



2018
TRA Taiwan
Railways
Annual Report

台北車站
TAIPEI MAIN STATION

臺北
TAIPEI



taroko



交通部臺灣鐵路管理局
Taiwan Railways Administration, MOTC





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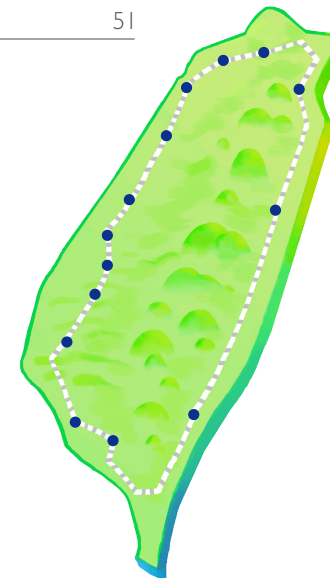


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— Preface



Preface

Taiwan Railways Administration (TRA) celebrated its 131st anniversary in 2018. We built the only round-the-island railways in Taiwan that are designed with modern and traditional styles and developed through a long history. As railways play a key role in public transportation, TRA operates all year round especially during the holidays, except for natural disasters and extenuating circumstances. All employees stand at their posts ready to take their responsibilities of providing the public with complete transportation services. We feel a sense of responsibility and of mission to accomplish this.

Recently, we continue to promote the "6-Year Plan for Railway Safety Improvement" to improve the operational performance and quality. In addition to adding aseismatic design and improving the flood-resisting capacity to the bridges subject to the responsibility of individual construction branches, we set up fences in dangerous sections and dedicate ourselves to the safety and quality of the railway system. A new Houli East Station was established to connect to Taichung City Government Transfer Station for the "2018 Taichung World Flora Exposition". Access-free facilities and the appearance of the Houli West Station were improved to provide tourists with better services and promote the tourist business. We continue to promote the private participation in infrastructure projects to take more advantages of combining transportation infrastructure with property development. The contract of the Taichung Station Railway Culture Park BOT project was

executed at the end of 2018, and we will further give the square in front of Taichung Station a new face by changing it into a railway culture park to boost local tourism.

As for keeping up with modern trends and pursuing innovation, TRA started the automatic QR code ticket inspection at the entrance gate in 2018. Now, over 20 thousand people get their tickets in convenience stores every day. We also rented an intelligent robot, Pepper, to be our new highlight. The traditional railway "50kg-N #12 Wood Sleeper Turnout Replaced with PC Sleepers" project was completed based on traditional railway techniques. This can save public funds and boost the turnout changing efficiency, and facilitate the improvement of railway maintenance quality. As for our affiliated business, intelligent parking systems are now available in the outdoor parking lot at Taipei Main Station. All the parking spaces are equipped with colored LED lights on the ground, and this can lead the driver to an empty space faster. We are also active in establishing more stands that sell the railway meal box to provide service for more passengers. Taiwan Railway Shop is another project we are working on. It is the base for promotion of our own culture and creative products to increase our income effectively.





TRA continues to exchange experience with railway businesses around the world to become more internationalized and innovative. We have mutually visited the corresponding businesses in the UK, Czech Republic, Austria, Switzerland and Japan in 2018. In addition to holding the international photography competition, "Beauty of TRA and Kintetsu - Charm of Railways", together with Kintetsu Group Holdings Co., Ltd., we signed a contract with Shinano Railway Co., Ltd., to build a friendly mutual relationship. Since both parties have a station with the same name in Chinese character (Tienzhong), we established a sister relationship for these stations. TRA also established a relationship of affiliated railway with Heisei Chikuho Railway. All cooperation and relationships will bring about mutual benefits and facilitate the promotion of the tourism and railway trips in Taiwan. In this way, people in the world will know more about Taiwan and the visibility of Taiwan will be effectively improved as a result.

TRA is facing major difficulties and challenges after the occurrence of the "2018 Yilan Train Derailment". We work hard on reviewing the accident and making improvements, and, with honor and unity as the faith, take "Safe transportation" as our first priority. In the future, we will take the core values of "safety, punctuality, service, innovation, unity, honor" as our foundation to march toward the 6 goals: "ensuring traffic safety", "transforming TRA's culture", "enhancing service quality", "improving work environment", "upgrading facilities of trains and tracks", and "promoting corporate management". We devote ourselves to reformation and face changes with open arms to provide a safe journey home for every passenger and make TRA, a company running more than one century, brand new again.



Take **"Safe transportation"** as our first priority

Core values

Safety, Punctuality, Service, Innovation, Unity, Honor

6 goals of core values

"Ensuring traffic safety", "Transforming TRA's culture", "Enhancing service quality", "Improving work environment", "Upgrading facilities of trains and tracks", and "Promoting corporate management".



Director General

張政源

Cheng-Yuan Chang

Sincerely ►







Vision of TRA

I.I | Vision and Strategic Goal

I.II | Business Strategies



I.I

Vision and Strategic Goal

(I) Vision

Building an extraordinary railway environment of public transportation, and managing both transportation and affiliated business with customers' satisfaction as our first priority.

(II) Strategic Goal

1. Building a safe, stable, efficient and eco-friendly transportation system.
2. Proactively improving the universalization of operating facilities to make them more friendly and compliant to the international standard of informatization.
3. Improving the quality of the fleet and be ahead of the times on the matter of innovative transportation services.
4. Developing affiliated business and utilizing assets flexibly.
5. Highlighting the features of railway cultures and creations.



I.II

Business Strategies

(I) About Business Management

1. Strengthening the long and medium distance inter-city transportation on the Western Line and Eastern Line (Taipei to Taitung and Taipei to Kaohsiung) and the cross-line transportation (Taichung to Hualien); improving local commuting transportation on the Western trunk line.
2. Promoting seamless transportation; integrating the ticketing service, frequency of dispatch, stations and integrated operation of long-distance buses, city buses as well as MRT and THSR trains to ensure diverse, convenient and outstanding transportation services.
3. Putting universalization into practice, continuing the construction of access-free facilities and forming modern and friendly transportation environment.
4. Cooperating with companies in different areas to promote railway culture; improving marketing strategies to attract new customer groups.
5. Putting environmental awareness of sustainable development and human-oriented design ideas into practice; making good use of existing resources and developing tourism services; creating TOD benefits of transportation constructions and land development to make TRA a "bridge to wonderful life".
6. Promoting debt payment plans by re-utilizing assets: With promotion of private participation in infrastructure projects, urban renewal projects, superficies establishment, and many other development projects, TRA chooses prioritized assets to be re-utilized to speed payment of the debts.
7. Improving employees' risk management and crisis handling skills by performing on-the-job training and evaluation; enhancing disaster prevention and anti-terrorism mechanisms to improve emergency response capability and ensure safety of the train and passengers.
8. Enhancing communication within the corporation to establish harmonious labor-capital relations.

(II) About Supply and Demand

1. Continuing to purchase new trains to replace old ones; simplifying train types and improving service quality.
2. Continuing to deal with relocation of the Kaohsiung Railway Workshop; improving the train repair technique and quality to ensure traffic safety; promoting development of the existing workshop and preserving and utilizing railway cultures to expand relative business areas.
3. Continuing railway traffic safety improvement plans; enhancing engineering and electrical joint inspection and disaster prevention measures; enhancing infrastructures to boost train operation performance and improve train safety and service quality.
4. Continuing the ticket system integration project; optimizing ticketing process and performance to solve ticketing problems during peak hours; enhancing customer relation management to improve customers' satisfaction with service quality.
5. Continuing the intelligent TRA electrical engineering project; enhancing transportation efficiency by upgrading hardware and software and using technologies and intelligent tools to expand service ranges, provide better services, and improve conveniences passengers.
6. Continuing the double track construction between Chenggong and Zhuifen to make it more convenient for the residents along the Coast Line to transit to THSR. This will also provide passengers with more convenient railway transportation.
7. Optimizing the transit service from THSR Zuoying Station to Pingtung to build an THSR-TRA railway transportation network in the hope of attracting passengers who usually drive. In this way, we can achieve the goal of establishing an eco-friendly public transportation system and creating a sustainable low carbon environment.

II.

Organization and Operation

- II.I | Organization and Human Resources
- II.II | Status of Operational Facilities

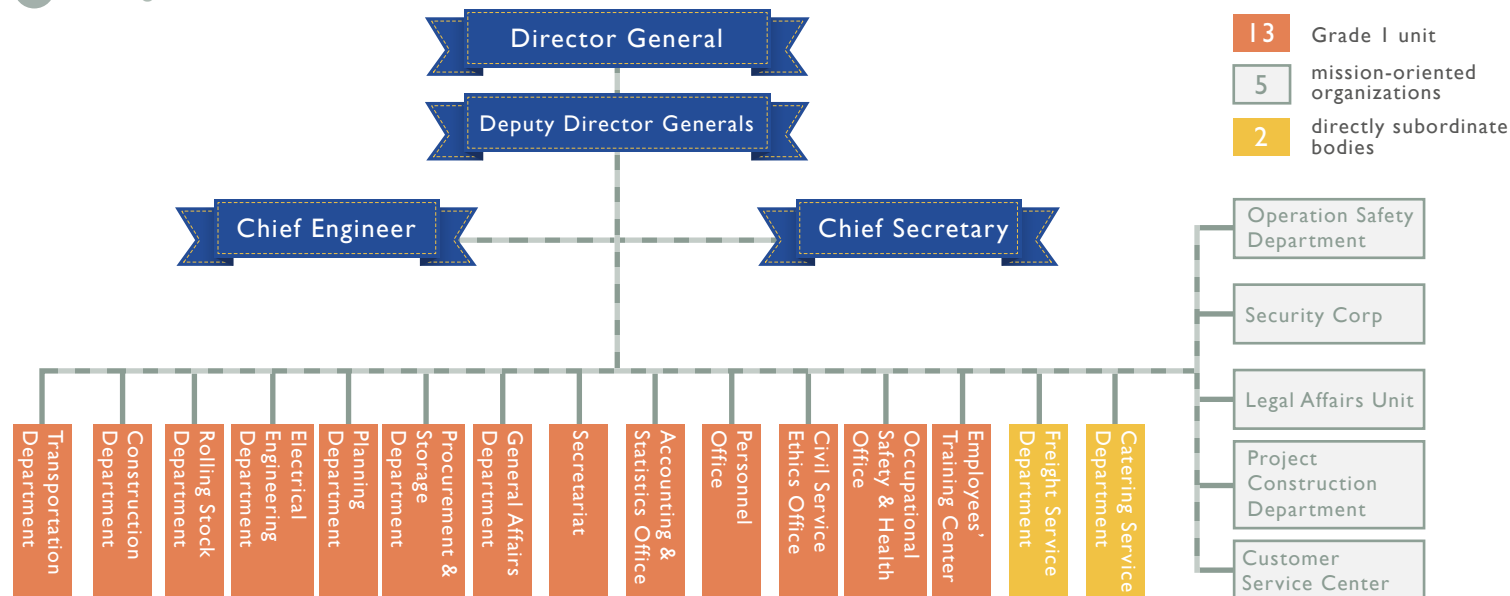


II.I Organization and Human Resources

At the early stage after Taiwan Restoration, the central government asked the Taiwan Province Government to run the railway business on its behalf. The Taiwan Railways Administration Committee was founded in 1945 and the Taiwan Railways Administration was founded in 1948. The latter became a subordinate organization of the Ministry of Transportation and Communications on July 1st, 1999. There are 13 units under TRA Director General, Deputy Director Generals, Chief Engineer and Chief Secretary. They are Transportation Department, Construction Department, Rolling Stock Department, Electrical Engineering Department, Planning Department, Procurement & Storage Department, General Affairs Department, Secretariat, Accounting & Statistics Office, Personnel Office, Civil Service Ethics Office, Occupational Safety & Health Office, Employees' Training Center. Another 5 task forces of Operation Safety Department, Security Corp, Legal Affairs Unit, Project Construction Department, and Customer Service Center are set up, 2 units of Freight Service Department and Catering Service Department directly under TRA are organized, and 43 external branch units in the name of Workshop, Branch, Center, Bureau and Corps are established.

The budgeted complement of TRA in 2018 was 16,452. The number of employees at the end of December, 2018, was 14,506.

