

# Rail Professional

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## Transforming the skyline

The new stations of Hanoi

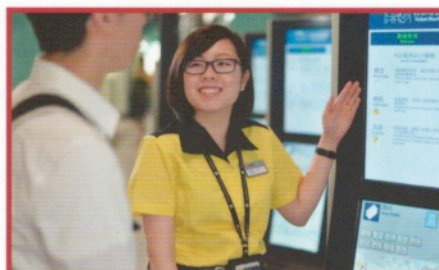
### INTERVIEW

Sanjay Kumar - chief engineer at Kolkata Metro Rail



### TICKETING

Hong Kong's MTR keeps residents and visitors on the move



### MANUFACTURING

India's clean trains of tomorrow



# Connecting the Mekong

Starting in China, the Mekong River runs south, splitting the border between Myanmar and China and then Laos and Thailand before spilling out into the East Vietnam Sea

The surrounding countries are all at different stages of development and yet in the two years of producing this magazine we've seen a coming together as Laos and China began construction of their high-speed railway, Thailand and Cambodia will soon be joined by rail and Vietnam and Cambodia have begun discussions on their own cross-border railway.

The Mekong is one of the most biodiverse regions in the world, and it is also hugely popular with tourists. Building infrastructure to ensure visitors and locals are able to travel across this quickly developing region is essential but the accompanying ticketing platforms also need to be able to support the anticipated surge in traffic and present an easy to navigate process that encourages people to use the railways as part of their travelling experience.

The well-trodden 'Banana Pancake' route that takes in Thailand, Cambodia, Vietnam and Laos could soon be done entirely by train, and we should all be ready for when that day comes.

## Baolau Ticketing

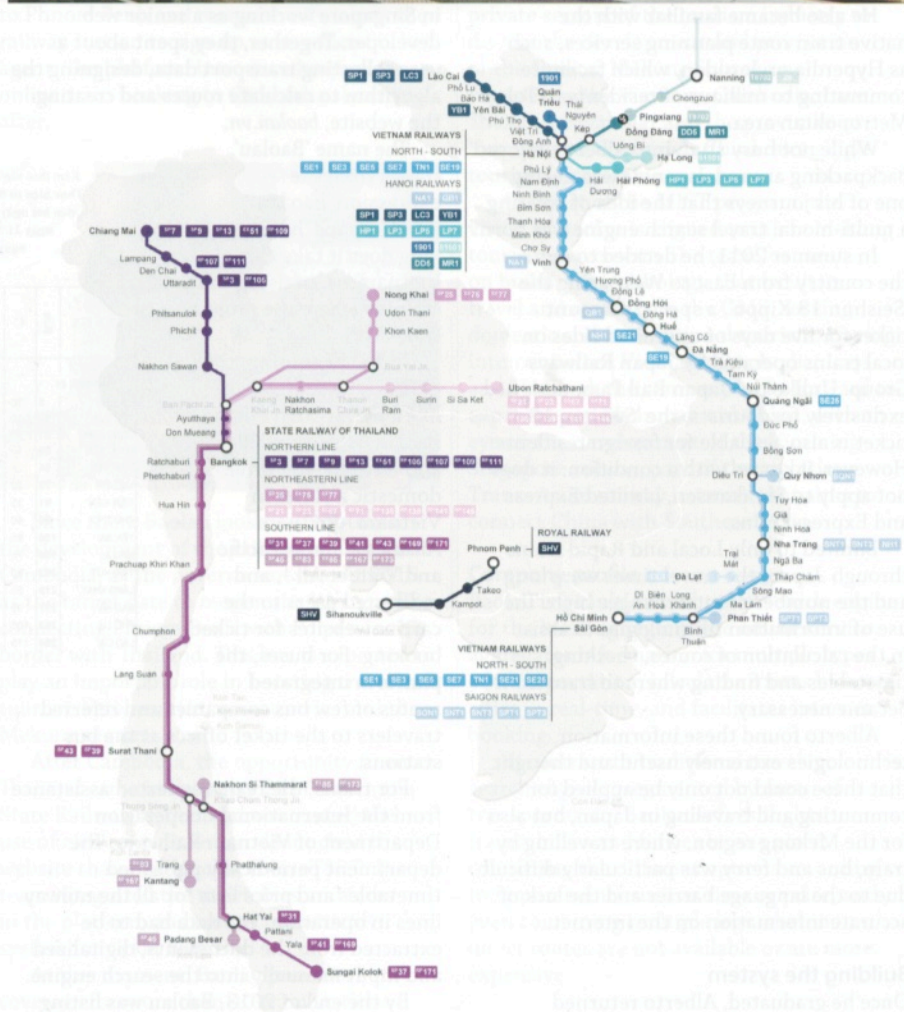
Baolau Ticketing started in Vietnam in 2013, expanded to Cambodia and Laos in 2016, and Thailand in 2017. Currently, the platform integrates online ticket booking for Vietnam Railways, Cambodia's Royal Railway, State Railway of Thailand and the international railway service Hanoi - Nanning - Beijing operated by China Railway, in addition to more than 20 regional airlines, 50 bus operators and ten ferry companies.

