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**A 'RAIL'
LOVE**
FOR TRAINS

**ON-DEMAND
PUBLIC BUS:**
HAIL A RIDE WITH
YOUR MOBILE PHONE!

**SMARTER
JOURNEYS**
WITH DIGITAL
SERVICES



**RAIL ENGINEERING'S
FANTASTIC FOUR**

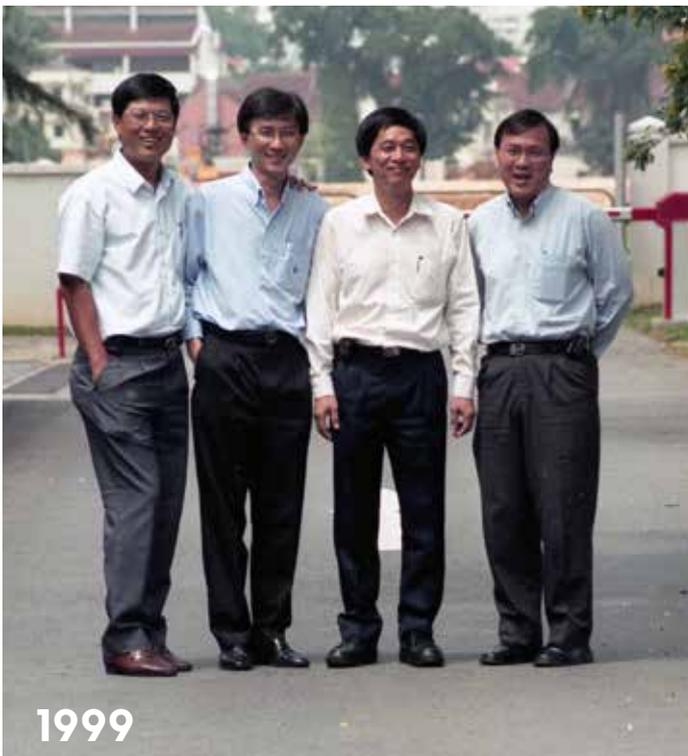
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RAIL ENGINEERING'S FANTASTIC FOUR

In 1999, four engineers from the Land Transport Authority (LTA) were featured in Chinese daily Lianhe Zaobao. They were lauded as key figures of Singapore's rail engineering who joined the then Mass Rapid Transit Corporation (MRTC) in the 80s as young engineers and dedicated themselves to the development of Singapore's rail system.



Source: Lianhe Zaobao © Singapore Press Holdings Limited. Reprinted with permission.



10 years is too easy for these stalwarts #LTA20YearChallenge

Twenty years on, after more than three decades on the job, they are the steady stalwarts who have steered Singapore's rail system through all its significant milestones. They helped to shape the nation's transport network, from breaking new ground with driverless trains on the North East Line (NEL) and ground freezing on the upcoming Thomson-East Coast Line (TEL), to extending the rail network with the Downtown Line (DTL), TEL and the upcoming Cross Island Line (CRL).

Today, they are still in service and tirelessly improving connectivity for commuters. They also walk alongside a new batch of young engineers, imparting their wisdom to the next generation who will eventually take over the helm of Singapore's land transport system.

For the quartet, each career spans over three decades, a feat that shows commitment to their job.

Rail engineering's Fantastic Four – Chua Chong Kheng, Sim Wee Meng, Ng Kee Nam, and Ow Chun Nam – share insights into the highs and lows of their careers, their most memorable projects, lessons learnt and how they have striven to provide the best transport experience for commuters.



CHUA CHONG KHENG

DEPUTY CHIEF EXECUTIVE
(INFRASTRUCTURE & DEVELOPMENT)

BREAKING NEW GROUND

Autonomous vehicles might be the hot topic in recent years, but few realise that Singapore already had one up and running years ago, in its rail system.

The North East Line (NEL) boasts many firsts. Opened in 2003, it is the world's first fully automated and driverless high-capacity rapid transit line, and the first MRT line to run entirely underground.

One of the men behind the ground-breaking line is Chua Chong Kheng, who was then NEL's senior project manager.

“There were many ‘firsts’ with the NEL. It was the first line with an integrated control system and also the first to use an off-site facility with a customised test track built for us in France.”

The NEL project, he adds, “provided a ‘base’ for the subsequent implementation of similar fully automated systems for the Circle and Downtown lines. We broke a lot of ground and it was a bold move at the time.”

DRIVEN TO SUCCEED

Like the NEL, Chong Kheng is a man of many “firsts”. Another milestone project that he led was the Jurong East Modification Project (JEMP) in 2011, where a train platform was added at Jurong East MRT station to ease crowding, and additional tracks added to separate the North-South and East-West line operations. It was the first time train service had to be disrupted for upgrading work.