TRA Organizational Structure



II.II

Status of Operational Facilities

(I) Operational Mileage

1. The operational mileage is 1,065 kilometers, including 716.3 kilometers of double track electrified and 169.6 kilometers of single track electrified, 16.8 kilometers of the double track non-electrified stretches and the single track non-electrified stretches 162.3 kilometers.
2. Station: There were 228 stations along the lines in 2017. The new Linrong Shin Kong Station was launched in 2018. 7 stations (Neiwei, Museum of Fine Arts, Gushan, Sankuacuo, Minzu, Science and Technology Museum and Zhengyi Station) were newly constructed thanks to the railway underground project in Kaohsiung, and 5 new stations (Lilin, Toujiacuo, Songzhu, Jingwu and Wuquan Station) were built along with the track elevation project in Taichung. With these 13 new stations, a total of 241 stations have been built along the lines including 4 special class stations, 28 first class stations, and 209 stations lower than the second class (incl.).
3. Level crossing: There are 421 level crossings including 3 Class-I, 1 Class-II, 371 Class-III, 28 semi-closed, 11 manual controlled, and 7 exclusive level crossings.
4. 1,627 bridges, 135 tunnels

(II) Number of Trains and Operation efficiency

I. Number of Registered Trains at the end of 2018

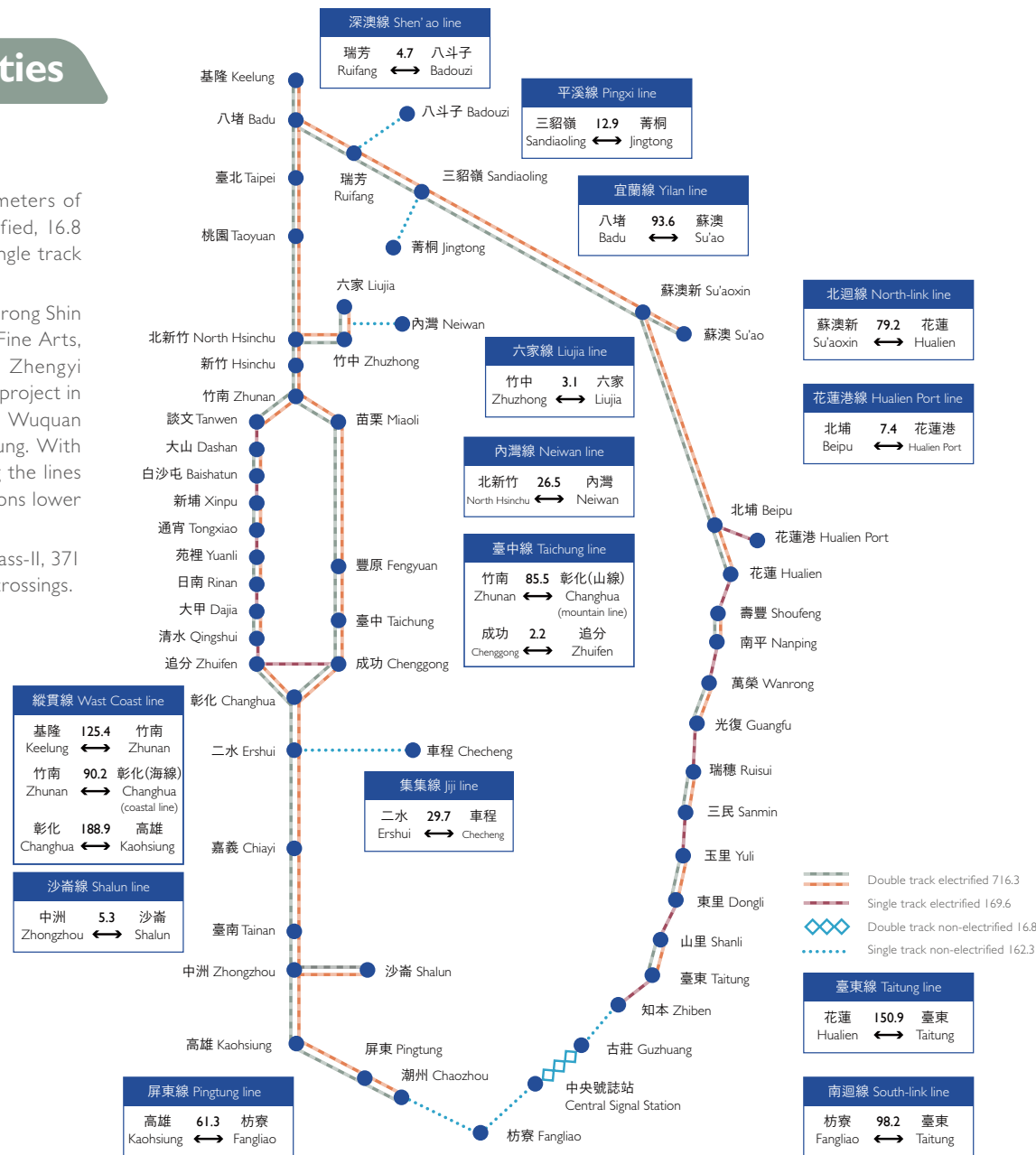
256 locomotives

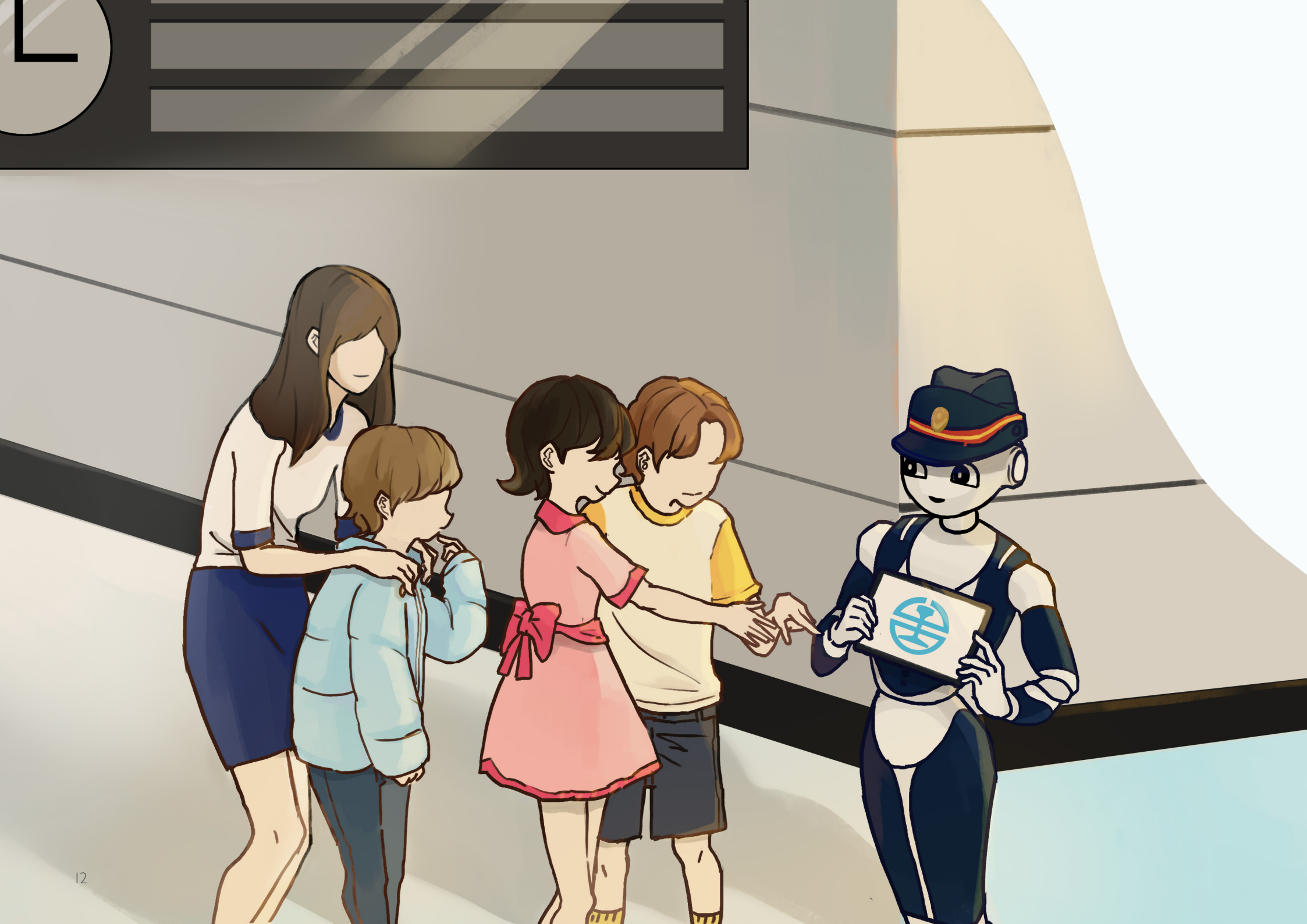
- (1)86 electric locomotives
- (2)64 push-pull electric locomotives
- (3)90 diesel-electric locomotives
- (4)16 diesel-hydraulic locomotives

There are 1,019 EMUs, 216 tilting EMUs, 211 diesel passenger trains, 900 passenger trains and 1,651 cargo trains.

2. Operation efficiency

The availability ratio of locomotives in 2018 was 87.85%, 86.49% was for electric locomotives 86.38% for push-pull electric locomotives, 84.47% for diesel-electric locomotives, 88.92% for diesel-hydraulic locomotives, 88.73% for EMUs, 96.6% for tilting EMUs, and 86.79% for diesel passenger trains.





III.

Achievements and Business Innovations

III.I | Achievements

III.II | Innovative Business



(I) Expanding the areas where e-tickets are available

For the convenience of the passengers to ride the train, we integrated different e-tickets into our system and engaged in the e-ticking business of EasyCard, i-pass, icash and HappyCash. Since June 28, 2016, the e-ticketing services have been available in the stations on all main and branch lines (Pingxi, Shenao, Neiwan, Liujia, Jiji and Shalun Line) except for Hualien Port Station and Fangye Station. The average number of passengers taking the train was 411 thousand/day (occupying 65% of the average travelers/day). Comparing to the average 390 thousand travelers per day last year, the number grew by 5.4% in 2018.

(II) Providing convenient ticket booking services

1. Booking and collecting tickets in the convenience stores

The average number of passengers' booking or collecting their tickets in convenience stores in 2018 was 25,270/day. Comparing to the average 25,985 passengers per day last year, the number decreased by 3%.

2. 24/7 Online and voice-booking services

Passengers can book the tickets for the train scheduled to depart more than 1 hour after the booking on the traveling day, but have to pay for the tickets 30 minutes before the departure time at the latest. Our ticket booking service is 24/7 for the convenience of the passengers. 14.55 million bookings were actually paid for collection in 2018.

3. Real-name system booking services for residents in Hualien and Taitung

TRA continues the system of "real-name booking services for Residents in Hualien and Taitung". The residents with the ID number starting with U or V or whose household registration is in Hualien or Taitung can use this system to book tickets. A total of 28 trains were dispatched for the residents in Hualien and Taitung in 2018, and 14,240 passengers were transported.

(III) Setting up bus transit discount E-pass devices

We have set up bus transit discount E-pass Devices in Yilan, Luodong, Xincheng, Hualien, Yuli and Taitung Stations since October 3, 2017. TRA specially elaborated and issued the "Commemorative Bus/Train Transit E-pass Card" as a contribution to the passengers for their taking public transportation and efforts in the environmental protection. The E-pass cards were given away at Yilan, Luodong, Xincheng, Hualien, Yuli and Taitung Stations on February 9, 2018. A passenger who had a ticket of the day (except for group tickets, TR-PASS, through tickets, pre-paid tickets and e-tickets) at a price over NT\$200 for a journey to one of these 6 stations could use this ticket to exchange 1 E-pass card at Yilan, Luodong, Xincheng, Hualien, Yuli or Taitung Station.

We further set up transit discount E-pass devices in 26 stations including Taipei Main Station and Taoyuan, Taichung, Tainan, and Kaohsiung Stations since January 1, 2018. These devices were enabled only for 3 (or more) consecutive holidays to encourage people to take public transportation.

(IV) Push-pull Tze-Chiang Express Limited Express with attached parent-child cars

Parent-child cars have been widely recognized since their launch in 2017. We planned to rebuild 20 cars and 16 cars have been rebuilt at the end of 2018. With refit of additional cars, more trains attached with parent-child cars were put into service and the dispatches were adjusted and increased on after another on March 3, July 27 and October 12, 2018, respectively. Accordingly, the number of the trains with these cars was increased from 28 to 74 every week. We have served 18,568 passengers during the period since the cars were put into service to 2018.

(V) Member service system

TRA Member Service System has now 270,914 members. Comparing to the 250,183 members in 2017, the number grew by 8.3%. The matching mechanism successfully matched 62,846 transactions in 2018 with a matching success rate of 23.1%. Comparing to 19% last year, the number grew by 4.1%.

(VI) Bike Eco-Train

To promote the idea of energy conservation and carbon reduction and meet the cycling tourism trend, TRA continued the bike eco-train service for the eco-delivery of bicycles. We offer a 50% discount for bicycles onboard. The total number of bicycles allowed on board has been collectively controlled by the ticket system of the station since March 1, 2017. Passengers may buy the tickets directly from the ticket office at any TRA stations during the ticketing period. We transported 151,533 passengers in 2018. Comparing to the 122,751 passengers in 2017, the number grew by 23.4%.