In the future, the platform will cover Myanmar as well as Yunnan and Guangxi provinces of China, providing a single solution to the transportation problem in the Greater Mekong Subregion (GMS).

## The idea emerged in Japan

The two co-founders, Alberto and Miguel, met in 2007, as part of a one-year program for Information Technology graduates at the Embassy of Spain. They were assigned respectively to the Economic and Commercial Offices in Vietnam and Singapore, which allowed them to travel and visit many destinations across Southeast Asia.

Later, in 2010, Alberto received a scholarship to study a master's degree in Japan. As a research student, he





had the opportunity to learn about information technologies applied to public transportation in Japan.

He also became familiar with the native train route planning services, such as Hyperdia or Jorudan, which facilitate commuting to millions of residents in Tokyo Metropolitan area.

While not busy studying, Alberto enjoyed backpacking around Japan. It was during one of his journeys that the idea of creating a multi-modal travel search engine was born.

In summer 2011, he decided to cross the country from East to West using the 'Seishun 18 Kippu', a special discount ticket for five days of unlimited rides on local trains operated by Japan Railways Group. Unlike the Japan Rail Pass, designed exclusively for tourists, the 'Seishun 18' ticket is also available for foreign residents. However, it comes with a condition: it does not apply to Shinkansen, Limited Express and Express trains.

Limited to only Local and Rapid trains through Japan, the travel times were long and the number of interchanges high. The use of information technologies to assist in the calculation of routes, checking timetables and finding where to transit became necessary.

Alberto found these information technologies extremely useful and thought that these could not only be applied for commuting and traveling in Japan, but also for the Mekong region, where travelling by train, bus and ferry was particularly difficult due to the language barrier and the lack of accurate information on the internet.

**Building the system**

Once he graduated, Alberto returned

to Vietnam in 2013 and proposed the idea of creating a multi-transport travel search engine to Miguel, who remained in Singapore working as a senior web developer. Together, they spent about a year collecting transport data, designing the algorithm to calculate routes and creating the website, *baolau.vn*.

The name 'Baolau' comes from the expression 'bao lâu', which means 'how long does it take?' in Vietnamese, praising the country where the project kicked-off.

In the beginning, the online service worked like a metasearch engine. Baolau listed schedules and fares for the three domestic airlines in Vietnam – Vietnam Airlines, Jetstar Pacific and VietJet Air–, and redirected users to the carrier websites for ticket booking. For buses, the platform integrated routes of few bus companies and referred travelers to the ticket offices at the bus stations.

For trains, the team requested assistance from the International Cooperation Department of Vietnam Railways. The department periodically published timetables and price lists for all the railway lines in operation. The data had to be extracted from the documents, digitalized and input manually into the search engine.