“It was the first-ever planned MRT service disruption. And the project involved a few weekends where we had to work 52 hours non-stop, starting on Friday night and re-opening service on Monday,” says Chong Kheng.

The team took two years to plan it and to make sure work would be executed safely.

Furthermore, there were inclement weather conditions to deal with. “On one Sunday, we had to stop work for 4 to 5 hours due to lightning. It was nerve wracking, and we worked until the last minute.”

Despite the Herculean task of the upgrading work, the LTA team completed it safely and on time.

The success of JEMP, he says, gave them a blueprint for similar future projects, such as a new platform planned for Tanah Merah station in 2024.

Chong Kheng is always on the lookout for ideas to improve the commuting experience. Other noteworthy projects under his belt include installing giant fans at above-ground train platforms, such as at Pioneer station, to help commuters stay cool, and retrofitting platform screen doors to enhance commuters' safety and reduce track intrusions.

“There's never a dull moment,” he observes about his work.

“I always encourage young engineers to think out of the box. We should not always think that what's there cannot be changed, or that it's good enough. There is always a better way of doing things.”



SIM WEE MENG

SENIOR GROUP DIRECTOR (RAIL)

FULFILLING HIS PASSION

For Sim Wee Meng, being a rail engineer was written in the stars. As a child, he enjoyed dismantling moving parts and was curious to find out how things worked.

"I liked to tinker with mechanical objects, and was always intrigued by moving parts, such as those of a bicycle or clock," he recalls, adding with a laugh, "I would dismantle a clock to see how it worked, and get a scolding when I could not put it back together."

Mr Sim, as he is known to everyone in LTA, attended a technical school before heading to the University of Glasgow to study electrical and electronic engineering.

As a student, he rode the London Tube and was impressed with the system.

"I told myself that if Singapore had a metro system, I would want to be part of the team to build it."

Upon returning home in 1978, however, his first job was with the Public Utilities Board where he worked on laying cables that supplied power to new towns. He later joined a consulting firm, designing power systems.

But building a rail system remained a dream. And the chance to fulfill it came in 1982, when he answered a recruitment advertisement in the newspapers for electrical engineers to build Singapore's MRT system.

He got the job, and worked on constructing the North-South and East-West lines, Singapore's first and second MRT lines.

"I told my former employer, 'I am resigning. I want to fulfil something that I've been telling myself to.' They were surprised because I had to take a pay cut. But I said I had made up my mind."

This steely resolve is evident in Mr Sim's approach to tough jobs. Mr Sim recalls facing many complex issues getting core systems to work together during the final testing stage for the NEL, which he says is his biggest challenge to date.

"Every night, after completion of planned testing at around midnight, the project team and contractors would huddle together on the top floor of Sengkang Depot to go through the list of failed tests and work out solutions.

Many contractors were based overseas and had to call in to the discussions," he explains. "If software patches were required, the offshore contractors were required to examine the logs and provide software patches the following day."

His hard-nosed approach and perseverance paid off. With close cooperation, intense effort and great teamwork, Singapore's – and the world's – first fully automatic steel wheel and steel rail MRT system was ready for its trial run in May 2003, to Mr Sim's great relief.

"You must be passionate about your work, get your hands dirty and be prepared to work long hours to learn the trade. You can't get far if you only work from 9 to 5."

To young engineers, his advice is:

"It will be rewarding at the end of the day. You will see a product that can serve the community for a long time. Your work will touch the lives of many."





NG KEE NAM

GROUP DIRECTOR, THOMSON-EAST COAST & CROSS ISLAND LINES (CIVIL)

TRANSFORMING THE LANDSCAPE

Today's Sembawang is a bustling residential town in northern Singapore. But Kee Nam still remembers the rural backwater of the past.

Once dotted with farms, it was also home to a British naval base. Even up till the 1970s, there were hardly any amenities there.

Sembawang was a blank canvas, and Kee Nam was one of the artists who would breathe new life into the area. He was part of the project team that built the Sembawang MRT station in 1992, which altered the landscape for good.

The opening of Sembawang MRT station, as part of the Woodlands MRT Extension, spurred the development of Sembawang New Town. The station served as a central hub around which residential, commercial and industrial zones began springing up.

The project remains etched in his mind today. There were some technical challenges but it was extremely rewarding for Kee Nam to see the benefits the station brought to whole communities.

"The viaduct between Sembawang and Admiralty stations traversed thick vegetation and farmlands," he recalls. "There were many wild dogs, and we could only reach the area using four-wheel drive vehicles."