(IV) Push-pull Tze-Chiang Express Limited Express with attached parent-child cars

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(VII) Continuing the group train services

We promote railway tourism and offer domestic and international tourists with comfortable and convenient travel services. In 2018, we accept 565 groups and 196,504 passengers to earn an income of NT\$68,794,702. Comparing to the income of NT\$61,534,565 last year, the amount increased by 11.8%.

(VIII) Summer Formosa SL Express

TRA introduced the “2018 Summer Formosa SL Express” to run 6 dispatches for 3 days on June 23, 30 and July 7, 2018. As usual, the train was led by the CT273 steam locomotive with 6 Chu-Kuang Express cars. It headed from Yuli Station to Taitung Station, giving passengers the experience of vintage steam trains and the beautiful scene of the Hualien and Taitung Cliff. In 2018, the package tour introduced by TRA attracted 779 tourists to take the train and created an income of NT\$1.31 million. Comparing to the NT\$1.25 million last year, the amount increased by 4.8%.

(IX) Public convenience Graded A or above

There were 544 public conveniences under TRA's control and monitoring in 2018. All of them were recognized with Graded A, and 492 of them (90%) were A+. We will keep up with the good work in the future.

(X) Cooperation with international railway companies and reciprocal measures for passengers

1. Holding the photography competition, “Beauty of TRA and Kintetsu - Charm of Railways”, together with Kintetsu Group Holdings Co., Ltd.

TRA signed a contract of friendly relationship with Kintetsu Group Holdings Co., Ltd. on July 6, 2017. To celebrate the anniversary of the contract, we organized the photography competition, “Beauty of TRA and Kintetsu - Charm of Railways”, together with Kintetsu Group Holdings Co., Ltd. from March 20 to May 20, 2018, and held a press conference on July 26 to announce the award winners of the competition. The photography works for the competition were then exhibited in the west wing corridor on the first floor of Taipei Main Station for one month. We continued to exhibit the works in Xinzuoing, Taichung and Hualien Station from October to December in the same year. The exhibition period in each station is one month. By doing so, we hoped more passengers could enjoy the beauty of railways with us.



| Poster of Beauty of TRA and Kintetsu - Charm of Railways

2. TRA signed a contract with Shinano Railway Co., Ltd., to build a friendly relationship with it. Both parties established an affiliated relationship for their stations with the same name Tianzhong (or Tanaka in Japanese), and held the 1-day-ticket exchange event.

Director General Chieh-Shen Lu, Tianzhong Station Master Ming-Sung Yu, and President Tamakijunn and Tanaka Station Master Sakeigenmi from Shinano Railway Co., Ltd., (Shinano Railway) signed a contract of friendly relationship in Tianzhong Station on March 26, 2018, in the hope that both companies can exchange the railway tourism experience and work together to promote railway economy. Shinano Railway had a Tanaka Station bearing the same name in Chinese characters as the Tianzhong Station of the TRA. Tanaka Station was built in 1888 and Tianzhong Station started the operation in 1905. Both stations have a history over a hundred years. Because of the same name both stations have, they established the relationship of sister stations in the hope of bringing more tourists to both stations.



| TRA signed a contract of friendly relationship with Shinano Railway Co., Ltd., in Tianzhong Station. An affiliated relationship was established for the stations of both parties with the same name.

Both parties held the 1-day-ticket exchange event from May 7 2018 to March 31, 2019. Taiwanese tourists with the used Jiji 1-day-ticket could use it to exchange for a “Shinano Railway Banzai 2-day Pass” at the location specified by Shinano Railway. Japanese tourists with the used “Shinano Railway Banzai 2-day Pass” or “Kinuizawa to Nagano 1-day Pass” could use either of them to exchange for one of the Pingxi Shen'ao line 1-day Pass, Neiwan line 1-day Pass or Jiji line 1-day Pass free of charge at Taipei Main Station, Hsinchu Station and Ershui Station. To help Hualien build its tourism business after the earthquake, Shinano Railway accepted the tickets of all trains departing from or arriving at Hualien Station, or the tickets affixed with the approval stamp of Hualien Station, to exchange for a Shinano Railway Banzai 2-day Pass.



3. The Pingxi Line of the TRA established an affiliated relationship with Heisei Chikuho Railway

To promote railway tourism exchange and local development, TRA and Heisei Chikuho Railway held a ceremony for establishment of an affiliated railway relationship at Ita Station in Japan on May 19, 2018. This was the third affiliated railway of Pingxi Line besides the entire Enoshima Dentetsu Line and Yurikogen Railway Chokaisanroku Line.



(XI) Developing cultural and creative railway products with TRA brand value

1. Commemorative bento sets for festivals

TRA launched the “TRA Legacy Inheritance, the 12 generation Family Series” stainless steel bento sets, including the 11th generation EMU700 and the 12th generation TEMU types, in 2018 and a total of 3,600 sets were sold.



| The 11th generation EMU700 of the “TRA Legacy Inheritance, the 12 generation Family Series” stainless steel bento sets



| The 12th generation TEMU of the “TRA Legacy Inheritance, the 12 generation Family Series” stainless steel bento sets

2. Promoting various railway products

Classic products were introduced for various festivals, such as titanium tableware sets, 2019 Hualien and Taitung Commemorative Railway Calendars, TRA round bento bags, hand painted canvas bags for railway travel, Travel Bear drawstring bags, Travel Bear bento isothermic bags, Travel Bear water-proof baggage bags, limited fountain pens, Puyuma Express flash drives, Puyuma Express baggage strings, Travel Bear stuffed toys, Yongkang Bao'an and Ji'an Shoufeng red envelopes, Puyuma Express backpacks for kids, Summer Formosa hand painted products (cotton bags, aluminum alloy ID pouches, openers, etc.), Oh Bear Puyuma Express Model Trains, Taiwan Steam Train product series (posters, graphic postcards, document holders, mugs, commemorative towels, etc.), cotton socks with train patterns and commemorative postcard sets of railway stations, etc. The total sales turnover of railway products (including the Train Service Department and all restaurants) in 2018 was over NT\$28.02 million.



|A marketing leaflet of railway products (published on TR News)



III.II Innovative Business

(XII) Promoting new flavors of bento

1. To celebrate the 2018 Railway Festival, TRA introduced 2 new bento flavors - "Pumpkin and Pine Nuts Bento with Vegetables" and "Teriyaki Chicken Bento". We insisted on introducing healthy bento boxes that catered to the preferences of the elderly by selecting ingredients that were softer and easier to chew. We simplified the cooking, added less oil and salt in the food, and cut the ingredients into suitable sizes for taking a bite. The bento boxes became a new healthy option for the people who usually ate out.



| Pumpkin and Pine Nuts Bento with Vegetables



| Teriyaki Chicken Bento

2. TRA participated in the "2018 Taiwan Culinary Exhibition" held by the Tourism Bureau in Taipei World Trade Center Exhibition Hall 1 from August 10 to 13, 2018. TRA Train Service Department, Taipei Railroad Restaurant and Taiwan Railway Shop were invited for the exhibition. For the Taiwan Culinary Exhibition, the Qidu Meal Office of the TRA Train Service Department introduced 2 Taiwanese local bento boxes with flavors everyone loved. They were the "Two-in-One Braised Beef Bento" with braised beef shank and beef belly and the "Sesame Oil Wine Chicken Bento" with sesame oil as the basic sauce. Taiwanese local cuisines were put into bento boxes and offered to domestic and international travelers, whether they took the train for travel or commuting to work. In addition, we chose seasonal vegetables as side dishes to make the bento boxes a fresh surprise, bringing customers pleasant joy of taste and look.



| "Two-in-One Braised Beef Bento" and "Sesame Oil Wine Chicken Bento"



| 2018 Taiwan Culinary Exhibition

(XIII) TRA Taichung Restaurant received a Grade A award in sanitary self-evaluation

TRA Taichung Restaurant received a Grade A award in the sanitary self-evaluation area from the Office of Food and Drug Safety in Taichung City on November 7, 2018. All the Taipei, Taichung and Kaohsiung Restaurants and Qidu, Hualien and 5 other meal offices of the TRA Train Service Department passed the self-management and evaluation certification (complying with the GHP regulations and standards). These effectively improved the sanitary management level of TRA bento boxes and let people eat without worrying about safety.



| The Office of Food and Drug Safety, Taichung City, granted the Grade A award in sanitary self-evaluation area to TRA

(I) Automatic QR code ticket inspection

There are more than 600 thousand passengers taking trains every day and over 20 thousand tickets are collected in the convenience stores. To ensure passengers have their tickets inspected through the QR code inspection service at the entrance gate, we have set up QR code scan devices in 17 stations (Songshan, Taipei, Banqiao, Taoyuan, Zhongli, Hsinchu, Fengyuan, Taichung, Changhua, Douliu, Chiayi, Tainan, Kaohsiung, Yilan, Luodong, Hualien and Taitung Stations) since February 10, 2018. We further extended the service to the Third Class stations or higher (68 stations) and set up 409 more automatic QR Code inspection gates on December 21, 2018. Passengers with tickets collected from the Top 4 convenience stores can simply enter and leave the station within 3 seconds using the QR Code scan device without the need to have the ticket inspected manually.

(II) A combination of AI technologies and humanities in the parking lot of Taipei Main Station

We promoted private participation in infrastructure projects (Operate-Transfer) for the east and west underground parking areas in Taipei Main Station in 2013 and selected premium private businesses for its operation. The first reconstruction of the underground parking areas was completed at the end of the same year. When the contract was about to end and an invitation to a new tender was announced in 2017, we combined it with the west parking lot and selected premium companies with the original intention to attentively provide the best service for passengers. The reconstruction of parking lot was started in June 2017, and the project was completed in March 2018. With the reconstruction, an outdoor parking space detection system was introduced and every parking space was equipped with a colored LED light on the ground, ensuring the driver would find a vacant space more easily. Railway and train elements were added to the background to present a brand new appearance and upgraded our overall service.

(III) Interaction between the intelligent robot Pepper and passengers

Giving a fresh start for our service and searching for new highlights, we rented 4 intelligent robots named Pepper and set them up in Taipei Main Station, Taichung Station, Kaohsiung Station, and Hualien Station. They were officially launched on June 8, 2018. The daily working hours for the robots were set from 9 am to 6 pm. They were on duty in front of the information counter, departure waiting lobby or ticket gate. In addition to greeting guests and interacting with passengers, the robots could give service explanations, offer guided tours and introduce TRA products. We hope the adorable and energetic services of the robots can give passengers a brand new feeling when taking TRA trains.



| Passengers using Pepper to look up travel information

(IV) 50kg-N #12 wood sleeper turnout replaced with PC sleepers

Turnouts are devices on the rails. They enable a train to shift from one track to another (Figure 1). Currently, TRA has over 2000 sets of wood sleeper turnouts on the rails. The normal life span of a wood sleeper is 7 years, and then the sleeper will start to rot and crack (Figure 2). If the sleeper deteriorates badly, it may endanger traffic safety. The main material of the sleeper is wood. It is a kind of natural resources and only trees that have been growing for over decades are suitable for making wood sleepers. It is getting harder and harder to purchase wood sleepers of premium quality, and the price of wood sleepers is getting higher.

The life span of a PC sleeper is about 50 years. To improve traffic safety, TRA is planning to replace wood sleeper turnouts with PC sleeper turnouts. Considering that rails and accessories of wood sleeper turnouts are still usable, Deputy Chief Engineer, Hui-Yuan Hsu, hopes to develop PC sleepers and plates as a replacement for the wood sleepers and apply usable rails and accessories continuously. This is not only capable of achieving the goal of using PC sleepers for turnouts, but also saving public funds.

