of a new road expects to increase its capacity and improve travel speed, and the closure of existing roads expects to cut down the capacity and exacerbate traffic congestion. However, Downs and Braess proposed the paradoxes that the new transportation facilities such as newly-added roads in a big city can result in the worse traffic congestion, and so do other scholars. Downs and Thomson support this idea that an increase in road capacity discourages the individual drivers from converting other modes into the public transportation and bring their cars to the added roads. Instead, reduced road capacity can cause better traffic condition by shutting down a road. Cheonggyecheon restoration project showed both ideas.

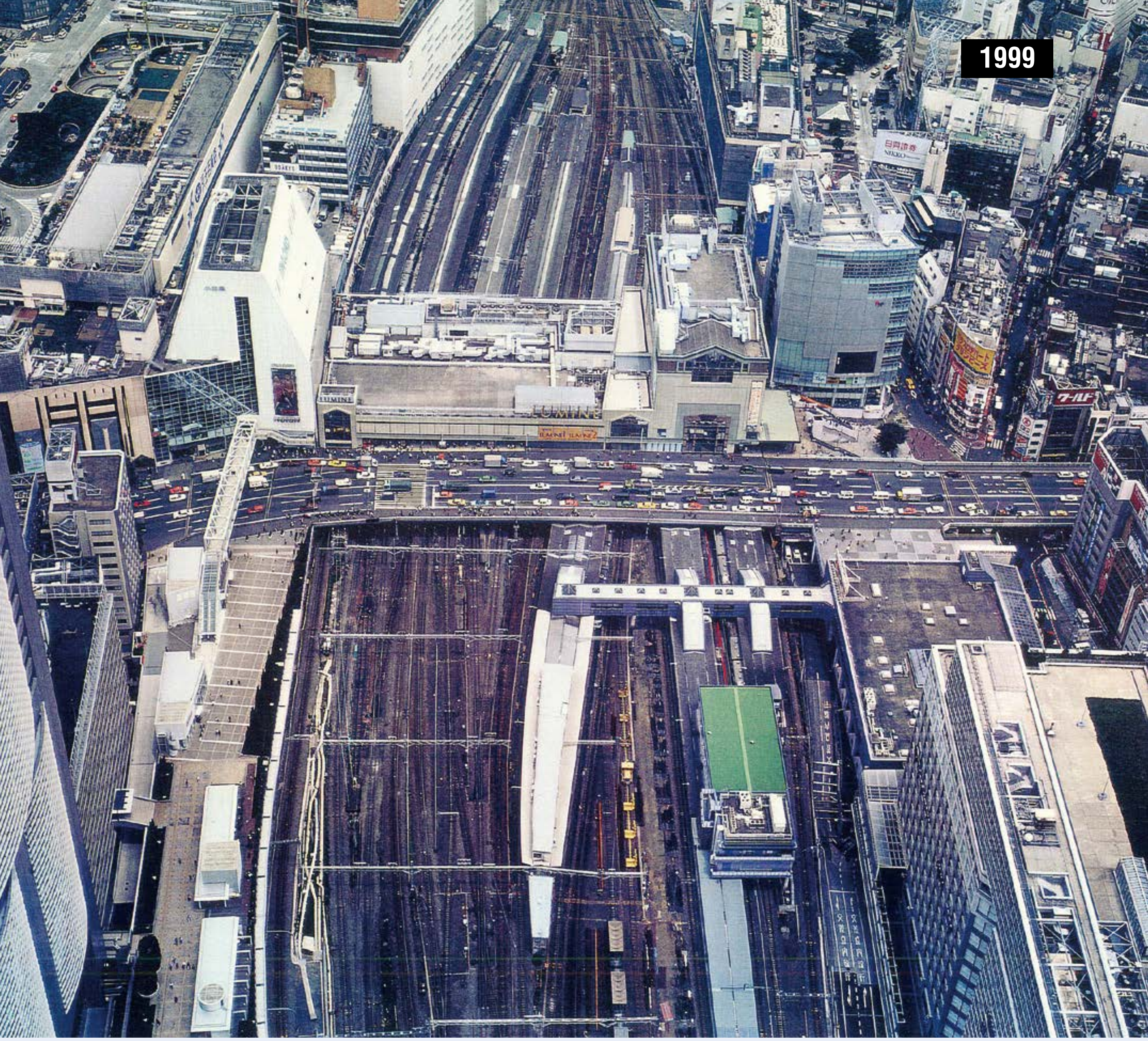
Increased investment in roads leads to increased car use, which leads to decreased travel speed. Even worse, declining speed on roads can apply to the buses, reducing bus ridership, and instead, a faster subway can increase ridership. Also, the traffic condition was improved by shutting down Namsan No. 2 Tunnel, heading to the construction area, until the construction was over.

There are clear changes among citizens. Some drivers changed their departure times, and subway ridership increased continuously for two weeks as opposed to the bus passengers to punctuate their work time. The Cheonggyecheon restoration project means that pedestrian amenity is a much more pivotal factor in determining a better quality of living in a city rather than smooth vehicular movement. Also, paradigm shift can bring numerous changes simultaneously that have been aspired for but not achievable.

2015

Shinjuku Station
Tokyo, Japan

Photo：Tokyo National Highway Office, Ministry of Land, Infrastructure, Transport and Tourism (MLIT)



An old road bridge, which was built in 1925 over the railroads at the Shinjuku Station, was identified to be rebuilt after the Great Hanshin earthquake in 1995. Therefore, the Ministry of Land, Infrastructure, Transport and Tourism and the East Japan Railway Company started redevelopment around the south exit in 1999.

They have planned a new bridge and a station plaza to be built over the railroads by spending national road budget. A four-story building and 33-story retail and office building above the existing station and railroads also will be built so as to create a large space (1.5ha) inside the station. There was not enough space to accommodate the pedestrians and passengers, including those transferring to and from local buses, taxis, and intercity buses. The old road bridge has only a 30m-wide space for traffic lanes and sidewalks, even though the traffic volume on this street is around 60,000 cars per day. The new bridge is being broadened to 50m in width and provides access to the station plaza from the street.

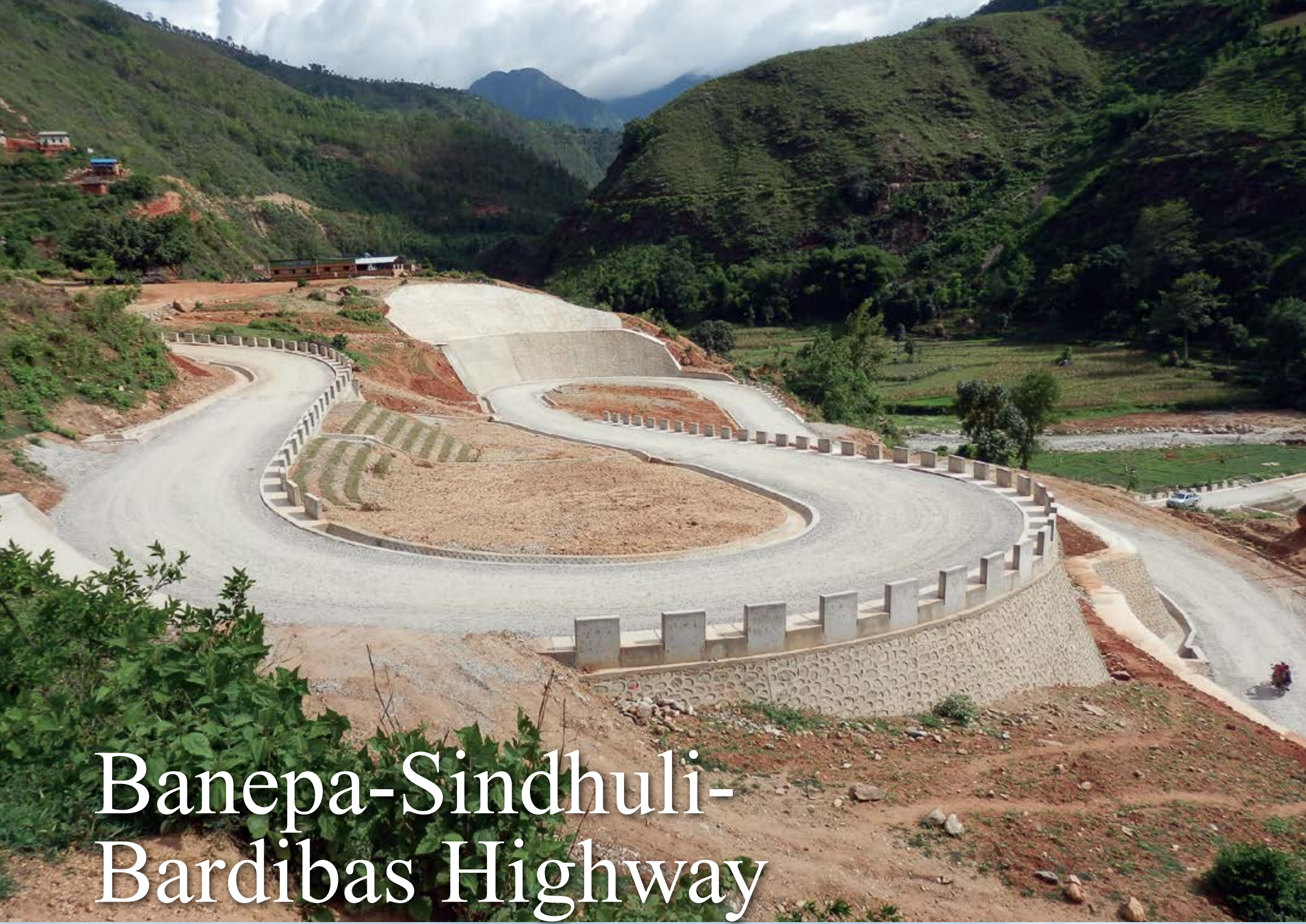
Shinjuku Station is the busiest station in the world, with 3.4 million travelers per day. Five railway companies provide nine lines with 21 platforms, and more than 4,200 trains arrive at and depart from this station. The construction has been difficult due to the narrow space and continuously running trains. This project will be completed in 2015.

Shinagawa Station
Tokyo, Japan

Shinagawa Station is the crossing of the past, present, and future of railway. It had a long history as a station even before the modern railway era. In 1601, Shinagawa was designated as the first station of Tokaido, one of the five main routes during the Edo period. Stations in those days were transfer points for travelers and goods that were carried on horseback, while towns provided lodges for travelers. Shinagawa Station has been one of the most important stations in Japan since it was opened, along with the first railway built between Shimbashi and Yokohama, in 1872. The freight stockyard and train yard (16ha), at the eastern end of the station, was redeveloped into offices, hotels, restaurants, and apartments between 1998 and 2003. These accommodate many workers, residents, and visitors.