"It is a thriving town now, and I am glad to have been involved in this transformation of the Singapore landscape."

These days, Kee Nam spends a lot of his time mentoring young engineers who face a whole new set of challenges.

"As our transport network gets denser, our stations become obstacles themselves. Building new lines is becoming more challenging," he notes.

"New stations will be sited near residential areas and businesses. This means we have to either under-cross or over-cross these structures, and look for innovative solutions to lessen the impact on the surroundings while protecting the environment."

"Conventional ways may not work anymore. So we must look into innovative solutions and be bold to try new ways of doing things. An example would be our use of ground freezing technology," Kee Nam adds, referring to the method of using ice walls to stabilise the earth in the tunnelling of the Thomson-East Coast Line.

Training, he believes, cannot be just about theory. "Besides spending time with younger engineers, I invite them to ask questions, test them and let them take the lead while I observe. I have identified a few high-potential engineers along the way who are ready to write the next chapter of our rail story," he shares.

"A good engineer is made through exposure and experience."



OW CHUN NAM

DIRECTOR & CHIEF TUNNEL ENGINEER

CHALLENGING THE GROUND

Ow Chun Nam would be the first to tell you that his job is “not glamorous”, and that most civil engineers like him are the “pai kias” (bad boys in Hokkien) who do the “dirty work”. But in truth, a civil engineer’s work is as distinctive and invaluable as it is sophisticated.

Chun Nam, who is LTA’s chief tunnel engineer, has weathered various crises and is battle-hardened.

In 2008, tunnelling works for the Circle Line caused a cave-in off Holland Road and he was woken up by a call at 4am.

“When you are doing tunnelling work, you can’t sleep well every night,” he reveals. “You are worried when your phone rings. You wake up and, most of the time, there is an issue.”

He rushed down to the site. A 10m-wide stretch along Cornwall Gardens had been swallowed up after loose ground caused the road to cave in, resulting in a 4m-deep crater. The water supply to some homes was cut off as the pipes had snapped when the road crumbled.

It was memorable because of the unprecedented challenge, but he stepped up to it. He had to immediately secure the area, and minimise the impact on activities around the accident site. Thankfully, there were no casualties.

It was an important lesson on the risks that come with tunnelling. Today, Chun Nam constantly tells his engineers to familiarise themselves with all the different techniques and the various types of tunnelling machines, as each one is suited to a specific type of terrain. “Singapore’s geology is not homogeneous but stratified, with layers of rock, clay and other soil types,” he says. “This poses a lot of challenges, including the importance of assessing the terrain and ground conditions. During tunnelling, one stretch may be soft soil, but another may be hard rock.”



A slurry tunnel boring machine, for instance, is used in highly permeable and unstable terrain, or under civilian structures sensitive to ground disturbances.

The sinkhole was not the first such setback for the Circle Line project. The most serious incident occurred in 2004, when a cave-in at the Nicoll Highway tunnel killed four persons.

Chun Nam was asked to lead LTA’s crisis management team. To him, the work is not only about solving engineering problems. The human element is also one of the most important aspects.

“The accident happened in the day. I went to the site at night and it was unusually quiet,” he recounts.

“I saw the silhouette of a man. He was a manager from the Japanese company contracted for the project. He was feeling down and meditating.”

“I placed my hands on his shoulders and didn’t say a word. I didn’t know what to say. It was a sad moment.”

Yet, there is a learning moment from every crisis.

“We learn through experience and, sometimes, mistakes.”

He was the first Singaporean resident engineer hired by LTA, among the pioneer LTA engineers who were mentored by the late Terry Hulme, a founding member of the Tunnelling and Underground Construction Society (Singapore). “He was my guru.”

Chun Nam has earned his stripes the hard way.

“If you didn’t take the initiative and ask questions, they wouldn’t share information,” he says, referring to the expatriate engineering experts who came mainly from Australia and Britain in the early days of his career. “They didn’t have much time for everybody. You had to ask, and learn through observation.”

His advice to young engineers:

“Be inquisitive. Always make an effort to learn.”