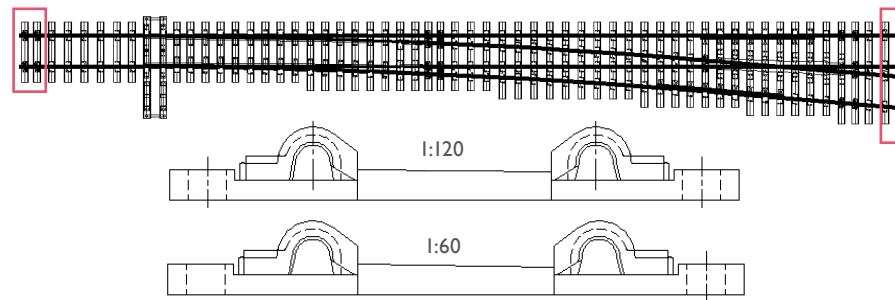
Substituting PC sleeper turnouts for wood sleeper turnouts comes with a difficulty. When replacing a turnout, assembling the PC sleeper turnouts near the place where substitution is needed. Then a track panel lifter or a crane is used to move the turnout assembly to that place. If the operation space is limited or the blockade time at night is too short, the replacement may not be completed on time, bringing about delays for scheduled trains. Since the Construction Maintenance Corps reserves all usable rails, plates and frogs for the PC sleeper turnout replacement it designs, only 7 to 10 PC sleepers can be installed every day. Therefore, replacing a set of turnouts requires about 7 to 10 days. Since the daily workload is less and, thus, the construction can be completed within the blockade time at night, the trains will not be delayed due to the replacement construction. Ideally, each construction branch can replace 3 sets of turnouts simultaneously. The overall turnout replacement time will be less than that needed for the replacement with track panel lifters.



| Figure 1. Turnout

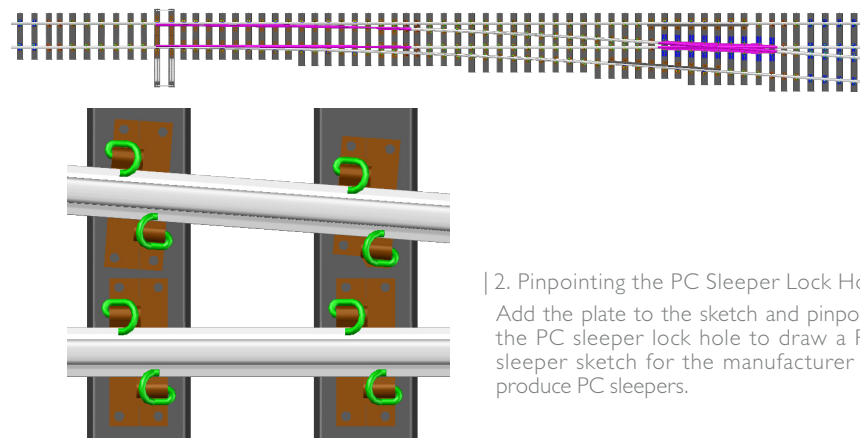


| Figure 2. Wood Sleeper Turnout

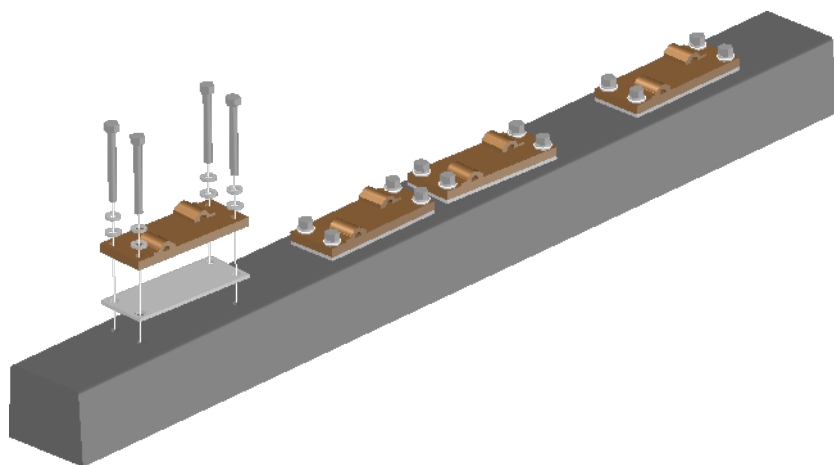


| 1. #12 Turnout Sketch

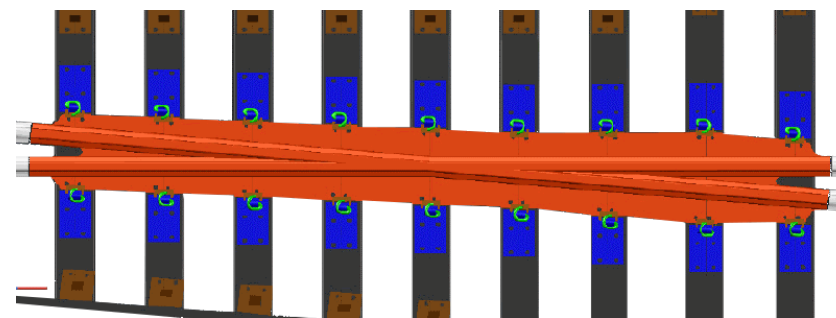
Use CAD to draw a turnout sketch and add plates with 1/120 and 1/60 inclinations to the heel end to make the turnout connect with the rails with 1/40 inclination successfully.



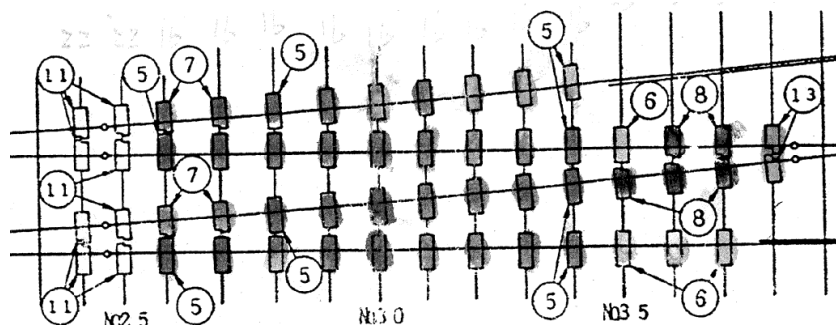
| 2. Pinpointing the PC Sleeper Lock Hole
Add the plate to the sketch and pinpoint the PC sleeper lock hole to draw a PC sleeper sketch for the manufacturer to produce PC sleepers.



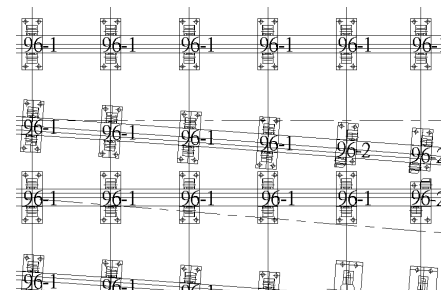
| 3. Assembling Model
Use 3D CAD software to simulate the assembly on the computer. In this way, the engineer can make sure there are not hidden problems to avoid design problems.



| 4. Frogs Fixing Simulation
2 types of 50kg-N turnout frogs are available to TRA: PC sleeper frogs and wood sleeper frogs. Since these frogs have different edges, new plates with pinpointed locking positions are needed. The advantage of this design is that different types of frogs can be used by simply replacing the plates.



| 5. Assembly of Plates for a Wood Sleeper Turnout
Numbers are used to indicate the plates in the assembling drawing. The difference between the plates can only be identified by checking the plate drawing against their individual numbers. This brings inconvenience during the assembling.



| 6. Assembling Drawing Made by
TRA Construction Maintenance
Corps
The numbers of the plates are indicated on the assembling drawing, and the plates can be assembled correctly by following these numbers.



| 7. PC Sleeper Mold

The hole locations of individual PC sleepers are different. It is needed to ensure the correct hole locations.



| 9. Finished PC Sleepers

After the manufacture of PC sleepers is complete, maintenance process needs to be followed according to the specifications to ensure PC sleepers can reach their designed mechanical strength.



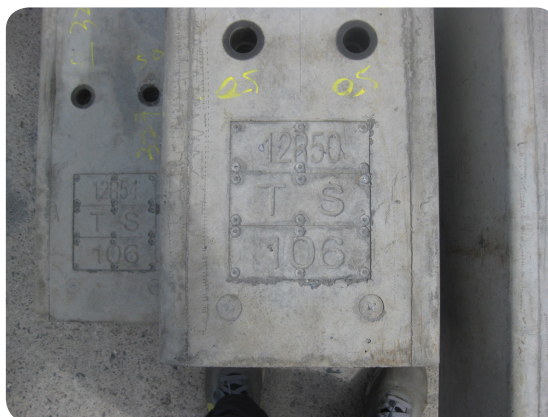
| 11. PC Sleeper Compression Test

After manufacture of PC sleepers is complete, they shall undergo a compression test according to the specifications to ensure they are safe for operation.



| 8. PC Sleeper Assembly Line

Reinforced steel and prestressed steel strands need to be placed in the PC sleeper according to the instructions on the figure.



| 10. PC Sleeper Marking

The PC sleeper marking contains the year of manufacture, manufacturer, and number. With this information, we can know the source and year of manufacture, and the PC sleeper number is needed to ensure correct construction.



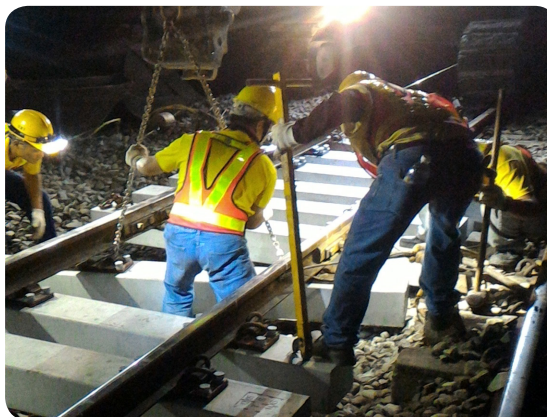
| 12. Tensile Test for PC Sleeper Bolt Hole

The test can ensure the strength of the PC sleeper bolt hole.



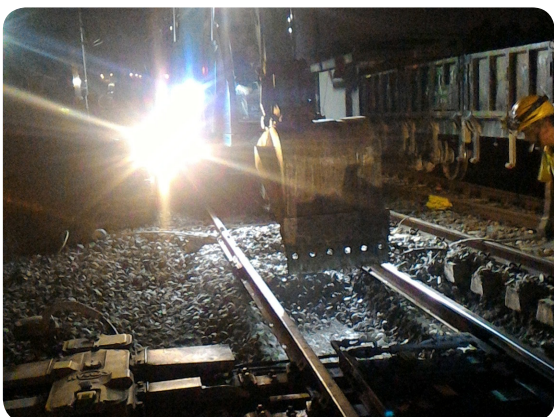
| 13. Trial Assembly

After manufacture of all the accessories for replacing the 50kg-N #12 wood sleeper turnouts with PC sleepers, a trial assembly is performed before the trail construction to ensure correct design and manufacture of every part.



| 15. Plate Locking

A mini excavator is used in conjunction with the manual operation of the workers to adjust the distance between the PC sleepers and lock the plates.



| 14. Trial Construction On Site: Removing Old Wood Sleepers and Ballast

Use a mini excavator to remove old wood sleepers and ballast.



| 16. Construction Completion

The 50kg-N #12 left turnout construction at Dadu Station was complete at the end of November 2017. The 50kg-N #12 right turnout construction at Tongluo Station was complete at the end of July 2018. No delay due to late completion of the works occurred to the train during the trial construction, and no abnormalities in terms of operation of the train were identified at the place of construction. The result shows the feasibility of this project.

Quantized execution value of the project:

1. Replacement of wood sleeper turnouts with PC sleepers has the same effect as replacing with PC sleeper turnouts. It can achieve both the goals of PC sleeper replacement and saving of public funds.
2. Only 7 to 10 PC sleepers can be installed every day, allowing the construction to be completed within the blockade time at night and ensuring that trains will not be delayed due to the replacement construction.
3. **Reduction of the procurement cost:**

The cost of purchasing a whole set of turnouts and replacing with PC sleepers:

Turnout No.	PC Sleeper replacement	Purchase Price for a Whole Set of Turnouts	Cost Saved
#12L	NT\$750 thousand	NT\$1.61 million	NT\$860 thousand
#12R	NT\$590 thousand	NT\$1.61 million	NT\$1.02 million

Note:

- (1)The cost of purchasing a whole set of turnouts is NT\$1.61 million, including NT\$600 thousand for turnout rails and frogs.
- (2)#12L was contracted out to vendors after the development in 2016. The contract amount was NT\$750 thousand.
- (3)#12R was contracted out to vendors after the development in 2017. The contract amount was NT\$590 thousand.



IV.