Tokaido Shinkansen opened a new station between Tokyo and Shin-Yokohama in 2003. The total number of daily travelers, including those using the East Japan Railway, the Central Japan Railway, and the Keikyu Railway, reached 500,000 in 2014. Chuo Shinkansen, which will run from this station to Nagoya as the first commercial Superconducting Maglev service in 2027, should make Shinagawa Station a gateway to Tokyo, and also to the future.

Banepa-Sindhuli-Bardibas Highway Nepal



Before

Before

Photo：JICA

Brief Background:

Banepa-Sindhuli-Bardibas Highway, also called Sindhuli road, connects Eastern Terai region of Nepal with the capital city Kathmandu. This is the second alternative access link to the capital for the southern part of the country, which has significant portion of country's population and economic activities. This road joins Dhulikhel on the Arniko highway to Bardibas on the East West Highway with a length of about 158 km.Furthermore, this highway shortened the distance between Eastern Terai to capital city Kathmandu by 188 Kilometer. In addition, this highway passes through the local areas, otherwise not accessible by motor able road. It has therefore significantly contributed in local services and other sectors of economy.

Successful factors and lesson learned:

The construction of Sindhuli road was started in 1996 with the grant assistance from the government of Japan. And the road has been recently completed. The alignment mostly passes through the difficult geographical terrain. However, with the innovative technology and efficient construction methods, the road has become an exemplary transport infrastructure. The fundamental approach of construction is to make balance between cutting and filling to achieve the sufficient width of the road without much disruption on slope stability. Massive retaining walls have been used for the soil retention. Additionally, advanced bio-engineering technique has been adopted for the stabilization of the soil. Finally, previous earthen local road now has been converted into a model of environment friendly national highway with attractive road geometry. Nowadays, this road has become an attraction for the students for their educational tour to see the innovative technology and environment friendly infrastructure.

High-Speed Rail Taiwan

Photo：Chinese Institute of Transportation (CIT)

History

The Taiwan High Speed Rail (THSR) is a major public transportation system that opened in 2007 in Taiwan's western corridor. The high-speed railway line extends from Taipei in the north to Kaohsiung in the south. THSR has a total length of approximately 345 km with 12 stations (8 of them have been in service since 2007), 6 maintenance bases. THSR trains operate at a top speed of 300 km/h.

Through October 2014, the THSR has carried more than 289 million passengers (average 131-thousand passengers per day in 2014) with a 99.4% punctuality. The THSR has shortened the travel time from Taipei to Kaohsiung to 90 minutes making Taiwan's western corridor a one-day-society.

The Project

In 1987, in view of the steadily deteriorating state of transportation service quality in Taiwan's western corridor and the gradual saturation of capacity, the government performed the "Taiwan Western Corridor High Speed Rail Feasibility Study", and approved the Taiwan High Speed Rail Project in 1992.

The project adopted the "build-operate-transfer" (BOT) model because it was significant in two important ways: it eased the government's fiscal burden, and also boosted business efficiency. The total budget of the project is NT 513 billion dollars (around 17.1 billion USD, 79% comes from the concession company Taiwan High Speed Rail Corporation, THSRC) and the concession period is 35 years for the project's operation, and 50 years for the station area development, which is one of the most representative PPP (Public-Private-Participation) projects in Taiwan.

High-Speed Rail China

History

The construction of the Chinese high-speed railway started in 2004. Due to long-term planning of the Chinese high-speed railway, the Beijing-Tianjin Intercity Rail, which opened on August 1 2008, is the first truly high-speed railway, with an operating speed of 350 km/h.
As of December 28 2014, the total operational mileage of the Chinese high-speed railway is more than 16,000 km, with 4 vertical lines. China's high-speed railway mileage accounts for about 50% of the world's high-speed rail operating range.

Medium and Long Term Planning

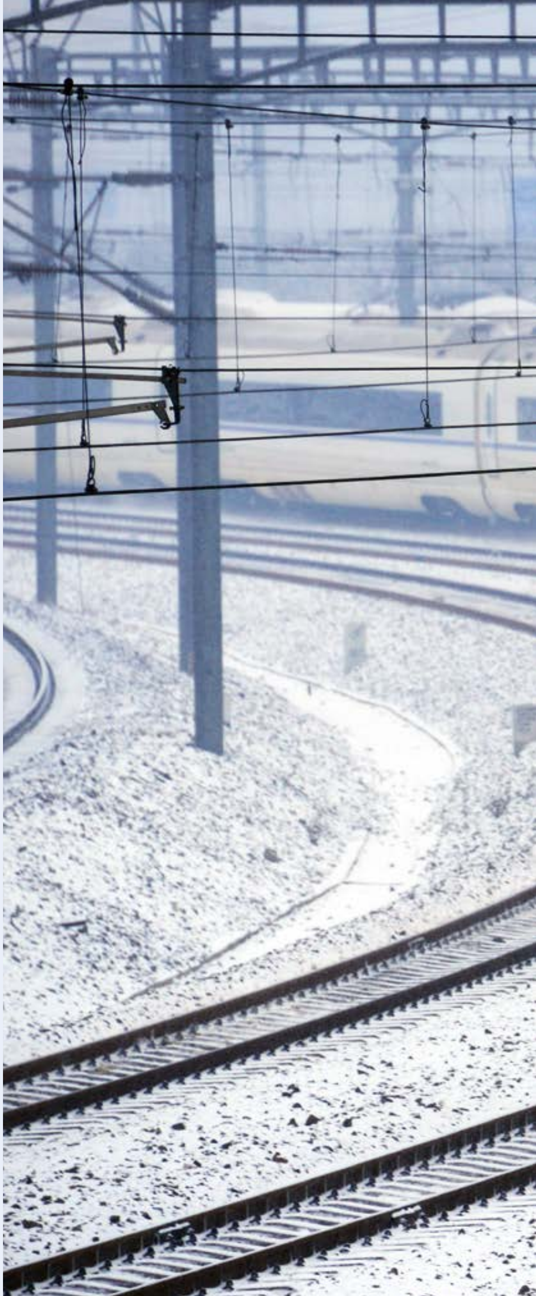
In October 2008, national approval was given for the Long-term Railway Network Planning (adjusted in 2008). The plan outlined that by 2020 the national railway mileage would reach more than 120,000 km, the passenger dedicated line would reach more than 16,000 km, the key planning "been horizontal" passenger dedicated line and economically developed and densely populated areas such as intercity passenger transport system. The focus is on planning a passenger-dedicated line, for example, four vertical lines and four horizontal lines.

Four vertical lines :

- Beijing - Shanghai ;
- Beijing - Wuhan - Guangzhou - Shenzhen ;
- Beijing - Shenyang and Harbin (Dalian) ;
- Shanghai - Hangzhou - Ningbo to Fuzhou to Shenzhen.

Four horizontal lines :

- Xuzhou - Zhengzhou - Lanzhou ;
- Hangzhou to Nanchang to Changsha - Guiyang - Kunming ;
- Qingdao - Shijiazhuang - Taiyuan ;
- Nanjing - Wuhan - Chongqing - Chengdu.



Photo：Liubin

Beijing South Railway Station

Beijing South Railway Station accommodates 24 rail lines, such as Beijing Shanghai High-Speed Rail and Beijing-Tianjin Intercity Rail.

Entrances near the University at HKU Station are designed to connect directly to the University's high level linkway network and also provide a pedestrian link from high to low levels of the surrounding areas.

MTR West Island Line Hong Kong

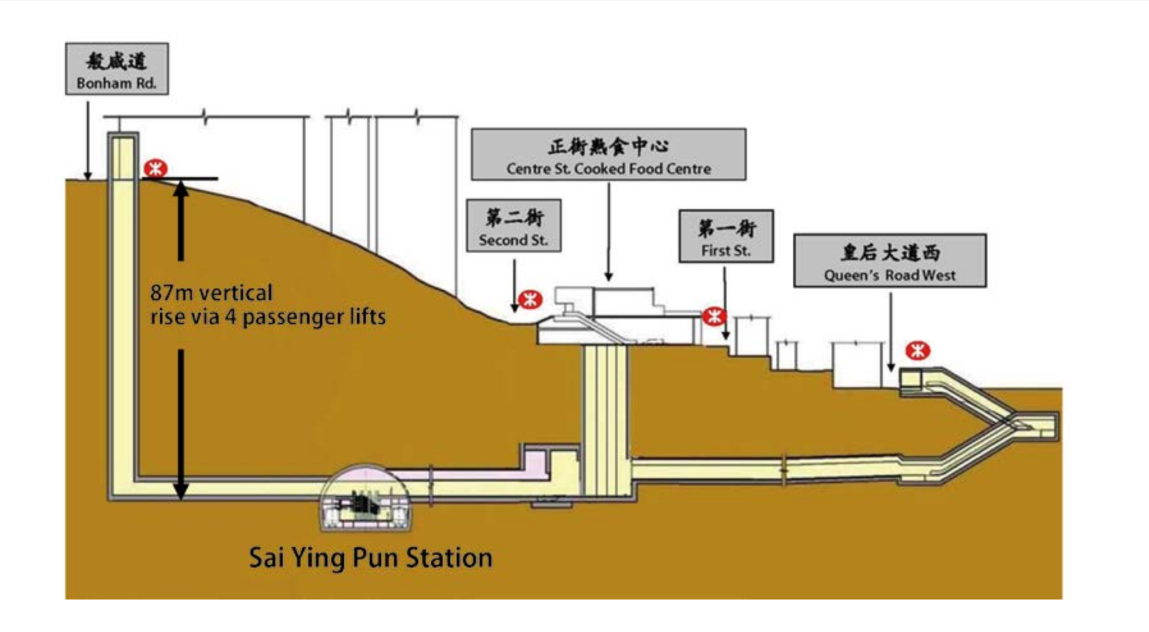
Photo：MTR Corporation

An extensive community art programme engaged local people in the creation of the many artworks that are located throughout the three stations. At Kennedy Town Station above, a large sculpture Blooming Bud by Lao U Kei and Lau Kung Wah is the centre-piece of the station concourse.

Inside HKU Station, next generation Ticket Gates and Ticket Machines provide new features and convenience to passengers.