AT THE SITE

OW CHUN NAM

Studied

Civil Engineering at then
Singapore University

Joined

Mass Rapid Transit
Corporation in 1984

**“Use your initiative.
Don’t be afraid of
making mistakes.”**

NG KEE NAM

Studied

Civil Engineering
University of London

Joined

Mass Rapid Transit
Corporation in 1984

**“The level of job
satisfaction is on a
whole new level because
you see the benefits
to communities, the
transport convenience and
connectivity. I developed
a lifelong career here and
never looked back.”**

SIM WEE MENG

Studied

Electrical and Electronic
Engineering at University
of Glasgow

Joined

Provisional Mass Rapid
Transit Authority in 1983

**“If you have no
passion for your
work, you will not
last very long.”**

CHUA CHONG KHENG

Studied

Electrical and Electronic Engineering
at then Nanyang Technological
Institute (NTI)

Joined

Mass Rapid Transit
Corporation in 1985

**“I have been involved
in MRT development
for over 30 years but
I am still learning new
things every day. It is
deeply satisfying to
know that you have
been a part of building
a legacy that will
benefit generations of
people today and many
years down the road.”**



CROSS ISLAND LINE

FIRST PHASE TO OPEN BY 2029



- Interchange Station**
- CRL 1**
(Completion by 2029)
- CRL Subsequent Phases**
(Under Study)

Our 8th MRT line, the Cross Island Line (CRL) will serve commuters in the eastern, western & north-eastern parts of Singapore.

The 1st phase (CRL1), which begins work in 2020, will serve residents in areas such as Tampines, Pasir Ris and Ang Mo Kio.

Commuters can look forward to shorter travelling times, more route options across the rail network, and easier access to destinations such as Bishan-Ang Mo Kio Park, Changi Beach Park, Hougang Mall and Ang Mo Kio Hub via public transport!



WATCH this video for more about the CRL1

KEY FACTS

about CRL1

12 MRT stations

29 KM long

4 Interchange stations



Connecting to NSEWL, NEL and the upcoming TEL

Works to begin in 2020, estimated completion by 2029



IN THE WORKS

FEATURES THAT EXCITE YOU

A 'RAIL' LOVE FOR TRAINS

Meet Ong You Yuan and Liang Ge Song, Friends of Land Transport whose love for locomotives led them to run SGTrains, a website that shares everything you wanted to know about the trains that ply our tracks.

Even with their eyes closed, Ong You Yuan and Liang Ge Song can identify the different types of MRT train models – just by the sounds the motors make.

“The fourth-generation trains make a higher-pitched sound than the older trains, which are noisier,” said Ge Song, 19, a Human Resource Management student at Singapore Polytechnic, who became hooked on trains seven years ago.

Both used to spend hours recording the registration numbers of passing trains – a hobby known as trainspotting. “We could identify patterns and know which trains were not running on any day,” explained You Yuan, 26, a recent Business Information System graduate from the University of Wollongong at

Singapore Institute of Management. His special affinity with MRT trains started at the age of five.

Today, the trainspotting duo are part of a team that runs a website called SGTrains, which is dedicated to everything rail-related in Singapore.

A key feature of SGTrains is its dedicated travel guide, which includes first and last train timings that are consolidated across all MRT lines. The website also includes frequently sought-after tips such as train etiquette and safety guidelines.

SGTrains has become a go-to page site for many commuters, receiving over 20,000 monthly views. Their pages featuring train timings, and early closures and late openings on certain lines, are among the most popular as they provide convenient and reliable information to commuters.

The group also engages the public through events such as the annual Singapore Train-Enthusiasts' Amazing Race, where participants traverse Singapore using public transport to solve puzzles. They also frequently hold Facebook contests, with prizes like limited-edition EZ-Link cards up for grabs. They have also set up booths and conducted activities for the public at LTA events such as the opening of the Downtown Line.



You Yuan and Ge Song checking out a Bombardier train at the InnoTrans exhibition in Berlin.



*InnoTrans Exhibition
Berlin - September 2018*



Photo credits: SGTrains

They have even gained international recognition, as some tourists use their website to plan their travels around Singapore.

“As the majority of Singaporeans use public transport, we help to provide accurate information on trains,” said Ge Song.

SGTrains has built up a sizeable online presence since its launch in 2011. Over 300 train enthusiasts have joined the group, and its Facebook and Instagram pages count more than 6,100 and 1,300 followers respectively.

You Yuan and Ge Song are part of LTA’s Friends of Land Transport (FoLT) programme, which engages people interested in land transport. Through the programme, they have been able to visit LTA sites for an up close and personal look at developments in land transport, often sharing their feedback on land transport issues which has been constructive and useful.

The team has visited sites like MRT depots and the upcoming Thomson-East Coast Line (TEL) tunnels. LTA also invited them to Jurong Port in May 2018 to witness the delivery of the first trains for the TEL line. For these enthusiasts, the experience was exhilarating. “It was the first time we saw such a process of trains being delivered and transported to the depots,” shared Ge Song.



[▶ Watch SG Trains’ video of their visit to Jurong Port](#)

A GERMAN ADVENTURE

One of the most memorable trips for the duo came in September 2018, when transportation giant Bombardier invited them to the biennial InnoTrans exhibition in Berlin. This is the world’s largest trade fair for the rail transport industry.