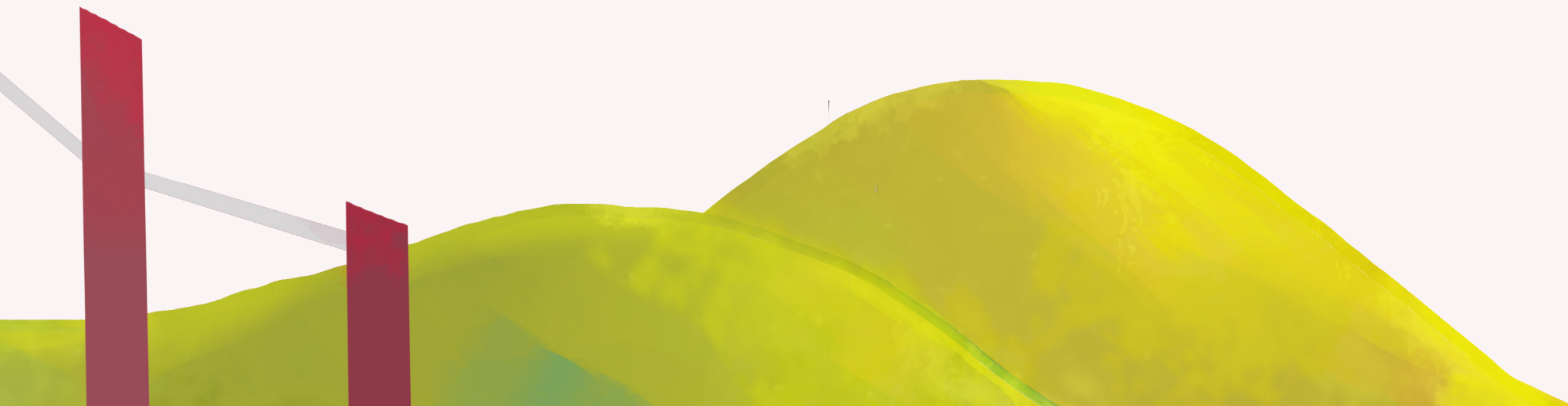
2018 Operating Performance



IV.I | Profit and Loss Analysis

IV.II | Passenger & Freight Transport Analysis

IV.III | The Benefit of the Affiliated Business



IV.I Profit and Loss Analysis

2017 and 2018 Profit and Loss Comparison Sheet

Unit: NT\$ Thousand

Item	2018	2017	Compared to 2017
Total Revenue	28,340,933	27,381,170	3.51%
Passenger Transport Revenue	17,853,724	18,132,149	-1.54%
Freight Transport Revenue	645,008	619,530	4.11%
Other Operating Revenue	7,443,702	7,269,608	2.39%
Non-operating Revenue	2,398,499	1,359,883	76.38%
Total Expenditure	30,896,833	28,733,202	7.53%
Operating Costs	26,113,980	24,623,059	6.05%
Operating Expenses	1,317,979	1,268,591	3.89%
Non-operating Expenses	3,464,873	2,841,553	21.94%
Profit and Loss	-2,555,900	-1,352,032	Profit Loss 89.04%

*The data in 2017 are based on the approved final account while the data in 2018 are based on the preliminary final account.

Cause Analysis

1. The passenger transport revenue of the TRA in 2018 was NT\$ 17,853,720,000, a decrease of 1.54% compared to 2017. The Hualien earthquake was the main factor resulting in decreased passenger transport on Eastern Line in February and March. The freight transport revenue in 2018 was NT\$ 645,010,000, an increase of 4.11% compared to 2017 as a result of the offset between the increased transport amount of sandstone, clay, container and road supplies and the decreased transport amount of limestone, cement and grain.
2. TRA lost NT\$ 2,555,900,000 in 2018 and the loss increased by NT\$ 1,238,700,000 compared to 2017 due to increased personnel expenses, service expenses, and compensation damages to the amount of NT\$ 1,095,200,000, NT\$ 391,030,000 and NT\$ 677,800,000, respectively.

IV.II Passenger & Freight Transport Analysis



Passenger & freight transport status of TRA in recent 5 years

Year	Number of Passengers (Thousand)	Passenger Transport Revenue (NT\$ Thousand)	Freight Amount (Kiloton)	Freight Transport Revenue (NT\$ Thousand)
2014	232,826	17,892,441	11,012	805,673
2015	232,217	18,256,200	10,910	759,726
2016	230,365	18,126,453	9,215	668,099
2017	232,806	18,132,149	7,764	619,530
2018	231,268	17,853,724	7,720	645,008

Ridership by transport vehicles in Taiwan

Year	Total	TRA	THSR	MRT	City Bus	Highway Bus	Inland Airway
Number of Passengers (Thousand)							
2014	2,260,915	232,826	48,025	740,814	1,066,896	171,901	453
Structure Ratio (%)	100.00	10.30	2.12	32.77	47.19	7.60	0.02
2015	2,277,977	232,217	50,562	777,715	1,048,555	168,623	305
Structure Ratio (%)	100.00	10.19	2.22	34.14	46.03	7.40	0.01
2016	2,315,758	230,365	56,586	803,093	1,056,904	168,438	372
Structure Ratio (%)	100.00	9.95	2.44	34.68	45.64	7.27	0.02
2017	2,356,554	232,806	60,571	827,734	1,093,161	141,905	377
Structure Ratio (%)	100.00	9.88	2.57	35.12	46.39	6.02	0.02
2018	2,396,998	231,268	63,963	856,769	1,108,821	135,809	368
Structure Ratio (%)	100.00	9.65	2.67	35.74	46.26	5.67	0.02

Source: Monthly Statistical Report of Transportation.

In 2018, the total number of passengers taking all the vehicles in Taiwan was 2.4 billion, in which the number of TRA passengers was 230,000,000, representing 9.65% of the total passengers.

IV.III The Benefit of the Affiliated Business

(I) Assets development

To improve the operating performance, TRA actively executed land development to enhance the operating performance of the affiliated business by promoting private participation in the infrastructure projects, urban renewal projects, and creation of superficieses. By doing so, TRA expected to increase revenues and improve the financial status to achieve the goal of railway business sustainability.

Because of the promotion of assets revitalization, TRA has achieved significant performance in land development by promoting private participation in infrastructure projects and creating superficieses. The promotion period began from the contract execution of the Taipei Main Station specific zone T9 BOT Project in December 2004 to the contract execution of the Taichung Station railway culture park BOT project in December 2018. The total revenue from the land development amounted to NT\$ 5,196,000,000. The total revenue from related land development projects amounted to about NT\$ 432,580,000 in 2018. The income statement is shown as follows:

Unit: NT\$ Thousand

Land Development Method	Project Name	2018 Revenue (Tax excluded)	
		Rent	Royalty
Promotion of private participation in infrastructure projects	Taipei Main Station specific zone T9 BOT	61,175	-
	Nangang Station Building BOT Project	55,339	94,500
	Songshan Station Multipurpose Building & Multistorey Parking BOT Project	54,396	53,792
	Wanhua (East & West) Station Building BOT Project	43,688	-
Creation of Superficies	International Tourism Hotel Construction Project in Banqiao Station Special Zone II	15,197	9,626
	Creation of superficieses on Jingxiu Road, Yuanlin Township, Changhua County	350	695
	Creation of superficieses in Fuhe section, Zhongzheng District, Taipei City	1,899	3,300
	Creation of superficieses in Baoqing section, Xinyi District, Taipei City	5,485	24,200
	Creation of superficieses in Chenggong section, Zhongzheng District, Taipei City	2,671	10,175
	Subtotal	240,200	196,288
Total		436,488	

(II) Assets Revitalization

To revitalize TRA assets and effectively increase revenues, TRA conducted assets revitalization activities in 2018 including TRA traditional business, promotion of private participation in construction projects of station malls and parking lots, and leasing of buildings, land, warehouses, advertising space, photography studios, and space for base stations. The total increased revenue was about NT\$ 1,498,810,000.

The Activity and Income of Assets Revitalization (2018)

Unit: NT\$ Thousand

Item	Activity	Income
Traditional business	Cement, limestone and sandstone	3,290
Leasing business	Parking lots, buildings, land, warehouses, advertising space, photography studios and space for base stations	1,164,863
Station mall	Station malls at Taipei, Banqiao, Nangang and Xinzuoing and the Underground Parking lot at Banqiao Station	303,229
Others	Interest and miscellaneous income	27,428
Total		1,498,810

Income & Expenditure Statistics of assets revitalization from 2014 to 2018

Unit: NT\$ Thousand

Year	2014	2015	2016	2017	2018
Revenue	1,074,974	1,134,379	1,207,351	1,394,449	1,498,810
Expenditure	471,889	453,014	438,199	438,416	470,071
Income	603,085	681,365	769,152	956,033	1,028,739

Note: The data from 2014 to 2017 are based on the approved final account.



(III) Catering Service

1. Active development of TRA bento (meal boxes) market

The sales volume of TRA meal boxes was 10,535,672 in 2018 (the average sales volume per day was about 28,865), and the total revenue was NT\$ 744,677,587.

2. Development of railway tourism (popularizing two-day and one-night cruise-style train services)

TRA provided two-day and one-night (or longer) cruise-style tour services by selecting travel agents via open tendering to promote railway travel. In 2018, a total of 23 tours were offered with an average seat utilization rate of 75.9%. The total revenue was NT\$ 10,409,042 (including tickets, meal boxes, royalties, and in-car product sales).

3. Improvement of station image by commissioning professional teams to operate station malls

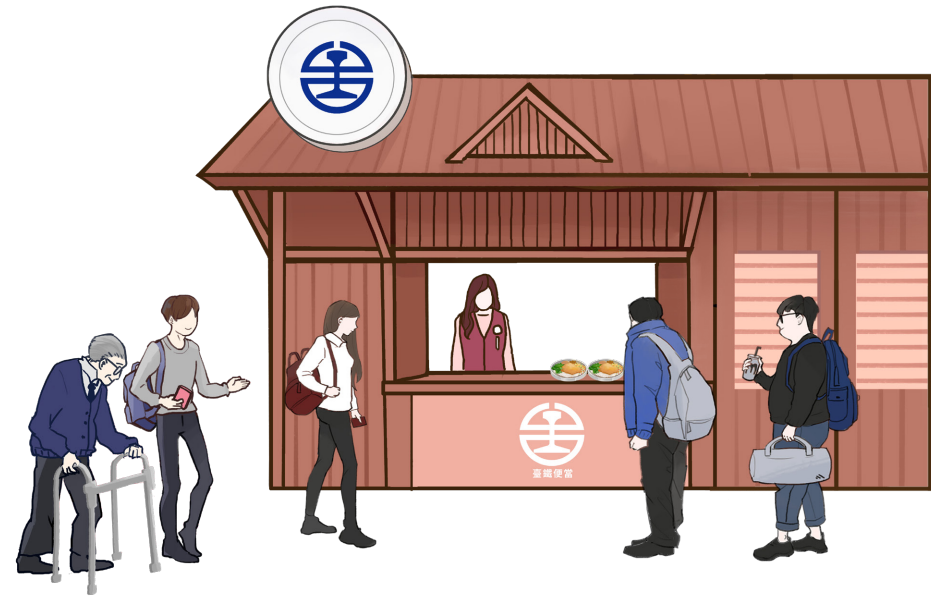
TRA Catering Service Department commissioned professional teams, such as 7-ELEVEN and McDonald's, to operate the stores in the stations around Taiwan. In 2018, the revenue from commissioned operations was over NT\$135,390,000.

4. Increase of revenues by leasing station space for commercial use

TRA Catering Service Department leased part of the waiting area in stations to the private sector to set up various stores, ATMs, vending machines, photo booths, lockers and tourist information centers. The rental income from leasing assets was NT\$ 125,540,000 in 2018.

5. TRA trademark and logo authorization to increase royalty income

In 2018, 5 review meetings were called and 206 trademark and 8 logo authorizations were approved at the meetings. The trademark and logo authorization revenue (including the image utilization charges) totaled NT\$ 2,830,000.



V.

Operational Performance



Special Report- TRA I3I, the heartwarming service

V.I | Passenger and Freight Transport

V.II | Assets Development

V.III | Assets Revitalization Business

V.IV | Operation Management

V.V | Procurement

V.VI | Personnel Management

V.VII | Training Affairs

V.VIII | Occupational Safety Affairs

V.IX | The Disaster Prevention and Preparedness

V.X | Ethics

V.XI | The Information Affairs



Special Report- TRA 131, the heartwarming service

TRA held the 131st Anniversary Celebration and Railway Festival at TRA auditorium at 10:00 am on Friday, June 8, 2018.

TRA greatly appreciated Vice President Tsuyoshi Mineyuki of the Taiwan-Japan Exchange Association for the gratuitous design of the key visual image and various promotion images for the Anniversary. As a railway fan, Vice President Tsuyoshi Mineyuki fused the characteristics of TRA trains into the design of the anime characters. Unlike the previous years, this vividly style uniquely presents the key visual design of the celebration this year. To respond to this significant celebration, the hosts (Mr. Yueh Wang and Miss. Li-Jung Wang from the General Affairs Department) disguised themselves as the anime characters in the key visual design, adding a highlight to the celebration.



| The photo of Mr. Tsuyoshi Mineyuki and Director Huang of TRA General Affairs Department



| Pepper served as the opening guest and interacted with the host

TRA cooperated with Asia Pacific Telecom to introduce the robot Pepper to serve in the Taipei, Taichung, Kaohsiung and Hualien stations. In the anniversary celebration, Pepper served as the opening guest and interacted with the hosts and had a photo taken with the Minister of MOTC Tan Hochen on June 8. Four videos were played during the celebration (the warm up video, 100-year-old retired seniors video, important business review video and outstanding employees video). In the warm up video, the catering bear Hannah guided everyone to travel through 10 wonderful TRA stations (Yilan, Ershui, Sanyi, Sijiaoting, Wudu, Liujia, Qidu, Badouzi, Jiuqutang and Shifen). TRA also filmed a video showing the interview with 5 retired 100-year-old seniors to add warmer atmosphere to the celebration. By performing a kickboxing matinee show, Storm Rockers displayed the beauty and strength of kickboxing that surprised the audience. Thanks to the kind assistance of the Japan Seibu Railway Company, TRA invited the well-known international superstar Yu-Chun Lin (Jimmy) to sing a great song at the final performance. This brought the celebration atmosphere to the highest point.