With an average weekday patronage of over 5.4M passengers, MTR Corporation is regarded as one of the world's leading railway operators for safety, reliability, customer service and cost efficiency. Established in 1975 with a mission to construct and operate an urban metro system to meet Hong Kong (HK) public transport requirements, the MTR network now comprises 10 rail lines (including West Island Line which is now part of the Island Line) with a total of 185km length and 87 stations serving HK Island, Kowloon and the New Territories (NT) with a fleet of buses providing feeder services and a light rail network serving the northwest NT. Apart from the Airport Express, a high-speed link to HK International Airport, passengers can travel to China using intercity railway services. MTR Corporation is also involved in developing residential and commercial projects, property leasing and management, advertising, telecommunications and international consultancy services.

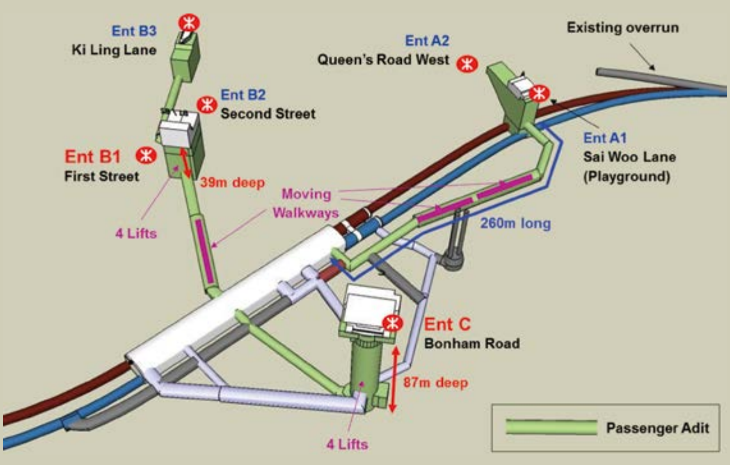
The West Island Line (WIL) is a 3km long underground extension of the existing MTR Island Line and comprises 3 new stations (Sai Ying Pun, HKU & Kennedy Town). Construction started in July 2009 with a budget of HK$18.5 Billion (2014



Section through Sai Ying Pun station showing how the low, mid and high levels are connected though the station. To provide connectivity across the steep terrain of Hong Kong Island deep entrances accessible via passenger lifts provide access to the station. A similar approach is adopted at HKU Station.

prices). Designed as a community railway, WIL extends train service to the densely populated Western District, thus relieving traffic congestion and shorten journey times for commuters. WIL also includes a number of features that respond to the needs of the local community, including a convenient above-ground and underground pedestrian network to connect upper and lower hillside areas of the Western Mid-Levels; lifts and escalators to improve pedestrian accessibility; a mini-bus interchange and local park area built outside Kennedy Town Station; station artwork projects; the re-provisioning, modification and improvement of affected local services such as a new public swimming pool and new rehabilitation centre.

The project includes community based artworks in the station interiors that celebrate the local heritage of each station location and actively engaged community participation with local artists in developing the designs. The design of the station entrances (including lift-only access for deep entrances at HKU and Sai Ying Pun) and adits provides convenient and sheltered connection between upper and lower hillside levels and the University of Hong Kong.



Diagrammatic layout of Sai Ying Pun Station showing the complex network of tunnels built for passenger access, ventilation and construction purposes.

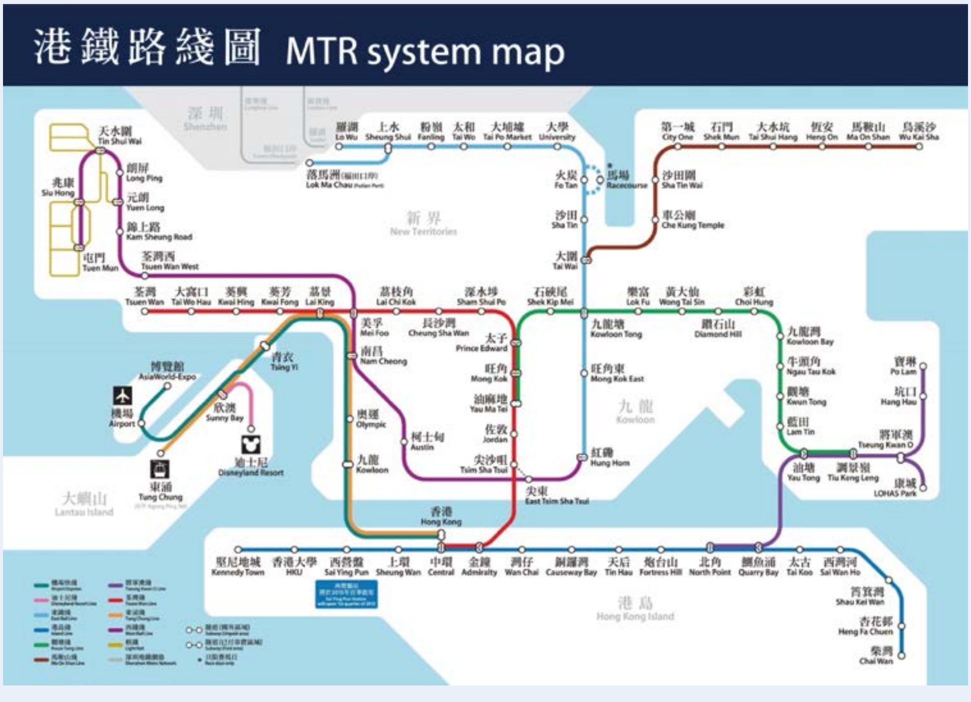
Customer interface and passenger experience were key design considerations for the WIL project. A new generation of station components, including Customer Service Centre, Ticket Machine, Ticket Gate, Payphone Stand and Braille Map with fluid futuristic forms successfully address passenger ergonomics and functional requirements. The artwork programme, reflecting the surrounding neighbourhood and involving local community groups through photo competitions and collaboration with local schools, provides an enduring connection with the local community in recognition of their strong support for the project. In order to obtain the necessary sites for the construction of stations and entrances, ageing community facilities including parks, medical facilities and a swimming pool complex have been re-provided to the latest standard, also contributing to community well-being.

Due to the steep terrain and space limitations in the dense urban environment of HK Island, the WIL station entrances are strategically located at upper, mid and lower hillsides levels, enabling vertical and horizontal connectivity not only to the railway but also between communities through the unpaid links at stations. Efficient vertical circulation is achieved by lift only entrances, typically containing four passenger lifts, but containing eight lifts for the connection to the University of Hong Kong with fully integrated circulation for the station and the university. Some lifts are mobilised in an emergency for lift-assisted evacuation for those who may be trapped in a connecting adit, a first for HK. Evacuation in the station and entrance adits is supported by intelligent emergency signs which, depending on the fire scenario, will guide evacuees away from the fire scene.

WIL is a Community Railway offering an enhanced transport system for the Western District in order to reduce road congestion, improve journey times and encourage economic development and urban renewal. Planning and design took place with a high degree of interaction and engagement with local communities as well as respect for local community values and aspirations.

Since the opening (Kennedy Town and HKU Stations) on 28 December 2014, WIL brings faster journeys; just 7 minutes to travel from Kennedy Town to Sheung Wan and 15 minutes to Causeway Bay, a fraction of the road journey times. With Sai Ying Pun Station opening on 29 March 2015, more than 90% of the district's population will be within walking distance of one of the three new stations, providing access to the convenience and reliability of the entire MTR network to the Western District.

http://www.mtr-westislandline.hk/en/home/



BTS/Green Line and Extensions Thailand

(Taksin-Wongwian Yai-Bang Wha (Phet Kasem) and On Nuj-Bearing)

Photo：Narabodee Salatoom

In 1991, the Bangkok Metropolitan Administration (BMA) initiated the first city rail mass transit system in Thailand. The concessionaire, Bangkok Mass Transit System PLC (BTSC), started the financing, design, and construction of the system in 1992 and began its operation along two routes (Silom Line and Sukhumvit Line), totaling 23.5km and 23 stations, in 1999; the system now serves 500,000 passengers daily.

The following extensions were constructed by the BMA and are now in operation:

Silom Extension (Taksin-Wongwien Yai: 2.2km, two stations, opened in 2009;
Wongwien Yai-Phet Kasem: 5.2km, four stations, opened in 2012)

Sukhumvit Extension (On Nut-Bearing: 5.3km, five stations, opened in 2011)

These extensions include several innovations, such as:

On Nut-Bearing:
- the first mass transit link to a nearby province (Samut Prakarn)
- use of new patented track plinths (rail sleepers) and barrette piles

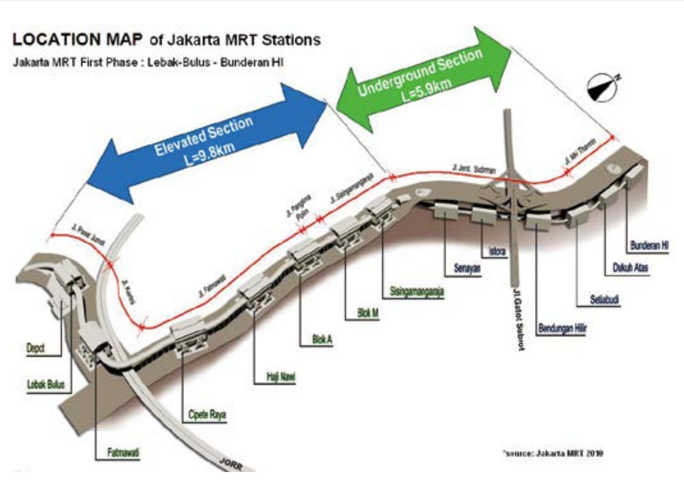
Taksin-Phet Kasem:
- the first mass transit across the Chao Phraya River
- the first single large-long bored piles for train foundation

Constructing the elevated railway without closing off street traffic and while maintaining traffic flow was not an easy task. Strict control of potential falling materials was a crucial part of construction works. In addition, traffic management during the construction stages required extensive public relations and coordination. A new public-private partnership (PPP) scheme (to cover the gross cost/pay for the provision of trains, an automatic fare-collection system, and the operating cost at a specified price per month) was introduced, and was the first of its kind in Thailand.

At present, the monthly fare collected for the extensions is about 75 million baht, which requires a subsidy from the BMA at 75 million baht at a flat fare collection rate of 10 baht to serve the additional 130,000 passengers per day on the Sukhumvit Extension and 120,000 on the Silom Extension. However, other Sukhumvit Extensions (Bearing-Samut Prakan and Mo Chit-Saphan Mai-Lam Looka) are implemented by the Government (Mass Rapid Transit Authority of Thailand (MRTA)).