The Canadian company, which built the Downtown Line (DTL) trains, Bukit Panjang LRT (BPLRT) trains, and the upcoming R151 trains for the North South & East West Lines (NSEWL), had been impressed with SGTrains’ engagement with the public.

In Berlin, You Yuan and Ge Song saw exhibitions showcasing the latest rail-related gadgets and services, met some of Bombardier’s top brass, visited its factory and tried its Virtual Reality (VR) technology that is looking to revolutionise how rail maintenance is being done.



With VR, staff can say goodbye to tediously flipping through user manuals and fixing parts concurrently. Now, they are able to identify parts of a train that require repairs – even before getting their hands dirty. It is similar to Singapore, where LTA is currently exploring the use of VR to train employees to dismantle and assemble train components.

The duo also explored Berlin’s public subway system. “I think Singapore’s is better. Their trains do not have air conditioning so it’s really hot,” quipped You Yuan.

As Berlin’s subway uses a shared track system between many train lines, they had to occasionally wait up to 15 minutes for trains. “We found that the trains aren’t as efficient as Singapore’s,” he added.

These train enthusiasts were more impressed with Berlin’s public buses, especially the electronic displays that give detailed information on bus and train services at subsequent bus stops. For first-time visitors like themselves, it was extremely helpful as they were able to make connections between services seamlessly.

“As tourists, we weren’t afraid of getting lost. The small details that they have focused on make the commutes very interesting and easy,” said You Yuan.

GOING THE EXTRA MILE FOR COMMUTERS

Back in Singapore, the SGTrains team also acts as a link between commuters, public transport operators and LTA.

Inevitably, SGTrains receives many queries and feedback from commuters, and they dutifully forward them to the relevant parties with whom they have established a working relationship.

“In a sense, we help the authorities maintain communications with the commuters. You could say we are like an informal corporate communications team,” joked You Yuan.

When taking trains, they also look out for defects and notify the operators. “We know that people are benefitting from what we do, and it motivates us to keep it up,” said Ge Song.

Both are considering careers in land transport, although You Yuan points out that passion and work are two “different things”.

It has been quite a journey for a website that began as a local forum. Now, it is almost like a Wikipedia page of rail information, including blog posts on interviews with the biggest names in the rail transport industry.

For these train aficionados who have seen what other countries have to offer, Singapore’s trains still top their rankings.

“Our trains are already among the better ones in the world in terms of reliability, comfort and operations. If you go to Tripadvisor, you’ll see tourists praising our system. I think Singaporeans should be proud of our train systems.”

ONG YOU YUAN
FRIEND OF LAND TRANSPORT





GROWING UP WITH DOWNTOWN LINE

We engage in some #throwback moments as we trace back SGTrains' journey along with the construction of the Downtown Line. Try and see if you can spot some familiar faces here!



2009

First visit to DTL Mockup Train



2011

Commencement of DTL2 tunnelling works



2013

Sharing the excitement at DTL1 opening



2012

Interaction with our engineers



2015

Celebrating the opening of DTL2



2017

Helping to improve the DTL3 signage

The next generation of transport enthusiasts

A gallery tour, an art jamming session, and being a train captain for a day.

What a treat! A group of 17 children participated in a fun-filled event as part of the Friends of Land Transport Juniors programme, which was launched in March 2018 to engage primary school-aged children.

The children toured the Singapore Mobility Gallery, which showcases interactive and multi-sensory exhibits on how LTA plans and builds our land transport system.

The Friends from SGTrains were on hand to quiz the children on public transport etiquette and gracious behaviour, and answer their many queries on the intricacies of our land transport system.



Proudly displaying their artwork's

These junior transport enthusiasts also tried a realistic simulation programme developed by the Friends from SGTrains which allowed them to "drive" a train along one of the MRT lines. To cap off a colourful experience, the children painted their imaginative and intricate visions of Singapore's future land transport system. For children who love trains and everything to do with land transport, look out for our next event for our junior Friends!

Art Jam





ON THE GO
TECHNOLOGY THAT TRANSPORTS YOU

SMARTER JOURNEYS WITH ENHANCED DIGITAL SERVICES



We are embracing technology to make life easier for commuters and motorists with more seamless and speedy services online. As part of LTA's digital transformation journey, we have revamped services to deliver a new level of convenience and efficiency for users. Here's how two of our digital initiatives help to serve you better.



A one-stop web portal where you can perform vehicle-related transactions, including payment of fines and fees. Vehicle owners can now enjoy secure and seamless access to an even wider array of services with an enhanced user interface.

Launched in 2018, the transformed portal features improvements not just for motorists, but also for other road users such as Personal Mobility Device (PMD) riders who can look forward to transferring and deregistering their devices on the same portal.