Besides these fascinating shows, TRA followed the precedent to award the "Friends of TRA," "Outstanding Volunteers," "Employees with Outstanding Service Performance" and "Employees with a Seniority for More Than 40 Years" to honor these great employees who contributed a lot to TRA.



| The group photo of the Director General with the employees with outstanding performance



| The group photo of Yu-Chun Lin with the administration team and staff

52 representatives of Japanese railway companies participated in the celebration. These friendly companies were the Shikoku Railway(JR-Shikoku), Yurikougen Railway, Isumi Railway, Keikyu Corporation, Sanyo Electric Railway, East Japan Railway(JR-EAST), West Japan Railway(JR-WEST), Nagarakawa Railway, Seibu Railway, (IGR)Iwate Galaxy Railway, Tobu Railway, Kintetsu Railway, Aoimori Railway, South Hokkaido Railway, Choshi Electric Railway, Ichibata Electric Railway and Tenryu Hamanako Railroad.

The celebration, lasting for 1 hour and 30 minutes, ended happily in an atmosphere of warmth, cheerfulness and surprises.



| The group photo of representative from Japanese railway companies that had good interaction with TRA

V.I Passenger and Freight Transport

(I) Passenger transport

1. Adding trips to assist disaster reconstruction after Hualien earthquake

In response to the government's disaster reconstruction and promotion of the tourism after the Hualien earthquake, TRA added 78 reserved trains for the Taipei, Kaohsiung and Hualien lines from March 24 to June 24.

2. The annual timetable adjustment on October 12, 2018

(1) Adding trains between Taipei and Hualien on Sundays

To relieve the insufficient transport capacity on Taipei and Hualien lines on Sundays, TRA added 2 Taroko Express and 2 PP Tze-Chiang Limited Express (total of 4 trains) between Shulin and Hualien on Sundays. 1,800 seats were added to Tze-Chiang Limited Express between Taipei and Hualien with an increased transport capacity by 6%.

(2) EMU500 with optimized cars

To enhance the riding environment quality between THSR Zuoying Station and TRA Pingtung Station, TRA ran 24 trips (16 fast local trains and 8 local trains) between Xinzuoing and Pingtung using the EMU500 with optimized cars every day.

(3) Adding trips with non-step cars in the Kaohsiung railway underground section

The average height of each station platform in the Kaohsiung railway underground section (between Zuoying and Fengshan) is 115 cm. For the passenger's convenience to get on and off the train, the trip ratio of trains with non-step cars running in this section was increased from 31% to 69%.

3. Provision of safe and punctual transport service

Punctuality is the core value of railway transport. The 2018 punctuality rate of passenger trains was 91.78%, which was 3.07% lower than in 2017 (94.85%). The increased cases of train equipment failure in 2018 was not the only cause of the delay. To meet the demand of major projects, such as the double track construction of the TRA Eastern Line and the electrification of the South-link line, the slow-down locations along the tracks were greatly increased and became one of the causes of the delay. Also, in first half of the year, to cooperate with the tourism promotion policy after the Hualien earthquake, TRA greatly added reserved trains for promotion of the tourism in Hualien. However, this action resulted in the crowding out effect on the regular trains due to limitation of current railway capacity. These were the causes that resulted in a slight decrease of the

punctuality rate. In the future, TRA will continue to enhance the overhaul and maintenance of related equipment and accelerate replacement of old trains to provide safer and more accurate services of good quality.

4. Developing international tourist business

TRA worked with Japanese railway companies to execute agreements of friendship. In addition to the railway business, TRA launched extensive exchange and cooperation with them in other areas to establish close relationship with each other and create a win-win situation. TRA has signed agreements of friendship with 20 Japanese railway companies during the period from 2012 to 2018.

5. Launching the "Train Etiquette" campaign

The "Train Etiquette" campaign promoted by TRA features "having courtesy for the vulnerable, alighting first, and maintaining order together". By improving station and in-car guide services and calling for passengers' cooperation, TRA aims to build a traveling environment of high quality. Since September 2013, TRA has been promoting the "Platform Queuing Line Project" to draw waiting line on the "local train" platforms for passengers to line up in order. To the end of 2018, 60 stations had waiting lines and TRA will continue to popularize this plan to other stations to maintain platform order.



(II) Freight transport

1. To adapt to the Suhua Highway Improvement Project B3 of the Provincial Highway 9 held by the Directorate General of Highways, MOTC, TRA added 4 reserved trains and had 8 trips every day to transport the construction surplus (the highest transport capacity is 1,800 tons per day). There were 633,600 tons of surplus transported in 2018.
2. TRA procured 24 new diesel hydraulic locomotives (delivered by 4 batches), 23 locomotives were delivered and accepted by 2018 and they were handed over to the freight stations for freight train dispatch to improve the efficiency of the freight station.

V.II Assets Development

TRA actively used the niche of joint infrastructure construction and assets development to maximize the benefit of the infrastructure projects. Through asset development and affiliated business operations, TRA implemented various development projects, including the government's railway construction projects, the Executive Yuan's urban renewal acceleration projects, and the urban development plans of local governments in accordance with Act for Promotion of Private Participation in Infrastructure Projects, the Urban Renewal Act, and the National Property Act.

In addition to the executed contracts, there were 12 ongoing projects including 1 infrastructure project subject to the private participation policy, 6 government-planned urban renewal projects and 5 superficies creation projects in 2018. The main projects in progress are as follows:

Promotion of private participation in infrastructure projects

		Development Area	Privilege Period	Contract Execution Date
Executed Contract	Taipei Main Station specific zone T9 BOT Project	261,157 m ² (TRA ownership 54.77%)	50 years	12.27.2004
	Nangang Station Building BOT Project	42,610 m ²	50 years	12.11.2006
	Songshan Station Multipurpose Building and Multistory Parking BOT Project	25,564 m ²	52 years	5.15.2007
	Wanhua (East/West) Station Buildings BOT Project	91,101 m ²	54 years	3.10.2009
	Taichung Station Railway Culture Park BOT Project	29,672 m ²	50 years	12.7.2018
		Site Area	Privilege Period	
Privilege Period	Changhua Roundhouse Peripheral Area ROT Project	14,148 m ²	15 years	

Urban renewal (Under planning by governments)

		Site Area	Contract Execution Date
Executed Contract	Hsinchu Station Rear Section Urban Renewal Project	57,607 m ² (TRA ownership 78.29%)	2.26.2014
	Nangang Marshalling Yard Urban Renewal Project	54,405 m ² (TRA ownership 94.69%)	4.2.2015
Privilege Period	Keelung Station Urban Renewal Project	66,260 m ² (TRA ownership 42.69%)	
	Taipei Main Station Special Zoning E1 and E2 Urban Renewal Project	27,551 m ² (TRA ownership 91.47%)	
	Star of Yilan Urban Renewal Project	19,831 m ² (TRA ownership 97.82%)	
	Changhua Station Northern Section Urban Renewal Project	10,181 m ² (TRA ownership 48.28%)	
	Yuanlin Station Peripheral Area Urban Renewal Project	119,873 m ² (TRA ownership 41.33%)	
	Kaohsiung Station East Old dormitory Area Urban Renewal Project	27,745 m ² (TRA ownership 98.62%)	



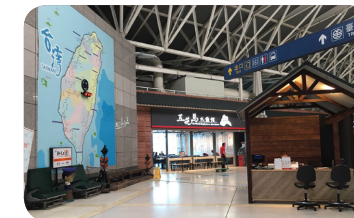
V.III

Assets Revitalization Business

(I) Station mall development project

Based on the "Act for Promotion of Private Participation in Infrastructure Projects," TRA revitalized assets to transform stations into regional commercial centers by introducing private investment and innovation. By providing comprehensive tourist services, stations become excellent locations for cultural and commercial gatherings. The royalty of the five projects totaled NT\$ 294,890,000 in 2018, including the station malls of Taipei, Banqiao, Xinzuoqing and Nangang and Banqiao underground parking.

As for new and reconstructed stations in recent years, in addition to the previously awarded contracts for Xinwuri, Pingtung and Chaozhou stations, commercial solicitation for the stations including Keelung, Qidu, Yuanlin, Xincheng and Taitung has been completed successfully in 2018. It is expected to increase annual revenue of NT\$ 9,890,000 in the future. Commercial solicitation for Hualien Station and the business operation there is to be completed in 2019 as planned.



| The Xinwuri Station mall

| The Pingtung Station mall
(Trial running)

(II) Transforming warehouses and cultural assets into cultural and creative tourist attractions

TRA leased old warehouses to develop and revitalize its own assets. Also, to effectively maintain and utilize TRA's cultural heritage (monuments, historical buildings, and old buildings), TRA worked with the local government to rehabilitate these buildings and use them as art exhibition venues and new cultural landmarks for the public. In 2018, TRA leased 120 premises and earned an income of NT\$ 62,860,000.



| The Ziqiangxincun in Banqiao District



| The original station master dorm at Guanshan Station

(III) Property lease

TRA made an integrated plan for the rentable estates in the peripheral areas around train stations. Without prejudice to the original purpose, the idle spaces, station buildings, dormitories, offices, lands and parking lots along the railways were utilized with diverse business operations.

TRA also planned the combined leasing tender of the station's surrounding parking lot. In addition to providing consistent services, the overall rental revenue was higher than individual leasing tenders. In 2018, the joint leasing tender for the parking lots around the Yingge Station and Shulin Station has been completed and the estimated revenue was about NT\$ 15,000,000 per year. The rehabilitation construction of the east and west underground parking and the west parking lot of Taipei Main Station have been completed in March, 2018. An outdoor parking space detection system was first installed in the parking lot with full color LED ground lights for fast location of available spaces. Railway and train elements were added to the background design to present a brand new appearance.

In 2018, there were 675 rented houses and lands and 130 rented parking lots. The rent revenue amounted to NT\$ 927,050,000.

(IV) Lease of station and train advertising spaces

Without obstructing station order, traffic safety and damaging architectural structures, station spaces were well utilized and rented for advertisement while the cars were rented for publication of interior posters and body color paintings. In and out the stations were advertisements in the form of posters, lamp boxes, showcases, and multimedia. With the "station" as a unit, in the meantime, TRA invited the advertisement tender for single or several integrated stations. The winning bidder can plan the whole advertisement spaces, sizes and the form of the media and display their creativities. The integrated advertisement leasing contracts were awarded respectively in Q3, 2018, to create a revenue of about NT\$ 10,730,000 per year. The projects extended to 10 stations of "Zuoying, Neiwei, Museum of Fine Arts, Gushan, Sankuaicuo, Kaohsiung, Minzu, Science and Technology Museum, Zhengyi and Fengshan" and another 3 stations of "Nangang, Songshan and Xizhi." The total revenue of the advertising rental was NT\$ 116,730,000 in 2018.

(V) Photography studios and equipment rental

To promote TRA's image as well as revitalize TRA's assets, the space and equipment of TRA were leased for shooting dramas, films, documentaries, and advertisements. In 2018, there were 58 rental cases and the total revenue reached up to NT\$ 2,140,000.

(VI) Lease of space for base stations

Without prejudice to the traffic safety and telecommunication quality, TRA actively opened train stations, estates and lands to telecommunication operators to set up their mobile phone base stations. The 2018 rental revenue was about NT\$ 24,760,000.

(VII) Lease of solar photovoltaic equipment

To cooperate with "2-year solar photovoltaic promotion plan" approved by the Executive Yuan, TRA provided the roofs of public buildings for installation of solar photovoltaic equipment. Besides awarding of the "photovoltaic equipment leasehold project for the Chaozhou train station" contract in 2017, the "building roofs of Hualien-Taitung region" contract with 20 years of tenancy was awarded in Q4, 2018. The revenues was about NT\$ 50,000 per year.

(VIII) Field optimization with upgraded innovation

TRA has authorized the multipurpose performance area at Taipei Main Station since 2018 to operators for consistent management and planning with optimization of the location and upgrade of the innovation as the core. The 2018 rental revenues was about NT\$ 18,000,000.



| Nangang Station Underground Parking



| The multimedia advertisement



| The building roofs in the Hualien-Taitung region (photovoltaic equipment)



| The activity held in the multipurpose performance area of Taipei Main Station

V.IV Operation Management

(I) Continuous promotion of operating accountability

1. Establishing an operating performance account system to appraise financial improvements

To reasonably assess the operating accountability of an operator, operational losses were classified into attributable losses and non-attributable losses based on the instructions of the MOTC. Attributable losses included normal losses (e.g., losses from service-based routes and small stations), while non-attributable losses included losses not attributable to the current operator, such as the "pension fund under the old system" and "interest of liabilities". According to the assessment results, the MOTC requested TRA to develop diversified revenue resources, reduce expenditure and open an operating performance account to evaluate financial improvement results.