MRT Jakarta
Indonesia

Photo：Indonesia Transportation Society (ITS)



Preparation for construction work field station (kingpost) on the MRT construction area in Jakarta began in March 2015.

Kingpost job is a continuation of the process of the work underground station wall (D-Wall) which is now nearing completion. Kingpost is a temporary structure that is needed to sustain the surface layer soil during excavation of underground space station by the method of the Top-Down Excavation. Kingpost will serve temporarily vertical burden for doing column structure permanent job. Kingpost workmanship in Indonesia roundabout will be done in parallel with the completion.

D-Wall jobs for Mechanical & Electrical Corridor. While the D-Wall work for station box has been completed. For information, the work has been first kingpost performed on the MRT construction area along the corridor underground station (Senayan, Sports Stadium, Benhil, Setiabudi, and Dukuh Atas) since mid-January 2015 ago. However, kingpost work in these areas did not give significant impact on changes Traffic Engineering Management (MRLL) throughout the region. Special work kingpost on the roundabout will give significant changes to traffic in around the area.

Bangkok
Bus Rapid Transit (BRT)
Thailand

Photo：Narabodee Salatoom


Bangkok BRT, which represents a new feeder mode of transportation, was introduced to Bangkok in the form of a Guided Bus in 1991, and various studies were conducted until the first BRT line began construction in 2007 and operation in 2010, with strong will on policy of the Bangkok Governor and heavy public relations and public participation activities.

Reducing private car use via the provision of this feeder transit was the main objective of the project, and was met with a positive response from public transportation users and other feeder operators (ordinary buses, taxis, and public motorcycles). However, criticisms was cited by car drivers along the route, which acquired one parking-prohibited traffic lane for BRT; the exclusivity of this lane for BRT has since been relaxed.

Bangkok BRT Line I: 402 (Sathorn-Narathiwas) was designed for 2,000 passenger per hour per direction and equipped with standard BRT facilities: CNG EURO III bus (230hp, air conditioned, high floor (with emergency steps), 20 seated and 60 standee passengers (with two wheelchair locks), 1.5 m. slide doors on both sides with GPS, CCTV, and PA system). 8 km exclusive lane for the 15 km route; there are 12 stations (two of which are air conditioned, and have CCTV, chairlifts, and ramps), automatic fare collection, a light-maintenance depot with mobile CNG station and control center, and an elevated plaza connected to the BTS station. The co-benefits estimated by Institute of Global Environment Strategy (IGES) are 9,700 million baht per year.

In 2015, there were 22,000 passengers per day, at a flat fare of 5 baht per trip; Bangkok Metropolitan Administration subsidizes operation of the 25-bus fleet at 5-15 minutes' headway between the 06:00-24:00 service hours of Krungthep Thanakom Co., Ltd. at 15 million baht monthly. Bangkok BRT was unofficially scored and ranked as conforming to the BRT Standard in 2014, which required operational improvements to the system. However, additional investigation and more research is needed to verify the success of the system and to provide a basis for the next line to be built in Bangkok or elsewhere in Thailand.

ERP: Electronic Road Pricing Singapore

Photo: Centre for Transportation Research, National University of Singapore

The ERP (Electronic Road Pricing) system of Singapore was put into full operation in September 1998. In this system, each vehicle passing an ERP gantry during the operating hours will be charged a fee under a differentiated pricing according to vehicle type and time of the day. The ERP system is fully automated. Each vehicle is installed with a device known as the In-vehicle Unit (IU) attached to its windscreen. A pre-paid stored value card (Cashcard) is inserted into the IU which interacts with the equipment on the ERP gantries erected at the pricing points to enable the electronic fee payment.

The ERP system provides the needed flexibility for traffic congestion management by varying the charges to be applied in different time windows, and different road sections. This flexibility enables a road pricing strategy to be implemented to regulate traffic conditions and levels of congestion throughout its operating hours. The rate of charges can be varied over multiple time periods within the operating hours in a day. The time period can be as short as 30 minutes.

Distinguished Expressway China

Photo：Liubin

Photo：Liubin

Photo：Guanhaiyan

Six Qin Expressway

The Six Qin Expressway is the first nautically inspired highway in Guangxi Province.

Different from the common highway, Six Qin Expressway's road divider and anti-collision steel bars are blue with white columns, giving one a sense that the ocean is near. Each toll station along the route is also designed in a marine style, with a white toll station, using the membrane structure to make the top marine atmosphere of the other, such as windsurfing, birds etc.

Photo：Guanhaiyan

Yu Rong Expressway

The Yu Rong expressway, an expressway from Chongqing to Chengdu in the Sichuan Province, is the first low-carbon expressway in China.

The expressway is designed with low-carbon technology, including the construction of low carbon, low carbon road tunnel, low carbon service area, ETC fees and travel information system, forest carbon sink and a high speed solar lighting system.

The National Highway Network Plans (2013 -2030)

The total size of the national highway network is planned to be 401,000 km in length, consisting of the general national highway and the national expressway.

(1) General national highway network

Composed of 12 capitals, 47 North-South lines, 60 East-West lines, and 81 contact lines. The total mileage is about 265,000 km.

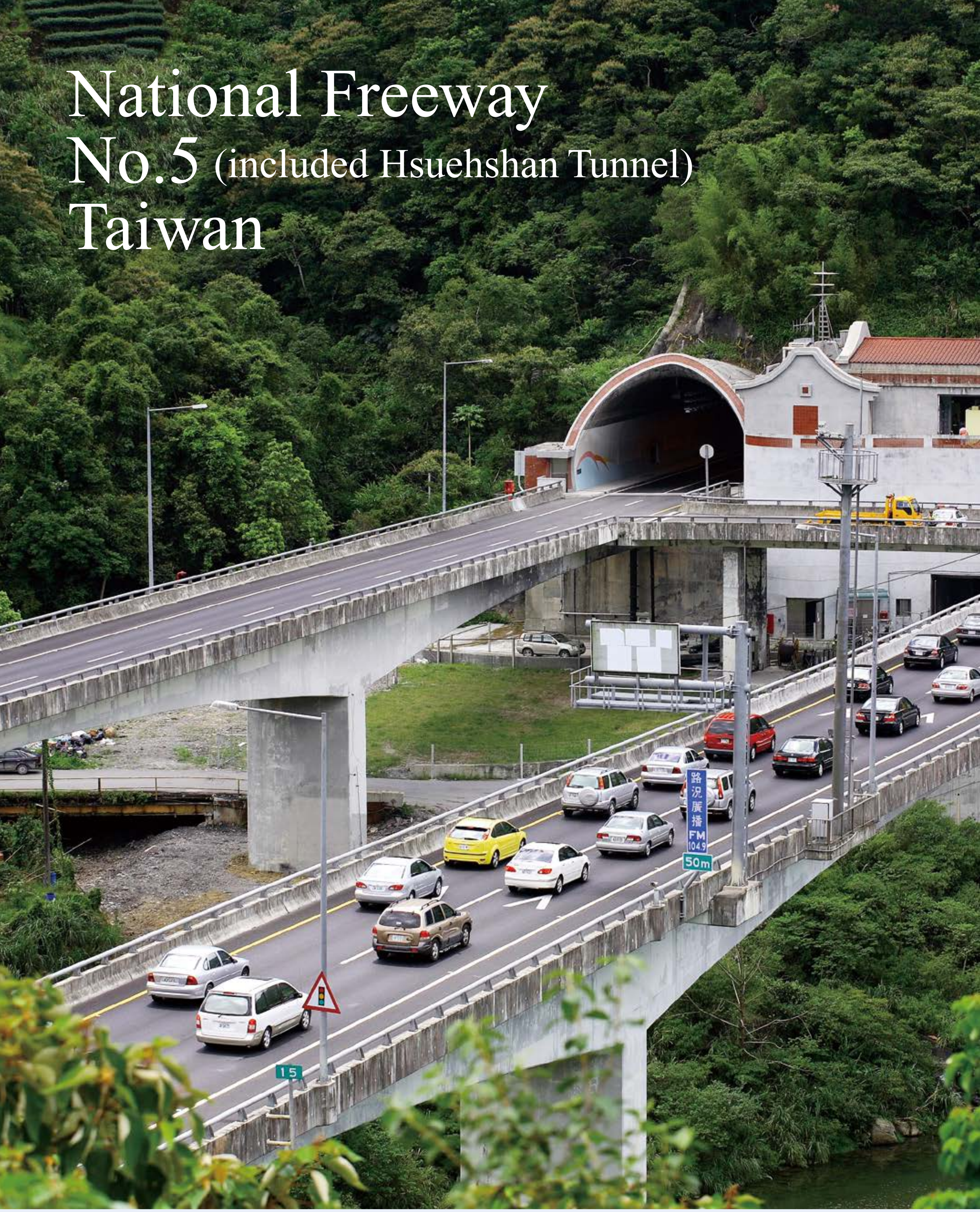
(2) National expressway network

Composed of 7 capitals, 11 North-South lines, 18 East-West lines, parallel lines, regional lines, and the contact line etc. The total mileage is about 118,000 km, in the long-term an additional 18,000 km of lines may be added.

China Highway Map

Photo：Liubin

National Freeway No.5 (included Hsuehshan Tunnel) Taiwan



North Portal of Hsuehshan Tunnel

History

Since 1982, in order to accelerate the development of eastern Taiwan, the government had been investigating the feasibility of constructing an Expressway between Taipei and Ilan. The Hsuehshan Tunnel is part of National Freeway No.5 that penetrates through the Hsuehshan Mountain Range in the northeast Taiwan. This tunnel reduces the traveling time between Taipei and Ilan from 2 hours to 40 minutes. After opening in 2006, the volume of traffic from Highway No.9 has shifted 60%-80% to the Hsuehshan tunnel.

Not only has National Freeway No.5 improved the transportation efficiency between the eastern coast and the western gallery of Taiwan, but it also has reduced gasoline consumption and carbon dioxide emission, therefore, protecting the environment.

The Project

The National Express No. 5 project includes two sections, the Nangang-Touchen Section and the Touchen-Suao Section. The total length is 55 km and the construction cost, NT 88.1 billion dollars (around 2.9 billion USD).

The Hsuehshan tunnel, currently the fifth longest in the world, is a 12.9 km-long road tunnel. Due to geological conditions and high pressure underground water, this project was extremely difficult.