“One.Motoring has been revamped with an enhanced navigation experience to make it even more user-friendly. Users can access useful information and popular digital services within a few clicks.”

TAY KAI LUN
DEPUTY MANAGER OF SERVICE
TRANSFORMATION AT LTA

“With the revamped One.Motoring portal, we hope to keep the entire motor industry competitive and aligned to our broader smart nation initiative.”

THAM BOON LEONG
DEPUTY DIRECTOR OF VRL SERVICE
DEVELOPMENT DIVISION AT LTA



RENEWING YOUR ROAD TAX FROM WHEREVER YOU ARE

After a weekend of family-filled adventures, your children are sound asleep in their beds. You sit down to take care of some mail and household matters when it suddenly dawns on you that your road tax is due that very day!

In the past, you would need to head down to a road tax collection centre or find an AXS machine to renew your road tax. But this time, there is no need to panic as you can renew your road tax from the comfort of your own home using LTA's One.Motoring web portal.

The portal was recently revamped with an enhanced navigation experience to make it even more user-friendly. You can access useful information and popular digital services with just a few clicks.

LTA is going paperless for all notifications, except summonses, from the middle of this year for timelier updates.

So from now on, a road tax renewal reminder will be sent directly to your mobile phone via SMS. No more missed reminders buried under piles of envelopes!



CHANGING CARS: TRANSFER VEHICLE OWNERSHIP WITH EASE

You see an advertisement for the latest hybrid car and figure it is time to change gears from your petrol guzzler to a more sustainable sedan.

Thankfully, you are able to quickly close a deal with an interested buyer for your current car and transfer the vehicle ownership speedily and easily through the enhanced One.Motoring portal.

This is a big change from not too long ago when you had to request a Transaction Personal Identification Number (TPIN) – a special password that was previously sent through snail mail, or obtained over the counter at LTA's customer service centre at Sin Ming, before you could perform high-value transactions such as vehicle ownership transfer and deregistration.

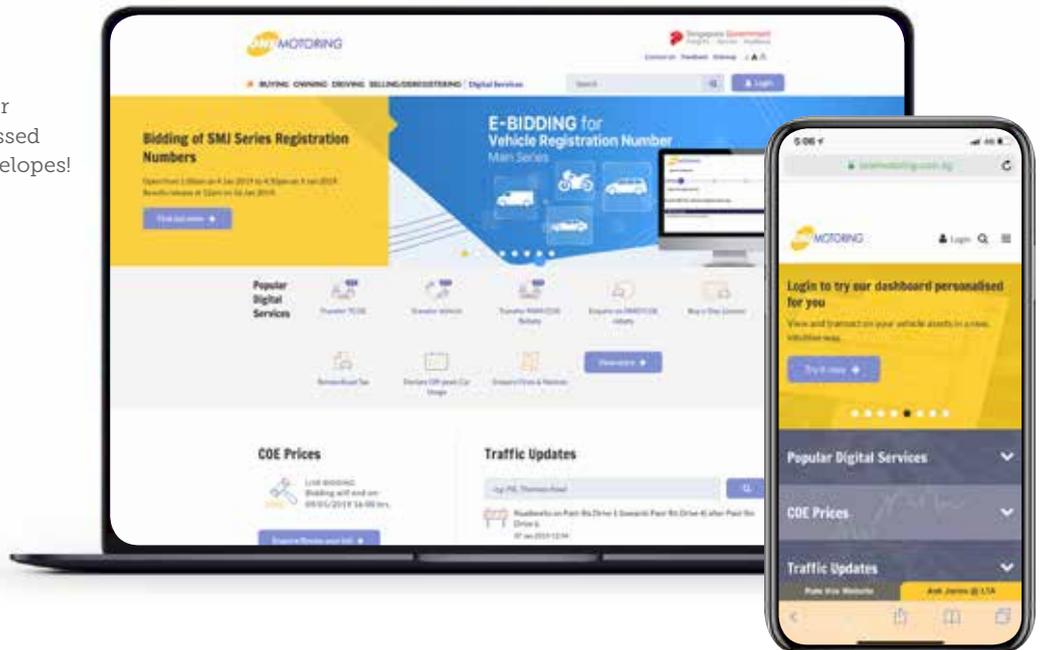
Being able to handle this easily yourself also removes the need to hand over your personal documents, like your identity card, to vehicle dealers to take care of such things on your behalf.

Since November 2018, motorists have been able to perform a wider range of high-value vehicle-related transactions on the One.Motoring portal. Users can now securely authenticate themselves through SingPass or CorpPass 2-Factor Authentication (2FA).