2. Achievements

The average daily revenue of TRA gradually grew from NT\$ 39,890,000 in 2007 to NT\$ 48,910,000 in 2018 with a growth rate of 22.6%. The daily passenger transport average gradually grew from 465,000 passengers in 2007 to 634,000 passengers in 2018 with a growth rate of 36.3%. However, due to the 3% wage adjustment for the national military personnel, public servants and teachers from January 1, 2018, the increased amount of employees compared to the previous year (2017), the increased expenses on station's cleaning maintenance in compliance with the Labor Standards Act (the rising of basic wage and the five-day workweek) and the related loss and compensation due to Puyuma Express derailment at Xinma Station, TRA had a loss of NT\$2,556,000,000 (preliminarily audited) in 2018, an increase by NT\$1,204,000,000 compared to the loss of NT\$ 1,352,000,000 (final audited) in 2017.

(II) Organizing surveys in accordance with latest market trend to carry out the operating philosophy of "Customer First".

The 2018 "TRA passengers intent survey" was conducted to explore passengers' views and service satisfaction, matters for improvement, overall satisfaction scoring and passenger suggestions. Results of the survey were used as a reference for related units to examine their service deficiencies, set up strategies for improvement and enhance service quality.

V.V Procurement

(I) Statistics on procurement projects

There were 782 procurement projects implemented in 2018 with a total sum of NT\$ 95,378,060,000, including 306 engineering service procurement projects, 263 labor service procurement projects and 213 property procurement projects. The procurement projects were listed as follows: the track maintenance vehicles including the catenary wagons, the track derrick car and the portal crane, the track maintenance materials including the tram contact wire, the fiberglass insulator and the 60EI rails; the information security enforcement project with respect to integration and reconstruction of the ticket system and the redundant center establishment project; tender projects including the 6-Year Plan for Railway Safety Improvement concerning the new construction and replacement of computerized interlocking systems between Nanping and Wanrong, and the drainage bridge reconstruction project at the mountain foot on the West Coast Line; the TRA double track construction plan on Chengzhui Line including replacement of the long rails, computerized interlocking of signals, and the house repairing; the plan of moving Kaohsiung workshop to Chaozhou with construction and improvement of the computerized interlocking system, the equipment overhaul engineering with the main workshop building (including the supply workshop in the southern region) engineering; the turnkey project for construction of the smart joint disaster prevention center for the main building of the Taipei Main Station.

(II) Revising regulations to improve procurement and material management effectiveness

1. Amending the procurement tender instructions and the contract terms to meet the requirements

Complying with the updated regulations, TRA amended the procurement tender instructions and terms of contract on a rolling review bases and issued the "TRA Goods Procurement Tender Instructions and Terms of Contract" (October 2018 version) on October 16, 2018 and the "TRA Procurement Tender Instructions" (November 2018 version) on November 15, 2018 to conform to the regulations and meet the actual operation requirements.

2. Revising the "Procurement Project Appraiser Selection Regulations" to comply with the regulations

To conform to the amendment of the Regulations Governing the Organization of Procurement Evaluation Committee and related rules governing the confidentiality of the committee member list, the revision of the "Procurement Project Appraiser Selection Regulations" was promulgated by TRA via letter on November 6, 2018 to clarify the method for selection of procurement appraisers and the reporting on whether to disclose the committee member list to improve the selection mechanism.

3. Completing of the C/E key material control program to improve the supply efficiency

The setup of the C/E key material control program was completed on March 12, 2018. After the responsible material using department adds or deletes controlled material based on a rolling review, the system automatically calculates the safety stock and regularly checks the stock status every two months. The material using department appropriates a budget for the material that reaches the procurement point after reviewing the status and reports to the Procurement & Storage Department for procurement and replenishment.

4. Amending the engineering, labor and material management regulations to enhance the control efficiency

TRA amended the "Engineering, Labor and Material Management Regulations" and enforced the amendment on June 21, 2018, to enhance the material allocation and transfer function. Accordingly, TRA specified that projects should be approved along with appropriation of the budget to avoid impacting the procurement schedule.

(III) Organizing on-the-job training and business audit

1. TRA organized four sessions of basic training for professional purchase personnel from April to September in 2018. A total of 226 persons were trained by studying related procurement laws and regulations to improve their professional competencies.
2. During the period from April to May in 2018, TRA held 1 retraining session with two different themes. 1 property procurement retraining session was conducted with 41 trainees and the retraining for procurement of engineering labor services was conducted with 38 trainees. By strengthening the procurement instances and avoiding mistakes, TRA expected to enhance the practical competencies of the procurement personnel.
3. In May and July, 2018, procurement preparation seminars were held for procurement of property and engineering labor services. By emphasizing the tender preparation and document preparation, the goal of passing down experiences and shortening the tender lead time has been achieved.
4. In July, 2018, 1 material management training session was held with a total of 50 participants to increase the personnel's knowledge and understanding of the material management regulations.
5. From July to August, 2018, TRA visited branches to review the contract status of the labor procurement to ensure that TRA has reasonably utilized the outsourced labor and secured the labor rights of the laborers dispatched by the contractor. 6 branches were visited in 2018.
6. To check whether each unit has implemented related material management regulations, TRA material management audit unit irregularly audited 2 stock management units of the Taipei Electrical Branch and Taipei Construction Branch without early notification in December, 2018. TRA expected the material could be managed properly in terms of its receiving, allocation and storage.



| Irregular auditing of the Taipei Electrical Branch in 2018
- The audit meeting



| Implementation of material shed 6S management



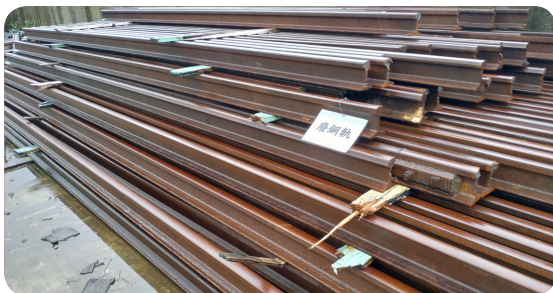
| Repaired Xiangshan warehouse subject to implementation of 6S management



| Implementation of warehouse 6S management



| The materials sorted and stacked neatly in the outdoor stock yard



| Wastes marked and stacked neatly in the outdoor stock yard

V.VI Personnel Management

(I) Employee on-the-job training

1. July 20, 2018 - National defense education - "The National Defense Policy, Governance Achievements and Challenges" lecture
2. September 18, 2018 - The physical and mental health lecture - "Emotion and Stress Management in the Workplace" lecture
3. October 30, 2018 - The core education - "The Service" lecture

(II) The 2018 model civil servants awarding ceremony

The MOTC 2018 model civil servants awarding ceremony was held on the 5th floor Hall in GIS MOTC Convention Center on Friday, May 4, 2018, hosted by Minister of MOTC Tan Hochen. 36 model civil servants were awarded in the ceremony. Director General Chieh-Shen Lu, Director Chin-Sung Chang, Section Chief Wu-Chang Hsieh and Shuang-Huo Liu and Associate Engineer and Deputy Chief Hsien-Yu Wang represented TRA to receive the awards at the ceremony.



| The group photo of Minister Tan Hochen and TRA model civil servants.

(III) 2018 Director General Cup Badminton Championship

To encourage employees to exercise, promote proper recreations and cultivate teamwork spirits, TRA held the 2018 "Director General Cup" Badminton Championship on June 13 and 14 in 2018. There were 15 male teams and 14 female teams and a total of 335 individual players participating in the championship. The champion of male groups was the Kaohsiung Workshop recreation team; the second was the Kaohsiung recreation team and the third was the Taitung recreation team. The female group champion was the Yilan recreation team; the second was the Taipei recreation white team and the third was the Kaohsiung recreation team.



| 15 regional recreation teams lined up to join the opening ceremony



(IV) The 7th Railway Cup Slow-pitch Softball Championship

The 7th Railway Cup Slow-pitch Softball Championship was held on Saturday, April 28, 2018. There were 9 teams and a total of 250 individual players participating in this event. Teammates of TRA softball delegation and the cheer squad along with the staffs had revealed the best teamwork spirit to win the champion again.



| The group photo of the participants and Deputy Director General Hsien-Lin Ho

(V) Family activity

To fulfill the family activity policies stipulated by the Executive Yuan, 2018 family activities were separately designed and managed by each unit before the end of August, 2018. The result of the activities designed by each unit was successful in bettering parent-child relationships and family harmony.



| The Personnel Office held the “2018 Family Activity” by watching films at TRA auditorium



| The Qidu Rolling Stock Branch held the “2018 Family Activity” by visiting Taipei Zoo

V.VII Training Affairs

(I) Training mission and task

To provide the public with safe and precise railway transportation service and to expand the scope of diversification, TRA must actively cultivate various talents for the sustainable operation and development of TRA. Thus, the Employees' Training Center adopted the TRA core value of "safety, accuracy, service, innovation, unity and honor" as the training objective to conduct centered core technique training and management knowledge training for the on-the-job employees and the centered orientation training for the new recruits.

To promote the management efficacy of the engineering quality, TRA Employees' Training Center has been approved by the Public Construction Commission, Executive Yuan as a training agency for the "Public Construction Quality Management Training Class" in 2009. The goal of this training class was to educate TRA engineering personnel new knowledge of quality management and prevent engineering deficiency to boost the public construction quality. Qualified trainees were awarded certificates by the Public Construction Commission, Executive Yuan. Through the end of 2018, there were 769 trainees, among whom 718 were qualified, with a passing rate of 93%.

(II) 2018 Training classes

In 2018, the Employees' Training Center had 132 training classes, with each class having an average of 6,864 trainees and 58,632.5 man-days. The details were as follows:

1. Track professional technique training

There were 38 classes, with each class having an average of 1,362 trainees and 28,583 man-days. The classes were:

Transportation class, operation class, dispatcher class, on duty Station Master retraining class, shunting locomotives operator class, train driver class, inspector class, operation supervisor class, maintenance car driver and conductor class, track management class, electrical engineering overseer class, catenary maintenance car driver class, catenary maintenance car conductor class, telecommunications technique basic class, power distributor class, signal maintenance technique basic class, signal maintenance technique class and risk management and failure analysis class.

2. Management competency training

There were 6 classes, with each class having an average of 189 trainees and 1,590 man-days. The classes were:

Public construction quality management class (the civil construction class and the electromechanical engineering class), personnel of the public construction quality management retraining class (the electromechanical engineering class), value engineering research class, material management training class etc.

3. Professional knowledge of occupational safety training

There were 16 classes, with each class having an average of 771 trainees and 1,720 man-days. The classes were:

Safety and health class for class-I manager of occupational safety and health affairs, safety and health class for class-3 manager of occupational safety and health affairs, safety and health class for class-I construction manager of occupational safety and health affairs, safety and health class for class-3 construction manager of occupational safety and health affairs, first aider's safety and health education training class and the safety and health education training class for on-the-job first aider.

4. New recruit training

There were 54 classes, with each class having an average of 3,763 trainees and 22,984 man-days. The classes were:

2018 operation recruited personnel basic session, basic session for 2017 and 2018 railway qualification examination new recruits (administration-based training), professional skills training (department-based training) and on-the-spot operation training (branch-based training).

5. Professional competency training of personnel and integrity

There were 6 classes, with each class having an average of 261 trainees and 285 man-days. The classes were:

Personnel WebHR subsystem education training, improvement training of the personnel employee professional capacity and the organization of the learning consensus camp.

6. Subsidiaries operation management training

There were 2 classes, with each class having an average of 94 trainees and 282 man-days. The classes were:

Lease and performance of private participation promotion project class.

7. Procurement professional knowledge training

There were 6 classes, with each class having an average of 299 trainees, and 3,328 man-days. The classes were:

Procurement professional basic training class and procurement professional retraining class.

8. E-learning education training

There were 5 classes, with each class having an average of 211 trainees and 105.5 man-days. The classes were:

2017 TMS system maintenance project training for manufacturers, PaGamo beginner setting session and PaGamo lecturer session.

9. Commissioned education training by external units

There were 3 classes, with each class having an average of 162 trainees and 1,733 man-days. The classes were:

TRA was commissioned by the Railway Reconstruction Bureau to train the operators for the railway construction block and the overhead catenary system isolation application as well as the driver of the maintenance car.

Note:

Description of "man-day"

Man-day of the individual training class: the number of trainees of a class * training days

Man-day of each training type: the number of trainees in each training class included in each training type* total number of days

Man-day of the annual overall training: the number of trainees of every training class in a year*total number of days



| New electronic reporting process for the railway new recruits



| Graduation photo of the 44th transportation class



| Graduation photo of the 42nd train driver class

V.VIII Occupational Safety Affairs

(I) Promoting TRA engineering safety culture

TRA employed scholars and experts to manage "Zero disaster and danger precognition" training and cooperated with the inspection organizations to hold the on-the-job education training along with the promotion of the on-site occupational accident cases. By emphasizing the concept of the "safety culture and management," TRA effectively increased the engineering safety consciousness of the employees to ensure their job safety.