By the end of 2013, Baolau was listing

schedules and fares for all trains in Vietnam. The next year, Vietnam Railways put into operation the website *giotaugiave.vr.com.vn*. This allowed the team to retrieve the data directly from an online source and synchronize it with the travel search engine.

With the information of flights, trains

**PHỤ LỤC SỐ 4: GIÁ VÉ TÀU KHÁCH LC1/2**

Kèm theo văn bản số 1983/KHN-KDVT ngày 21/11/2012 của Công ty VTHKDS Hà Nội  
 Thực hiện từ 0 giờ ngày 21/12/2012 đến hết ngày 27/12/2012, từ 0 giờ ngày 02/01/2013 đến hết ngày 24/01/2013, từ 0 giờ ngày 25/02/2013 đến hết ngày 31/3/2013, từ 0 giờ ngày 21/5/2013 đến hết ngày 29/8/2013 và từ 0 giờ ngày 01/12/2013 đến hết ngày 31/12/2013, riêng tàu LC1 vào thứ Sáu và tàu LC2 vào Chủ nhật hàng tuần áp dụng giá vé tại phụ lục số 5.

Đơn vị: 1000 đồng/vé

TÊN GA	Km	C	B	A	B ĐH	A ĐH, A, ZT	Bn T1	Bn T2	Bn T3	Bn T1 ĐH	Bn T2 ĐH	Bn T3 ĐH	An T1	An T2	An T1 ĐH	An T2 ĐH
HÀ NỘI																
LONG BIÊN ĐI																
GIA LÂM	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
YÊN VIÊN	11	10	10	10	10	10	10	10	10	10	15	15	10	10	20	20
ĐÔNG ANH	21	10	10	15	15	15	20	15	30	30	25	25	25	40	40	40
PHÚC YÊN	39	15	20	25	30	30	35	35	30	55	55	45	40	40	70	70
VĨNH YÊN	54	20	25	30	40	45	50	45	40	80	75	65	55	55	95	95
VIỆT TRÍ	73	30	35	45	55	60	65	65	55	105	100	90	75	75	130	130
TIỀN KIẾN	91	35	45	55	70	70	85	80	70	130	125	110	95	95	160	160
PHÚ THO	99	40	45	55	75	80	90	85	75	145	135	120	105	105	175	175
YÊN BÁI	156	65	75	90	120	125	145	135	120	230	220	190	165	165	285	285
MAU A	166	75	90	105	135	145	170	160	140	270	255	225	195	195	330	330
TRÁI HỨT	202	80	95	115	150	160	185	170	150	290	275	240	210	210	355	355
LANG KHAY	219	85	105	125	160	170	200	185	165	315	295	260	230	230	385	385
BẢO HÀ	237	95	115	140	180	195	225	210	185	335	335	295	255	255	435	435
PHỐ LÙ	262	100	125	150	195	205	235	225	195	360	355	315	270	270	460	460
LÀO CAI	294	115	140	170	215	230	265	250	220	425	400	350	305	305	515	515

and buses up-to-date, the service started gaining traction as many international travelers found it very useful to plan their trip through Vietnam. However, travelers often demanded the ability to book tickets in advance, since the process of booking directly at the railway station was still a bit tedious, queuing took long and tickets for some routes would often sell out by the time travelers get to Vietnam.

In efforts to improve the access of international tourists to railway



transportation in Vietnam, the co-founders established a company in 2014 and partnered with a local travel agency to sell tickets online. The Baolau team would collect the orders submitted via web, forward to the agency and the staff would purchase the physical tickets at the station, then deliver to customers in Ho Chi Minh, Da Nang or Hanoi.

The process was quite inefficient, however the advance reservation system helped hundreds of visitors from Europe, Australia and America to travel by train in Vietnam.

Things changed for better in 2015 when Vietnam Railways introduced electronic tickets and launched the website *dsvn.vn*. The fare system became more complex, as the railway operator started applying fluctuations in the price to compete with the airline industry. The same year, Baolau registered as an official ticket agent and the company put together an engineering team to optimize the data and an operation team to issue the e-tickets through a DSVN system.