Besides the efficiency and convenience enjoyed by vehicle owners, the new digital service is also expected to improve counter staff productivity as they can be redeployed to do higher-value work.

A new online appointment system is also in the works to cut down waiting times at LTA's customer service centre.

If you are not technologically savvy, fret not! Service ambassadors at LTA's Sin Ming office will be available to guide users on One.Motoring services. Motorists can also turn to CitizenConnect Centres (CCCs) located at community centres island-wide for assistance.





MYTRANSPORT.SG

A transit app that serves as a mobile guide to public transport services around Singapore, MyTransport.SG Mobile has come a long way from displaying general traffic information to providing motorists, commuters, and cyclists with a more personalised user experience.

Eight years after it was set up, and almost 4 million downloads and over a thousand counts of user feedback later, the new MyTransport.SG Mobile 2.0 is ready to make commuting even easier. Some new services include a 'Near You' function to display nearby bus, train, and traffic information, a multi-modal journey planner, and a bicycle parking map.



“In the previous app, multiple steps were needed to check bus arrival times. But with the new app, all I have to do is to open it and I can see my favourite bus stops, as well as the nearest bus stops on the home screen.”

JOEY FOO
COMMUTER

“I see the app as a form of public service to cater to the needs of our increasingly tech-savvy commuters. We will do our best to serve them and help everyone plan their journeys better.”

RUFAN MO
EXECUTIVE IT SYSTEMS ANALYST AT LTA



SAVVY COMMUTER: WAYFINDING ON THE FLY

If you are searching for the fastest route to your next destination, the updated MyTransport.SG Mobile app can be your handy personal travel concierge.

Imagine you are running late for your aunt's housewarming and you need to find the fastest way to get to her house from your workplace.

Flipping furiously through the various taxi booking apps, you find it tough to book a ride during the evening rush hour. Just then, the colourful icon of MyTransport.SG Mobile app captures your attention, and you decide to tap on it and input your aunt's address.

Planning a journey has never been easier with the new multi-modal journey planner, as it is now able to recommend routes across buses and trains. The customisable notification function can also provide commuters with real-time transport alerts on traffic and train delays nearby or on favourite routes. It is the first time you are visiting your aunt's new house but you are pleased to learn that the app gives you clear directions to get there via train and bus.

You decide to try the route recommended by MyTransport.SG Mobile, and to your surprise, you reach your aunt's house not much later than your cousin who took a taxi and was caught in rush hour traffic!



PEDAL POWER: FINDING NEARBY PARKING

Since bicycle sharing services first started, you have enjoyed getting on a rented bike and cycling around town.

You believe in shared bicycles as a form of commuting, but one pet peeve is how it is sometimes hard to find a proper space to park your bicycle, especially in areas that you are less familiar with.

The new MyTransport.SG Mobile app solves this problem. It provides cyclists with nearby bicycle parking information, including the location and parking capacity of nearby bicycle parking spaces.

The LTA team behind the app is actively working on fine-tuning and updating the features and user interface based on public feedback, so you can look forward to more improvements in the future.



Download the latest version of **MyTransport.SG** today!





ON-DEMAND PUBLIC BUS: HAIL A RIDE WITH YOUR MOBILE PHONE!

Commuters can now hail a bus through an app, picking you up from any bus stop within a defined area. This six-month trial was realised from an idea to use technology to optimise resources while providing more seamless and convenient commutes.

What if there was a way to only route buses to places where there is demand, while skipping other bus stops?

This idea was conceived about two years ago, and at that time, the concept was being tested in other countries such as the US and Finland.

The intent was to provide more seamless journeys for commuters through the use of a mobile application, where buses and passenger bookings can be matched by an algorithm to provide the service on a dynamic basis.

It also addressed the issue that some public bus services were facing low utilisation during off-peak hours, allowing limited resources to be better utilised.

This concept of dynamic routing means that buses will not operate on a fixed route and pre-determined timetables,

and commuters will no longer need to transfer between buses within the defined area. Routes will be determined based on real-time commuter demand.

“At the end of the day, it is about leveraging the latest on-demand technology to optimise resources, while at the same time providing commuters with a more seamless journey.”

FRANCIS TEO
DEPUTY DIRECTOR, BUS LICENSING
DIVISION, LAND TRANSPORT AUTHORITY,
PROJECT OIC

A PROJECT OF FIRSTS



Senior Minister of State Janil Puthucherry learning about the on-demand bus service from Alan Lin, Assistant Manager, Bus Licensing Division, LTA, during the launch.

The six-month On-Demand Public Bus (ODPB) trial is the first in Singapore, as well as in South-East Asia, involving public buses with a mobile application at its core.