Construction began in 1991 and opened in 2006. National Freeway No.5 provides the Nanyang plain and western Taiwan with a rapid, safe and reliable channel. It integrates Ilan's local industry and tourism resources with an efficient transportation system. It also enhances economic devolvement, adequately utilizes land resources and improves the inland exchange function of the Suao Port.

Layout of Hsuehshan tunnel

Photo：Chinese Institute of Transportation (CIT)

Christchurch International Airport
– Bringing the World South
New Zealand

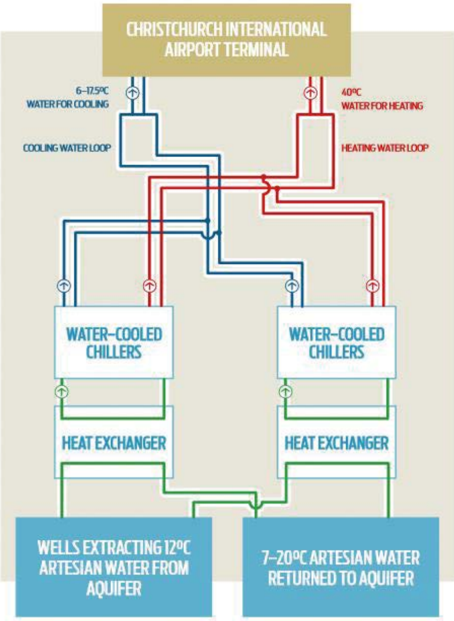
Photo：Christchurch International Airport

Christchurch International Airport, the gateway to New Zealand's South Island, replaced its original 1960s terminal with a new terminal, completed in 2013, and which for more than ten consecutive quarters since has been independently rated by travellers as the best airport in Australasia.

The airport is New Zealand's second largest airport, located on the South Island's east coast and is the South Island's only wide-body and military capable airport. It welcomes around six million passengers a year. Another five million come through the airport to greet and farewell those passengers, so that's around 11 million visitors to the campus per year. Christchurch is also the aerial gateway to the Antarctic, with more than 100 direct flights each year moving more than 5500 passengers and 1400 tonnes of cargo.

While the old terminal was designed to handle around 200,000 passengers per year, the new facility welcomes that number every 13 days. Increasing passenger numbers was only one factor behind the makeover - rapid responses to new technology integrated to facilitate faster processing of passengers and the opportunity to upgrade and reduce energy consumption systems for the 24-hour non-curfewed airport were all factored into the design.

The new terminal was built in stages over and around the old one. During construction, approximately 44 million visitors walked through the terminal and almost 300,000 commercial flights operated through it. Most remarkably, in spite of 11,000



earthquakes during the construction period, snow storms, volcanic ash clouds and other unforeseen events, the NZ$237M development was completed within one per cent of the budget set in 2009.

The new building replaced the old domestic terminal as well as the international check-in and new $15M baggage handling infrastructure. International departure and arrival areas were already adequately sized, so did not need replacement. The new building is located across the same footprint as the old building and has been integrated into the existing international building. Common or “integrated” facilities shared by domestic and international operations are a design feature and well received by airlines and travellers alike.

A significant challenge and success of the project was the careful staging required to allow airline operations to continue unaffected during the four years of construction. Practical completion of the first stage occurred in April 2011 and the final stage (the domestic operation upgraded, rebuilt and connected to international operations) in March 2013.

Environmental innovation

The new airport terminal is a sustainable and efficient operation and meets the airport company’s environmental policies. One of the many awards this new terminal has won is for its revolutionary artesian heating and cooling system. The system received industry recognition and won “Best In Class” and “International Project of the Year” at the 2015 CIBSE (Chartered Institute of Building Services Engineers) Building Performance Awards – an international affair (www.cibse.org) which recognises engineering excellence in the built environment, with an emphasis on energy efficiency.

The essence of the system is the use of artesian water that flows beneath the city of Christchurch and the Canterbury Plains. Easily accessible through wells, the artesian water provides the airport with a cost-effective, long-term heating and cooling solution and a super-efficient, sustainable energy source when used in this manner. LPG, diesel and cooling tower requirements could be eliminated, maintenance costs were reduced, and because the same energy is used for both heating and cooling, it can be up to five times more efficient than standard systems. For every 1kW put in, up to 5kW of energy is transferred.

Chillers act as geothermal heat pumps and provide both mechanical cooling and heating. This innovative system enables the 12°C artesian water to be used for direct cooling. As well as enabling the chillers to heat or cool the building at any one time, the system can also recover and

redistribute heat energy. The system helps the terminal building's temperature to remain constant, improving the experience of the millions of passengers who pass through the airport each year.

Economic and financial factors

Locally, 6000 people are employed on the airport campus in full time, part time or casual roles, making it the largest single centre of employment in the South Island. The airport also creates employment for more than 20,000 full time equivalents on and off campus.

The airport handles around 26,000 tonnes of international airfreight per annum. Around two-thirds of Christchurch's international passengers are international visitors to the South Island and New Zealand, so the airport is also the home to the majority of the South Island's rental vehicle fleet.

There is a symbiotic relationship between the South Island's visitor economy (worth approximately NZ$5.8b p.a. and generating 62,000 jobs), wide body international air capacity through Christchurch Airport and international air freight opportunities for the South Island's productive sectors.

Around 70% of international visitors arriving into Christchurch visit other regions in the South Island.

In other words, statistics show when Christchurch is the entry point for international visitors to New Zealand, they stay longer and spend more than if they enter through any other point.

The economic impact of the airport is clearly important, but it is more than simply a piece of infrastructure – the architects captured the panoramic view to the Southern Alps from the international departure lounge. When walking through the jetways (also known as airbridges) to or from the aircraft amid birdsong and panoramic floor-to-ceiling imagery of South Island landscapes, passengers are instantly reminded of what makes this country special, a very unique experience not found anywhere else.

Photo：Incheon International Airport Corporation

Incheon International Airport Korea

Brief history

In the 1990s, it became apparent that Gimpo International Airport could not cope with the increase in air traffic to Korea after Seoul Olympics in 1988. Construction for the Incheon airport began in 1992 to reduce the load on the international airport. It was constructed on the reclaimed land between Yeongjong Island and Youngyu Island and took more than eight years to complete the construction. The airport was officially open in March 2001.

Project outline

Air traffic had increased markedly since the airport was released, and it became apparent that the airport would be saturated in 2002. As a result, the construction of the second phase was initiated in November 2002 and completed in July 2008. Also, the 3rd Phase of construction started in 2009 and this 5-billion-USD project will be completed by 2017. The airport will be able to handle with 62 million passengers and 5.8 tons of cargo. Also, the airport aims to be one of the top ten busiest in the world by 2020.

Planning process

The airport could contain up to 30 million passengers per year and 2.7 million metric tons for a cargo yearly in phase 1. A passenger terminal of which a floor space is 496,000 square meters, two parallel runways, a control tower, an administrative building, an integrated transportation center as well as an integrated operations center, three cargo terminals, an international business center and a government office were constructed.

Another construction started in 2002 and completed on 20 June, 2008 to increase the capacity. During this phase, a 4,000-meter-long runway and a 13-hectare cargo terminal area were added. A 165-thousand-square-meter-wide concourse was connected to the main passenger building via two parallel 870-meter-long underground passageways by a Mitsubishi Crystal Mover shuttle train (Automated People Mover).

The South Korean government planned to add a second passenger terminal in the northern field of the airport, and expand its existing cargo terminal and other infrastructure for Phase 3. The terminals are connected with each other by the underground train, which currently links the first terminal and the concourse. Construction for Phase 3 began in 2009 with completion targeted for 2017.

Extending a railway line was complete to the center of Seoul, Seoul Station, more than 60 kilometers (37 mi) away from the airport in 2010. Plans for Incheon's expansion also include adding more aprons to park planes. If the airport is not capable of accommodating passengers or cargos, the airport plans to expand the existing passenger terminals, gates, concourses and runways including an exclusive runway for cargo.

Successful factors

There are many successful factors of Incheon International Airports such as the quick response from the problems or the remote boarding process at City Airport in Seoul, but one of the most pivotal factors can be various transportation modes to satisfy customers' needs for those who do not bring their passenger cars or use taxis.

Limousine buses or airport buses are the major transportation modes to reach the airport when passengers do not use their vehicles or taxis. They are available outside of the arrival areas on the first floor. The prices are various up to the destinations and the types of the buses. Most airport buses head to Seoul from Incheon including Korean Airlines Limousine buses, and some city buses head to Incheon or Bucheon. Intercity buses are served heading to the major cities in Korea. Rails are also served to the airport from the Seoul Station thanks to the commuter railway stations and express railway stations. Passengers can also reach the airport using Korea train express which connects to various provinces of Korea.

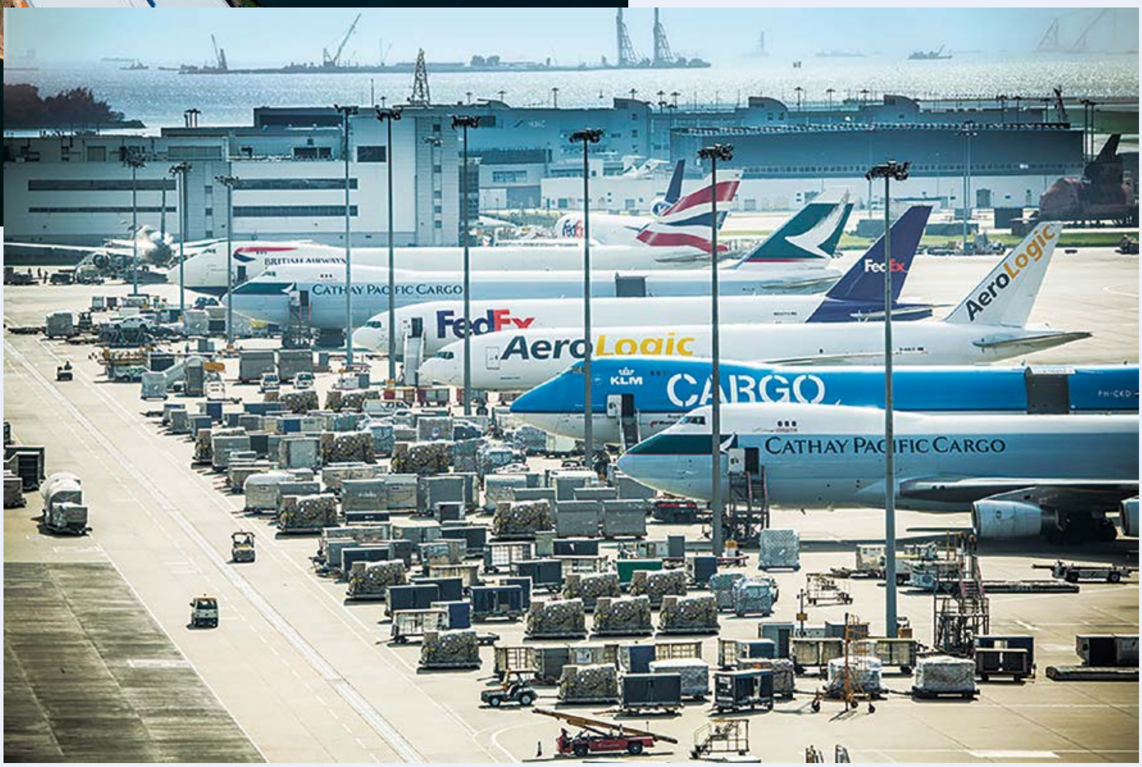
Source: Wikipedia.http://en.wikipedia.org/wiki/Incheon_International_Airport

Hong Kong International Airport
Hong Kong

The Hong Kong International Airport (HKIA) is an architectural icon as well as a landmark in Hong Kong. Since its opening in July 2008, HKIA has built an extensive global air network of approximately 180 destinations, including 45 in the Mainland, and convenient connections to the Pearl River Delta region via land and sea transport, strengthening Hong Kong's status as an international and regional aviation hub.