For the convenience of international travelers, the digital boarding passes were delivered by email and just needed to be printed or displayed in the screen of the mobile phone before boarding the train.

At present, Baolau lists more than 150 train stations across Vietnam interconnected with 12 airports, 30 bus stations and 2 passenger ports. The search engine allows travelers to combine rail transportation with flights, roads and waterways to reach all major destinations in the country.

#### Timing is key

After validating the model in Vietnam, the team pushed for international expansion as they realized that many international visitors continued their journey through the neighbouring countries: Cambodia, Laos and Thailand.

In March 2016, Cambodia announced that the passenger train service for the

Southern line connecting Phnom Penh and Sihanoukville would resume after 14 years of inactivity. Following a successful trial campaign during Khmer New Year, the regular service was established in July.

Baolau wanted to be part of the revitalization process and for that purpose sought cooperation with Royal Railway, the company that outsources the railway activities in the kingdom under a government concession. The team travelled to Phnom Penh and met with officials at the railway station to sign up as an official ticket agent. The platform introduced support for online train booking in Cambodia shortly after.



Since then, Baolau looks with optimism the development of the railway industry in Cambodia, as the government has set 2018 as the target date to reopen the Western line connecting Phnom Penh with Poipet, in the border with Thailand. This line is expected to play an important role in boosting travel and tourism between the two countries and the Mekong region.

After Cambodia, the opportunity to enter Thailand came in February 2017, when the State Railway of Thailand announced the use of electronic tickets and launched the website *thairailwayticket.com/eTSRT*. The team integrated the timetables and fares in the platform and connected with SRT system for ticket booking.

At this moment, Baolau provides coverage for more than 40 train stations

in Thailand and interconnects the rail network with 14 airports serving domestic and international flights for all Thai-based airlines. Bus and ferry routes will follow soon.

The engineering team is also working on the integration of KTM – Malayan Railway, with the purpose of extending the railway coverage to Malaysia and Singapore. In parallel, another team is adding more airlines and bus routes to the platform, so it can function as a multi-transport route planner for the region.

#### A mission to interconnect the Greater Mekong Subregion

Last year, Baolau qualified for the MIST: Mekong Innovative Startup Tourism accelerator, a program that supports innovative travel and tourism start-ups in developing markets of Cambodia, Laos, Myanmar and Vietnam.

The initiative is run jointly by the Mekong Tourism Coordinating Office (MTCO) and Mekong Business Initiative (MBI) and sponsored by the Asian Development Bank (ADB) and the Australian Aid Agency.

The Baolau team was invited to present their project at the Mekong Tourism Forum celebrated in June 2017 in Luang Prabang, Laos. The forum is an annual event that fosters cooperation between public and private sectors of the tourism industry to discuss the development and promotion of the Greater Mekong Subregion – represented by Vietnam, Cambodia, Laos, Thailand, Myanmar and the provinces of Yunnan and Guangxi in China, as a single tourist destination.

As a part of the MIST program, the vision of Baolau is aligned with the Mekong tourism movement. The team focuses on building a technology that facilitates travel and mobility in the GMS, serving domestic and international tourists. Having interconnected Vietnam, Cambodia, Laos and Thailand, the company looks forward to expanding to Myanmar and China, with an eye on the development of the Kunming–Singapore railway, part of the ambitious Trans-Asian railway network that aims to connect China with Southeast Asia.

#### Company profile

Baolau is a multi-modal travel search engine for the Mekong region. The online service aggregates information for multiple types of transportation, calculates routes between cities in real-time, and facilitates internet booking.

In contrast to traditional travel search engines, segmented by mean of transportation, Baolau serves flights, trains, buses and ferries in one place, comparing the different options according to requirements such as time or price, and even combining multiple legs when non-direct routes are not available or are more expensive.