Faced with many unknowns, it was a challenge even at the initial stage to draft the requirements for vendors to develop the mobile application. The team went on a study trip to New South Wales, Australia, to meet the local transport authority, and bus operators that were in the process of rolling out on-demand transport pilots.





IN THE KNOW

"The study trip was an eye-opening experience, as we managed to glean insights into the preparatory work undertaken prior to the roll-out of the on-demand transport pilots, such as stakeholder engagement and publicity," noted Annabelle Latiff, Assistant Manager, Bus Licensing Division.

"All in all, this was a steep learning curve with much learning done on the job. It was a very iterative process."

DESMOND TAY
ASSISTANT MANAGER,
BUS LICENSING DIVISION

But thanks to good team effort, they were able to overcome the challenges.



[Watch the video to learn more about the ODPB trial!](#)



Commuters boarding the on-demand public bus in Marina-Downtown.

HOW IT WORKS

- 

01 During the trial, commuters can request to be picked up and dropped off at any bus stop in the defined areas using an app on their smartphone.
- 

02 Based on the selected pick-up and drop-off points, the app may offer an ODPB or regular bus, depending on the expected wait time, to maximise efficiency.
- 

03 Commuters can use the BusNow app for the weekday ODPB trial in Marina-Downtown and the Night ODPB trial from CBD to the Bedok-Tampines area, and the BusGo app for the weekday ODPB trial in Joo Koon.

Francis hopes commuters will be receptive to the concept of riding on-demand public buses, and will provide feedback to improve the system. "Ultimately, the use of a mobile application to hail a bus is aimed at enhancing convenience for people to better plan their journeys," he concluded. So hop on for a ride and let us know if ODPB is the way to go!

Weekday Service

Weekday service by SBS Transit at Marina-Downtown and Joo Koon

Marina-Downtown



From 11am-3pm and 8.30pm-11.45pm on weekdays (excluding public holidays)

Joo Koon



From 11am-3pm and 8.30pm-11.30pm on weekdays (excluding public holidays)

\$0.83 Card **\$1.50** Cash
*Based on fixed distance of 3.2km

Night Service

Night service by SMRT Buses from the CBD to Bedok and Tampines, via Geylang

CBD-Bedok & Tampines



From 11.30pm-2am on Fridays, Saturdays and the eve of public holidays.

\$4.50 Flat fare (Cash/Card)



The **BusGo** and **BusNow** apps are now available on Google Play and Apple's App Store.





ART IN TRANSIT

Blink and you might miss some of the creative artworks adorning our MRT stations. Instead of rushing to your next destination, pause and take a moment to admire the works of art that add colour to your commute. See if you can identify which Downtown Line stations these eye-catching artworks are from.

PUNCTUM OF THE LONG HILLS

by John Clang

The name of this station means 'long hills' in Malay. The rows of tall public housing blocks in Clang's images are a nod to the neighbourhood's long hilly landscape, while the giant kampung boys peeking around the flats represent Singaporeans' curiosity.



CONSTRUCTED MEMORIES

by Marianne Yang

Whimsical pictograms of a bag of kopi-o (black coffee), a person on a ladder painting a wall and a kitten – these are some of the scenes & objects of a Singaporean community going about its daily business captured in Yang's artwork. A Senior Lecturer and Vice-Dean at the Nanyang Academy of Fine Arts, she also included pictograms of a construction worker drilling into the ground, a safety boot and other items in the station.



FLYING COLOURS

by Cheo Chai-Hiang

Singaporeans have been hanging their clothes out to dry on bamboo poles from their flats since the 1960s. Taking inspiration from this familiar sight in Singapore's public housing landscape, this artwork gives the illusion of clothes flying in the wind.



5. Geylang Bahru
2. Chinatown
1. Bukit Panjang
I-R

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READ & WIN!

JUST ANSWER 3 SIMPLE QUESTIONS

Stand to win a set of 4 limited-edition NETS FlashPay cards worth \$40!

1. The _____ trial tests the feasibility of public bus services with dynamic routes and schedules based on real-time commuter demand.
2. What is one new feature in the MyTransport.SG Mobile 2.0 app?
3. The _____ of Land Transport programme brings together transport enthusiasts who are keen on contributing to the improvement of land transport.

Email your answers to connect@lta.gov.sg by 28 February 2019, and include your name and NRIC with the subject "Connect Feb 2019". The winners will be notified via email. Good luck!

Note: Your email address will automatically be subscribed to Connect when you participate in this contest.

Congratulations to the winners of our Nov 2018 Read & Win Quiz:

1. Gwendolyn Chopard
2. Adeline Teo
3. Lucy Tay