In 2014, HKIA served 63.3 million passengers and handled 4.38 million tonnes of cargo and 391,000 aircraft movements, making it the busiest cargo gateway in the world for the fifth consecutive year, and one of the world's busiest passenger airports. With high standards of safety, security, efficiency and customer service, HKIA has been awarded the title of world's best airport almost 60 times.

Photos : Airport Authority Hong Kong
相片提供 : 香港機場管理局



Photo：JICA

Nhật Tân Bridge Vietnam

Photo：Tuan Phan

Photo：JICA

Photo：JICA

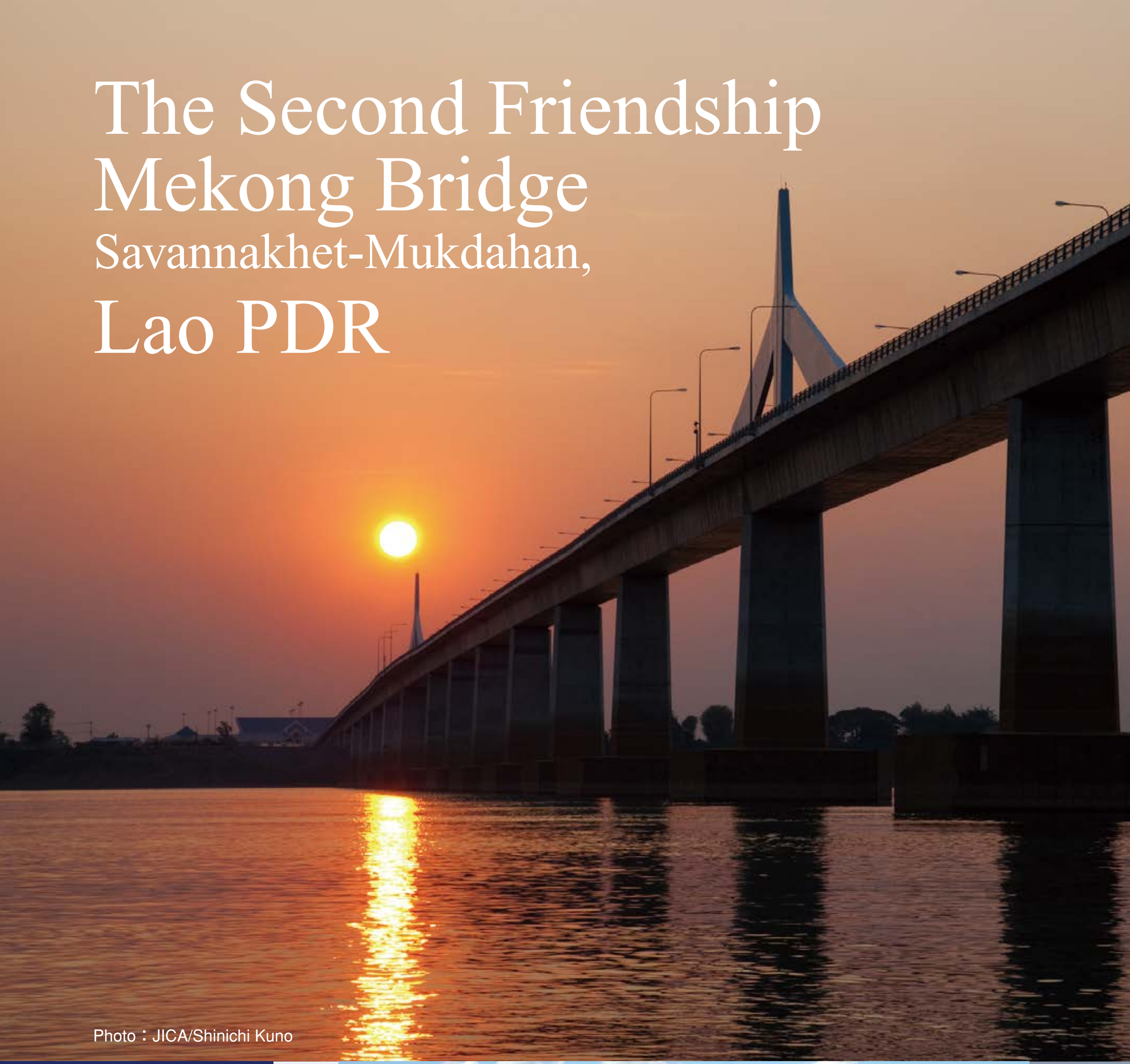
Photo：Chau Nhu Quynh, Dantri.com

The Nhật Tân Bridge is 8,930m long and has a total budget of 13,626 billion VND. This project starts from Phu Thuong ward, Tay Ho District to intersect with National Highway No.3 at Vinh Ngoc commune, Dong Anh District. The project includes three parts: the main bridge, which is a cable-stay bridge with five tower pillars symbolizing the five doors of Ha Noi City, and two approaching highways from the north and south. The main bridge, which crosses the Red River, is 3,755m long, with six lanes that total 33.2m wide. The approaching highways have a total length of 5,170m with three interchanges.

The build project ran from 2009 to 2014, and the bridge was officially inaugurated on 4th January 2015. The project was the result of support from and cooperation with the Japanese Government, and is a symbol of Japanese-Vietnamese friendship.

The Second Friendship Mekong Bridge

Savannakhet-Mukdahan, Lao PDR



Photo：JICA/Shinichi Kuno

Photo：JICA

Photo：JICA/Shinichi Kuno

History

Lao PDR and Thailand have long shared the Mekong as the border between the two countries, but did not have a bridge to facilitate transportation. In 1994, the First Mekong Bridge between Vientiane and Nongkhai was inaugurated and opened. This bridge is now significant for the rapid socio-economic development of Vientiane.

The Second Friendship Mekong Bridge began operation in 2006 after two years and 10 months of construction supported financially by JICA. The design of the bridge is reminiscent of the cultural characteristics of the two countries, and incorporates the clasped hand symbol.

This bridge represents the great aspirations of the people of the two countries (Laos and Thailand) and corresponds to the regional cooperation development trends according to the East-West Economic Corridor Integration. Therefore, the Second Friendship Mekong Bridge plays an important role, especially since Lao PDR does not have a sea border. With these new facilities, Lao PDR can develop its potential in terms of transportation, trade, and tourism between countries, obtaining mutual benefits that lead to new factors that contribute to the growth of each country in this Southeast Asian region. This bridge will enhance understanding between the people of the four connected countries (Laos, Thailand Vietnam, and Myanmar), thereby strengthening economic exchange in areas such as trade, tourism, and transportation itself. This also means that the four countries are cooperating towards strategic objectives in order to develop the regional economic cooperation of the Mekong sub-region. This infrastructural integration connects the neighboring countries via the transportation infrastructure, electrical cables, and networks of telecommunication. The Second Friendship Mekong Bridge is also a symbol of the cooperation between Japan, Laos, and Thailand.

Project Timeline: 2002 -2012 with construction commenced in 2009 **Five phases**

Phase 1:
New southbound bridge is built on the north-eastern (harbour) side of the original viaduct

Phase 2:
New southbound carriageway opens (Sept 2010)

Phase 3:
Original southbound viaduct is deconstructed

Phase 4:
New northbound bridge is built in place of the original southbound viaduct and connected to the southbound bridge (Dec 2011)

Photo: Greg Kempthorne

The Newmarket Viaduct Replacement Auckland, New Zealand

The Newmarket Viaduct is a part of the Auckland motorway system and one of the busiest stretches of road in New Zealand. The viaduct is 690m long and carries around 160,000 vehicles daily more than 20m above the busy retail suburb of Newmarket. The original 1960s structure was beginning to show signs of wear and tear, leading to an extensive inspection and assessment studies (2002-2006). The conclusion was that widening and strengthening would be possible but expensive and some of the inherent seismic weaknesses would remain. Given the importance of this transport corridor, the decision was made to replace it, with the major requirement and challenge being to complete this task without traffic disruption. To do this effectively required the very best of planning and engineering teamwork, associated with close liaison with the community, including Iwi groups. New Zealand is unique in regard to its planning regime having adopted the Resource Management Act (RMA) in 1991 promoting sustainable management of natural and physical resources such as land, air and water. Section 6 and 7 of the Act concentrate specifically on matters of national importance such as Maori culture, traditions and ancestral lands. The Newmarket Viaduct Replacement Project included substantial consultation with Iwi as the area was also home to two sacred springs as well as caves and lava tunnels used by Maori as burial sites.

In terms of key improvements, the new viaduct, completed in December 2012, was designed to provide the following significant enhancements:

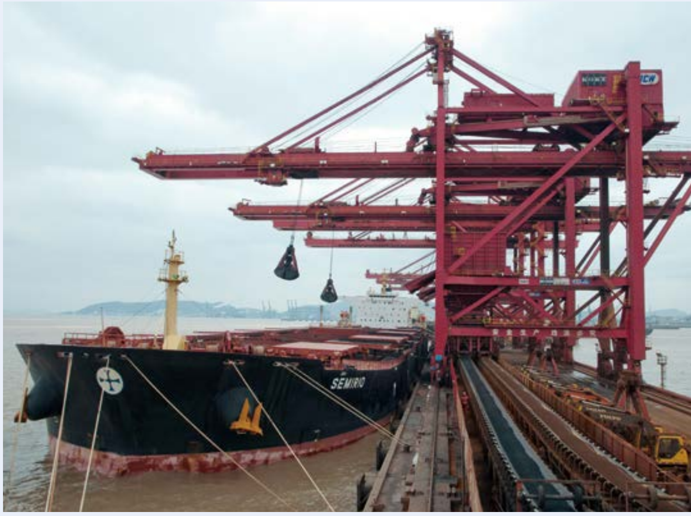
- Improved seismic performance to cater for a 1:2500 year earthquake
- Increased traffic load capacity: to allow for higher weight vehicles (up to 65to)
- Solid edge barriers: to provide improved protection and reduce traffic noise
- Four lanes southbound instead of three
- Only two expansion joints: compared to six on original viaduct
- Open grade porous asphalt (OGPA) surfacing: to reduce traffic noise and improve skid resistance
- Longer Spans and fewer piers: for greater visual appeal and more open space

Despite the risk magnitude of this project, the alliance maintained an excellent health and safety record with no major injuries. Winning 22 national and international industry awards gave recognition to the achievements of the NGA Newmarket alliance comprising the NZ Transport Agency with Fulton Hogan, Leighton Contractors, VSL, URS, BECA, Tonkin & Taylor and Boffa Miskell.

Phase 5:
Northbound traffic moves to new carriageway. Original northbound lanes deconstructed to reveal new seven-lane Newmarket viaduct. Southbound lanes widened to 3.5m (Dec 2012)

Ningbo - Zhoushan Port China

Photo：Hanjie



Photo：Zhanghan

By the end of 2014, the number of berths for production in Chinese ports reached 31,705. Among them are 5,834 production berths in coastal ports and 25,871 berths of inland port production. The number of million tons and above berths reached 2,110. The annual national port cargo volumes run up to 124.52 million tons. The national port complete passenger throughput is 1.83 million people.

The global top 10 port cargo throughput statistical rankings revealed that, except for the third and ninth place, Chinese ports filled all the remaining spots. China's port cargo throughput accounts for 81.51% of the world's top ten cargo throughput and this number continues to rise.

Ningbo - Zhoushan Port is an important hub of China's major coastal ports and national comprehensive transportation system. In 2014, Ningbo - Zhoushan Port completed cargo throughput of 8.73465 billion tons. The year-on-year growth reached 7.9%, completed foreign trade cargo throughput of 4.18816 billion tons, growing by 9%, and completed container throughput of 1945 million TEUs, with year-on-year growth of 12%.

Teluk Lamong Multipurpose Indonesia

Indonesia is a big maritime country would need a lot of sea ports. Major ports are being worked on. One of the major ports which have been completed in 2014 is Teluk (Bay Harbor) Lamong in Gresik, East Java as Multipurpose Terminal port. Teluk Lamong port is intended to accommodate the inability Port of Tanjung Perak Surabaya Construction Cost of Teluk Lamong Port is IDR 3,29 trillion (USD 366 million).

Soft operate in July 2014 and full operate in September 2014. Grand opening 22 May 2015. Draft water 14 meter low water spring (LWS) or vessel max 60.000 DWT. Capacity of loaded: 1.500.000 TEUs / year (stage I) or 67.000 MV / year.

Terminal Port

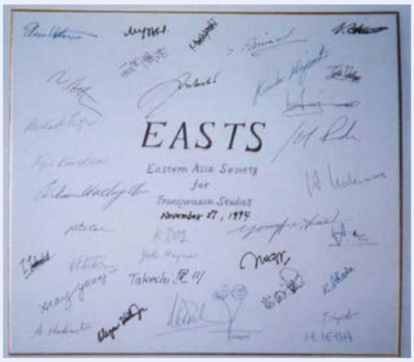
Photo：Eric Ireng

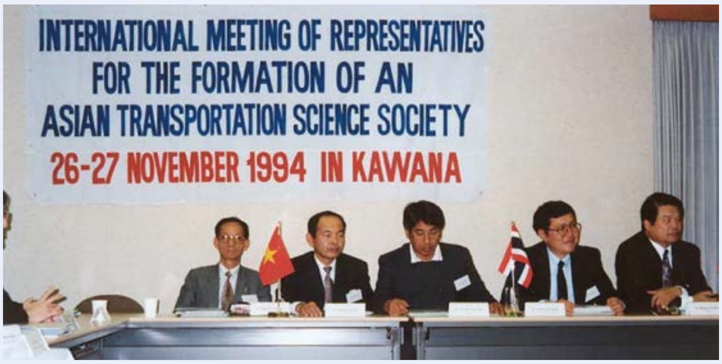
Brief History of EASTS

About the Society

EASTS (Eastern Asia Society for Transportation Studies) is an international cooperative society of researchers and practitioners from the Eastern Asian region with its headquarters in Tokyo, Japan. It was founded in November 1994. Its primary objectives are to foster and support excellence in transportation research and practice and to stimulate professional interchanges in all aspects and modes of transportation. It organizes an international conference on transportation studies once every two years.

Currently, there are 18 member domestic societies. It is expected more countries/regions to become member domestic societies.





Foundation Meeting in Kawana, Japan in 1994

Member Domestic Societies

Country/Region	Name of Society and History of Board Member	Since
Australia	National Committee on Transport Engineering Michael A.P. TAYLOR (1994-2006), Wen Long YUE (2007-)	1994
Cambodia	Cambodia Society for Transportation Studies Chhouk Chhay HORNG (2009-)	2009
China	Society for Transportation and Logistics Studies, CCTA De Rong WANG (2003-)	2003
Hong Kong	Hong Kong Society for Transportation Studies William H. K. LAM (1995-)	1994
Indonesia	Indonesia Transportation Society Sutanto SOEHODHO (1994), Komardin M.A. (1995), Suyono DIKUN (1996-2003), Bambang SUSANTONO (2005-2009), Danang PARIKESIT (2010-)	1994
Japan	EASTS-Japan Hideo NAKAMURA (1994-1998), Shigeru MORICHI (1999-2004), Hajime INAMURA (2005-2009), Haruo ISHIDA (2010-)	1994
Korea	Korean Society of Transportation Yong-Jae LEE (1994), Inwon LEE (1995-2000), Kyung Soo CHON (2001–2003), Joong Rae CHO (2004-2005), Kwang Sik KIM (2005-2006), Yong Jae LEE (2007-2008), Young Tae OH (2009-2010), Seung-Young KHO (2011-2012), Ki-Hyuk KIM (2013-2014), Youngchan KIM (2015-)	1994
Lao PDR	Lao-EASTS Khanngeun KHAMVONGSA (1995-2008), Sengsavang PHANDANOUVONG (2009-2010), Bounleuam SISOULATH (2011-)	1997
Malaysia	Transportation Science Society of Malaysia Mohd Yusoff Hj. SULAIMAN (1994) , Mohamed Rehan KARIM (1995-)	1994
Mongolia	Mongolian Transport Research Society Asralt BUYANTSOGT (2009-)	2008
Myanmar	Committee on Myanmar Transportation Studies Khin Than YU (2009-)	2009
Nepal	Society of Transport Engineers, Nepal Surya Raj ACHARYA (2014-)	2014
New Zealand	EASTS New Zealand Olegario VILLORIA, Jr (1994-1997), Chris KISSLING (1998-2012), Jean-Paul THULL (2013-)	1994
Philippines	Transportation Science Society of the Philippines Primitivo C. CAL (1994-2004), George D. ESGUERRA (2005-2006), Crispin DIAZ (2007-2011), Hussein Sinsuat LIDASAN (2012-2013), Reynaldo B. VEA (2014-)	1994
Singapore	Centre for Transportation Research/Institute of Engineers Singapore Tien-Fang FWA (1994-)	1994
Taiwan	Chinese Institute of Transportation Wilson Wucheng CHEN (1994), Chia-Juch CHANG (1995), Chi-Kuo MAO (1996), Chia-Pei CHOU (1997), Yi John SUN (1998), Cheng-Min FENG (1999-2009), Wu Cheng CHEN (2010-2011), Hsin-Li CHANG (2012-2013), Shiaw-Shyan LUO (2014-)	1994
Thailand	Thai Society for Transportation and Traffic Studies Kanchit PHIU-NUAL (1994), Prapansak BURANAPRAPA (1995-2002), Yordphol TANABORIBOON (2003-2005), Pichai TANEERANANON (2006-)	1994
Vietnam	Transportation Studies Society of Vietnam Nguyen Xuan DAO (1994-2008), Tran Tuan HIEP (2009-)	1994

Board Meeting in 2004

History of EASTS Officers

Year	President	Vice-President (1st)	Vice-President (2nd)	Secretary General	Treasurer	Chair of ISC
1994	Hideo Nakamura	Primitivo C. Cal	Inwon Lee	Shigeru Morichi	-	Hajime Inamura
1995	Hideo Nakamura	Primitivo C. Cal	Inwon Lee	Shigeru Morichi	Shigeru Morichi	Hajime Inamura
1996	Hideo Nakamura	Primitivo C. Cal	Inwon Lee	Shigeru Morichi	Shigeru Morichi	Hajime Inamura
1997	Hideo Nakamura	Primitivo C. Cal	Inwon Lee	Shigeru Morichi	Shigeru Morichi	Hajime Inamura
1998	Primitivo C. Cal	Inwon Lee	Cheng-Min Feng	Shigeru Morichi	Haruo Ishida	Kazuaki Miyamoto
1999	Primitivo C. Cal	Inwon Lee	Cheng-Min Feng	Shigeru Morichi	Haruo Ishida	Kazuaki Miyamoto
2000	Primitivo C. Cal	Cheng-Min Feng	Nguyen Xuan Dao	Shigeru Morichi	Haruo Ishida	Kazuaki Miyamoto
2001	Primitivo C. Cal	Cheng-Min Feng	Nguyen Xuan Dao	Tetsuo Yai	Haruo Ishida	Kazuaki Miyamoto
2002	Primitivo C. Cal	Nguyen Xuan Dao	Shigeru Morichi	Tetsuo Yai	Haruo Ishida	Keiichi Satoh
2003	Primitivo C. Cal	Nguyen Xuan Dao	Shigeru Morichi	Tetsuo Yai	Haruo Ishida	Keiichi Satoh
2004	Shigeru Morichi	Nguyen Xuan Dao	Yordphol Tanaboriboon	Tetsuo Yai	Haruo Ishida	Keiichi Satoh
2005	Shigeru Morichi	Nguyen Xuan Dao	Yordphol Tanaboriboon	Tetsuo Yai	Haruo Ishida	Keiichi Satoh
2006	Shigeru Morichi	Yordphol Tanaboriboon	Derong Wang	Tetsuo Yai	Haruo Ishida	Hitoshi Ieda
2007	Shigeru Morichi	Pichai Taneerananon	Derong Wang	Tetsuo Yai	Haruo Ishida	Hitoshi Ieda
2008	Kyung Soo Chon	Pichai Taneerananon	Bambang Susantono	Tetsuo Yai	Haruo Ishida	Hitoshi Ieda
2009	Kyung Soo Chon	Pichai Taneerananon	Bambang Susantono	Tetsuo Yai	Haruo Ishida	Hitoshi Ieda
2010	Kyung Soo Chon	Pichai Taneerananon	Young Tae Oh	Tetsuo Yai	Kee Yeon Hwang	Hitoshi Ieda
2011	Kyung Soo Chon	Pichai Taneerananon	Young Tae Oh	Tetsuo Yai	Kee Yeon Hwang	Hitoshi Ieda
2012	Cheng-Min Feng	Pichai Taneerananon	Seung-Young Kho	Tetsuo Yai	Gyeng Chul Kim	Akimasa Fujiwara
2013	Cheng-Min Feng	Pichai Taneerananon	Seung-Young Kho	Tetsuo Yai	Gyeng Chul Kim	Akimasa Fujiwara
2014	Cheng-Min Feng	Pichai Taneerananon	Hussein Lidasan/ Reynaldo B. Vea	Tetsuo Yai	Tetsuro Hyodo	Akimasa Fujiwara
2015	Cheng-Min Feng	Pichai Taneerananon	Reynaldo B. Vea	Tetsuo Yai	Tetsuro Hyodo	Akimasa Fujiwara

Board Meeting in 2014

Journals

Asian Transport Studies (ATS) [ONLINE ISSN 2185-5560]

Asian Transport Studies (ATS) is the top-level journal published by EASTS. ATS aims at providing useful insights into solving Asia-specific transport-related issues from both theoretical and practical perspectives. It treats all types of transport modes and all issues in transport sector. Even though papers dealing with the Asia-specific issues are especially welcome, other papers related to transportation studies are also within the scope of this journal. Previously, *ATS* only accepted papers submitted to EASTS Conference and its acceptance was about 5%. From Volume 4, it will accept not only EASTS Conference papers, but also papers submitted from general authors.

URL: https://www.jstage.jst.go.jp/browse/eastsats

Journal of the Eastern Asia Society of Transportation Studies [ONLINE ISSN 1881-1124, ISSN 1341-8521]

This journal only accepts papers submitted to EASTS Conference.

URL: https://www.jstage.jst.go.jp/browse/easts

Proceedings of the Eastern Asia Society of Transportation Studies

Papers accepted to be presented at EASTS Conference will be published in this proceedings.

URL: https://www.jstage.jst.go.jp/browse/eastpro

The above EASTS journals are also available online on EASTS Web at www.easts.info.

Paper Awards

YASOSHIMA Yoshinosuke Prize and Best Paper Awards

Best Paper Awards are selected ONLY from Reviewed Papers (both academic and practical papers) that are submitted to EASTS Conference and evaluated to contribute excellently in one or more of the following areas, in addition to the standard paper review criteria.

(a) Enlightening Asia-specific topics
(b) Discovering interesting facts
(c) Technological innovation
(d) Institutional innovation
(e) Theoretical development
(f) Methodological development
(g) Best application in practices
(h) Difficult research accumulations

Best Paper Awards are given to a maximum of 10 papers. *YASOSHIMA Yoshinosuke Prize* can be given to the most excellent paper, if any, among the above papers.

International Research Group (IRG)

Several international cooperative research projects are being conducted as an International Research Group (IRG) approved by EASTS due to the increasing importance of international viewpoints in the transportation field. The IRG is expected to hold seminars and symposia as part of EASTS activities, and encouraged to apply for other funding sources and to coordinate with other organizations.

IRG ID	Research Theme	Research Group Leader
IRG-01-2005*	Sustainable Transport for East Asian Megacities (STREAM)	Dr. Shigeru Morichi, Institute for Transport Policy Studies
IRG-02-2005*	International, Inter-regional, and City Logistics Research Group in Wide Variety of Asian Region	Dr. T. F. Fwa, National University of Singapore
IRG-03-2005*	Dynamics of Poly-centric Employment Formation in East and Southeast Asian Cities	Dr. Yoshitsugu Hayashi, Nagoya University
IRG-04-2005*	Scale Free Characteristics of the Traffic Network (SCAFT)	Dr. Bijan Mojarrabi, Complex Adaptive Traffic and Transport Systems
IRG-05-2005*	Culturally Sensitive Pedestrian-centric Philosophy to Advancement of Urban Form in East Asia	Dr. Upali Vandebona, The University of New South Wales
IRG-06-2005*	Building ITS Development Scheme in Asian Context	Dr. Hisashi Uchiyama, Tokyo University of Science
IRG-07-2005*	Risk Management of Transport and Logistics for Natural Disasters and Mega Events	Dr. Cheng-Min Feng, National Chiao Tung University
IRG-08-2005*	Research on the Control Mechanism and Simulation of Safety Conditions of Perishable Foods Transportation and Logistics	Dr. Ruhe Xie, Guangzhou University
IRG-09-2006*	Economic Instruments in Sustainable Transport of Asia Cities (EISTAC)	Dr. Nguyen Zuan Dao, Vietnam Bridge and Road Scientific and Technological Association
IRG-10-2006*	Sustainable Neighborhood Transportation to Improve the Quality of Life in Developing Cities	Dr. Hisashi Kubota, Saitama University
IRG-11-2006*	Research on the Flow of International Air Cargo in East Asian Region	Dr. Shigeru Morichi, Institute for Transport Policy Studies
IRG-12-2008*	Private Sector Initiatives for Promoting Road Development in East Asian Countries (PRIME Project)	Dr. Danang Parikesit, Universitas Gadjah Mada
IRG-13-2008*	Improving a Tour Travel Demand Forecasting Method for Asian Countries	Dr. Yongtaek Lim, Chonnam National University

IRG ID	Research Theme	Research Group Leader
IRG-14-2009*	Platform for Transport and Environmental Information (PTEI)	Mr. Branko Stazic, University of South Australia
IRG-15-2009*	Sustainable Transport Futures for Cities in Asia and the Pacific	Dr. Iderlina Mateo-Babiano , The University of Queendland
IRG-16-2010*	Intercity Transport in Asian Countries (ITAC)	Dr. Shigeru Morichi, National Graduate Institute for Policy Studies
IRG-17-2011	Logistics in Asia: Interdependent Supply Chain and Advancement of Intelligent Management	Dr. Tetsuro Hyodo, Tokyo University of Marine Science and Technology
IRG-18-2012	Strategies for a Sustainable Transportation Path for Small and Medium-sized Cities in East Asia	Dr. Alexis M. Fillone, De La Salle University Manila
IRG-19-2012*	International Comparison Study on Alternative Fuels and Vehicles in East Asia	Dr. Karl B. N. Vergel, University of the Philippines
IRG-20-2012	Developing Safe and Green Urban Corridors in Asian Cities	Dr. Nan Zou, Shandong University
IRG-21-2013	Comparative Study on Quality Management for Public Transport Systems in Asian Cities (QM4PTA)	Dr. Vu Anh Tuan, Vietnamese German University
IRG-22-2013	Integrated sign systems for non-motorized transport and transit users	Dr. Hiroshi Tsukaguchi, Ritsumeikan University
IRG-23-2013	International Comparative Research on Value of Travel Time in Asia	Dr. Hironori Kato, The University of Tokyo
IRG-24-2013	Viability of Public Transport Harmonizing System with Para-Transit Modes	Dr. Tetsuo YAI, Tokyo Institute of Technology
IRG-25-2013	Mobile Millennium Asia: Mobile Productivity and Utility Tools for Inclusive Urban Mobility	Dr. Francis Aldrine A. Uy, Mapua Institute of Technology
IRG-26-2014	Institutions for Railway Development in Asian Cities (IRDAC)	Dr. Shigeru Morichi, National Graduate Institute for Policy Studies
IRG-27-2014	Research on Promoting Sustainable Rural Area Development through Roadside Station	Dr. Asralt Buyantsogt, Mongolian University of Science and Technology

*Completed by 2014

History of International Conferences

	Date	Place	Theme	No. of Participants
1st	Sep. 28 - 30, 1995	Metro Manila, Philippines	--	245
2nd	Oct. 29 - 31, 1997	Seoul, Korea	Better Mobility for Eastern Asia Life	250
3rd	Sep. 15 - 17, 1999	Taipei, Taiwan	Sustainable Transport for the 21st Century	345
4th	Oct. 24 - 27, 2001	Hanoi, Vietnam	Transport for Equity, Economy, Mobility, and Sustainability	485
5th	Oct. 29 - Nov. 1, 2003	Fukuoka, Japan	Connecting Eastern Asia through Better Transportation	464
6th	Sep. 21 - 24, 2005	Bangkok, Thailand	Gearing Up for Sustainable Transportation in Eastern Asia	747
7th	Sep. 24 - 27, 2007	Dalian, China	Towards Integrated Transportation for Rising Asia	779
8th	Nov. 16 - 19, 2009	Surabaya, Indonesia	Enhancing Transportation Infrastructure and Services in Rapid Regional Growth	648
9th	Jun. 20 - 23, 2011	Jeju, Korea	Green Growth and Transport	663
10th	Sep. 9 - 12, 2013	Taipei, Taiwan	Towards a Harmonized Transportation Society	892
11th	Sep. 11 - 14, 2015	Cebu, Philippines	Resilient and Inclusive Transportation Systems through Smarter Mobility	

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EASTS was inaugurated in 1994 and has now become a leading academic society in the field of transportation not only in Eastern Asia but also in the world. In memory of EASTS 20th anniversary, the board of EASTS decided to publish this photo book to visually illustrate the growth and development of transportation in Eastern Asian regions over the past two decades. Many valuable photos were collected and they must be beneficial to the future transportation vision.

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