1. The 2018 "Zero disaster and danger precognition" training were separately held at the northern region (October 12), the central region (September 27), the southern region (October 25) and the eastern region (September 19) with a total of 201 trainees.
2. 74 trainees participated in the education training for the aloft work fall-prevention.
3. 80 trainees participated in the initial planning of the occupational health and safety strategy.



| The education training condition for the aloft work fall-prevention

(II) Promoting physical and mental health of employees

1. TRA Labor Health Newsletter No. 001-004.
2. The physician consultation service regarding the occupational health and safety was held once per month with 2-10 people at each time. 12 consultations were conducted.

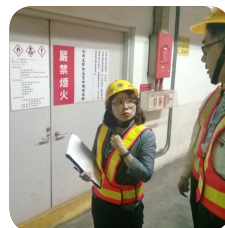


(III) Reinforcing the education and training of safety & health

To increase the knowledge of occupational safety and health and to implement autonomous management and automatic checks, TRA held various classes included 1 safety and health class with 45 employees for class-1 manager of occupational safety and health affairs, 2 safety and health classes with 91 employees for class-3 manager of occupational safety and health affairs, 1 safety and health class with 50 employees for class-1 construction manager of occupational safety and health affairs, 1 safety and health class with 36 employees for class-3 construction manager of occupational safety and health affairs, 3 safety and health education training classes with 144 employees for the first aider, 8 safety and health education training classes (retraining) with 400 employees for the first aider, 2 new recruit classes with 139 employees for 2018 on-the-job education training, 4 zero disaster activity classes with 201 employees and 1 on-the-job education training class of occupational health and safety with 30 employees.

(IV) Continuous promotion of the occupational safety & health management system (TOSHMS and CNS15506 standard)

In 2018, TRA completed the recertification of 10 units and the follow-up inspection of 28 units via carrying out the cross check of each safety & health item, guiding the supervisor to assist the audit and evaluation system, developing institutionalized management and effectively controlling the danger resulted from each facility and environment. Due to the previous achievement, TRA engineering safety culture was promoted and the physical and mental health of the employees were also improved.



(V) Improving the safety & health standard of the construction-in-progress

Aiming at significant construction-in-progress (above NT\$ 50,000,000), TRA enforced the safety & health operation audit at least once a month. The audit team consisted of Director of Occupational Safety & Health Office as the leader and the Directors and employees from Occupational Safety & Health Office in the branches. External experts were invited for each audit. The audited significant construction-in-progress in 2018 included: new construction of the cross-railway design at Dounan station, tender CL817 new construction of Fugang education training center, Replacement of the Dajia river under-bridge at Taichung line, TRA double track construction plan of Chenggong-Zhuifen line, reconstruction of the Yilan line Wufen culvert, the reconstruction of the Niupu River Bridge, tender CL121 Chaozhou Workshop (including the Southern Region Supply Workshop) principal part project and the promotion of safety and utility of Tainan Station historic spot.

(VI) Advanced occupational safety conduct

TRA has worked with the occupational safety and health departments of the Taiwan High Speed Rail Corporation, Taipei Rapid Transit Corporation, Taichung Metro Corporation, Kaohsiung Rapid Transit Corporation and Taoyuan Metro Corporation to establish the occupational safety and health platform of the track industry. Every member took turns to convene the meeting every year. The first meeting was convened by TRA to invite Section chief Li of the Northern Region Safety & Health Center for mutual learning and experience sharing.

TRA established the registered nurse platform consisted of registered nurses from TRA and each branches. By sharing the work experience of each other, registered nurses can reduce the groping time and increase the work efficiency. TRA also conducted multiple education trainings for the safety and health, the physical health examination record analysis, evaluation,

control and preservation, emergency management and also the employee's health education, guidance, promotion, consultation and caring.

The experts employed by the Occupational Safety and Health Committee also indicated that the fulfillment of "pointing and calling" was the most efficient way to prevent occupational accidents. To internalize the safety culture, Kaohsiung Rolling Stock Branch has tried to draw footprints in front of the track at the maintenance workshop to remind the employees to stop, watch, listen and perform the pointing and calling before crossing the track.

To decrease the occurrence of occupational accidents, Kaohsiung Rolling Stock Branch has conducted the interlocking between the grounding stick box and the catenary switch at the maintenance workshop. The grounding stick can be removed only when the power is cut off to avoid grounding hazards and ensure the employee's safety. The Rolling Stock Department has informed each branch to view and learn this interlocking facility.



The footprints drawn in front of the track at the maintenance workshop to remind the employees to stop, watch, listen and perform the pointing and calling before crossing the track.

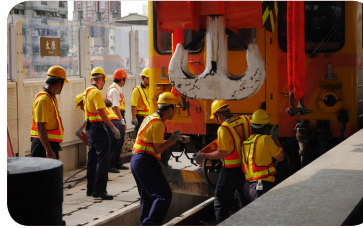


V.IX

The Disaster Prevention and Preparedness

(I) Conducting the "mobilization, disaster prevention, and anti-terrorism" drill

In 2018, 5 Mobilization Joint Offices of TRA held massive integrated drills regarding various railway disaster responses and rescues (repair). There were 731 people participating in the drills. TRA Headquarter also held "the disaster prevention drill at TRA Building" on May 10, 2018 and focused on the actual evacuation and disaster prevention on the second floor and above. There were 377 participants. There were 6 drills conducted with a total of 1,108 participants and there would be 1,601 participants if the external supporting units were included. By these drills, TRA expected to strengthen the refuge seeking, evacuation, first aid, rescue and recovery abilities of each region teams and TRA Headquarters when encountering various disasters.



| The drills of different joint mobilization offices

No.	Unit	Date	Location
1	Construction Maintenance Headquarters	5.10.2018	TRA Building
2	Taipei Mobilization Office	6.28.2018	Taipei Main Station
3	Taichung Mobilization Office	6.29.2018	Wuquan Station/ Taiyuan Station
4	Kaohsiung Mobilization Office	8.22.2018	Kaohsiung Station
5	Yilan Mobilization Office	5.30.2018	Su'aoxin Station
6	Hualien Mobilization Office	5.8.2018	Taitung Station

(II) Flood preparedness

"Personal safety, train safety, and railroad safety" are TRA's principles of flood prevention. From March when the flood season begins, all response teams promote disaster prevention awareness, thoroughly check the equipment in accordance with the "Flood Check Record", and conduct "flood drills" in accordance with the established Flood Drill Plan. In April, response teams formed a "spot check task force" to supervise the flood preparation of all units in the area. The transportation, construction, mechanical engineering, electrical engineering, and security corp of TRA Headquarters formed the "joint supervision task force" to supervise and evaluate the flood preparedness of all response teams.

TRA has finished the customization of Quantitative Precipitation Estimation and Segregation Using Multiple Sensor (QPESUMS) and promoted it to every emergency response center of TRA. TRA commissioned Central Weather Bureau to customize this disaster prevention decision support system. With this system, the Central Weather Bureau (CWB) provided TRA with real-time quantitative precipitation estimates of all rainfall monitoring points in important sections, bridges, construction maintenance sections every 10 minutes. These estimates thus provided TRA with a reference for alerting or taking action to the water level and rain volume of all monitoring points. As for the forewarning value, warning value and the action value concerning the important railway sections and bridges, the Construction Department of TRA gathered this information submitted by individual construction branches every quarter and submitted it to the CWB to make ad-hoc corrections.



| Auxiliary Military Service Corps training



| Training for civilian vigilance



| Emergency intercom in wagons

(III) Auxiliary Military Service Corps training

To enhance the skills of military service corps and the rescue ability for emergency railroad repair during wartime, TRA, together with Reserve Command of Ministry of National Defense, organized the "Auxiliary Military Service Corps" training based on the "Guidelines for the Assembly and Training of Annual Auxiliary Military Service Corps". Two independent regional corps with 74 members participated in the training.

1. On August 14, 2018, the 2018 assembly and training of Auxiliary Military Service Corps (No. Z951101) was held in Chiayi Construction Branch with 38 trainees.
2. On September 5, 2018, the 2018 assembly and training of Auxiliary Military Service Corps (No. 931101) was held in Yilan Construction Branch with 36 trainees.

(IV) Routine training for civilian vigilance

To enhance the civil defense knowledge and deepen the civil defense concept to increase the functions of the civilian vigilance, TRA held perennial trainings for 5 regional teams and the Construction Maintenance Headquarters in 2018. There were 6 sessions of training held during July 4 to August 14 with 435 participants (276 males, 159 females and 208 new employees).

The 2018 training courses included disaster prevention and rescue (1 hour), emergency medical rescue and AED (automatic external defibrillator) operation (1 hour), civil defense law and hazardous object identification and handling (1 hour), building fire inspection and application (1 hour).

No.	Unit	Date
1	Construction Maintenance Headquarters	7.25.2018
2	Taipei Mobilization Office	7.17.2018
3	Taichung Mobilization Office	8.14.2018
4	Kaohsiung Mobilization Office	7.4.2018
5	Yilan Mobilization Office	7.10.2018
6	Hualien Mobilization Office	7.12.2018

(V) Prevention from security incidents

Considering that TRA is a public transportation network that may be exposed to attacks and cause a serious threat to public transport safety, TRA took the following precautionary actions to prevent security incidents:

1. Security workforce:

Reinforce platform and train patrol, raise access control at boarding entrance, establish a security reporting system with shops in co-constructed or union stations, and establish a joint defense system with local military, police, and fire departments, local counties and cities, and health care systems.

2. Security facilities:

Increase monitoring equipment in station, emergency intercom in wagons, equip batons in the conductor's room, and anti-explosion blankets in stations.

3. Awareness education for the public:

Remind passengers not to carry dangerous items on train and make it known to the public. Broadcast at stations and trains should remind passengers to be aware of dangerous items and suspicious people, things, and events and they should immediately report to TRA station staff or the Railway Police (02-23115580) or call 110.



(VI) Organization drills for national major infrastructure facilities - Xinzuoing Station

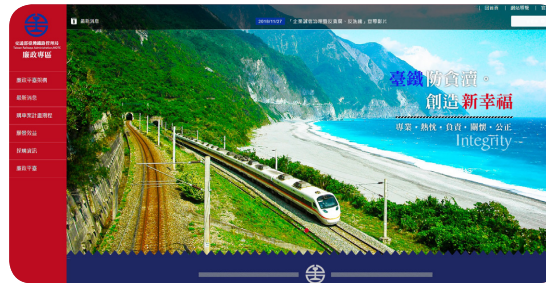
The assessment of “2018 national major infrastructure facility Xinzuoing Station drill” was planned and held by TRA on September 19, 2018. Director Chun-Tai Haung of Office of Homeland Security, EY leded the committee members for assessment in person. Using the co-constructed Xinzuoing Station as the drill location, this drill assessment contained procedures of the business report, on-site inspection, information review and military simulation. The current disaster risks were also reviewed. The task forces and division were implemented by TRA, THSR, KRTC, all stores in the stations and related units of National Security Bureau, National Police Agency, Environmental Protection Administration and Kaohsiung city government by executing the “military simulation” in response to multiple disasters and to strengthen the prevention and preparedness in peacetime and the rescue mobilization, logistics support, response decision and the recovery ability during disasters.

By enhancing the coordination and connection between co-constructed stations for prevention of human-error accidents, this drill ensured the safety operation of the railway transportation during the period of “2018 Taichung World Flora Exposition” (November 3, 2018 to April 24, 2019) and the railway transportation at Xinzuoing special district at the same time. This drill included the situations like the improvised explosive device detonated by the outlaws during the travel, explosives at parking lots, outlaws spill toxic liquid toward passengers at the departure waiting platform, violent attack occurred and hostages were taken on the MRT train during traveling and the information and communication security. 118 participants were mobilized for the drill. It received the recognition of the assessment commissioners.

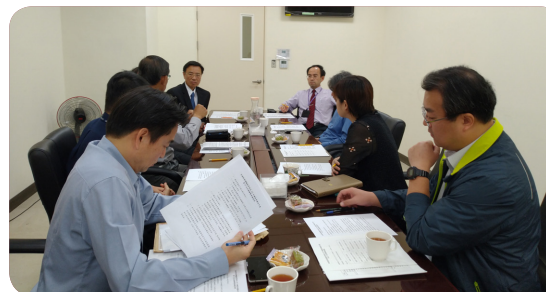
V.X Ethics

(I) The anti-corruption platform

To encourage the public servant to take their duties, TRA held a series of “anti-corruption platform for train procurement” and “anti-corruption platform for intelligent electrical engineering” activities to unify supervision power of the external authorities. By regularly calling liaison meetings, establishing administrative transparency zones, holding anti-corruption forums and taking related prevention measures, TRA eliminated improper external interference and constructed high quality public facilities to facilitate formation of an efficient government dedicated to anti-corruption.



| The anti-corruption platform web page of train procurement projects



| The regular liaison meeting on the anti-corruption platform

(II) Anti-corruption promotion

To reinforce TRA employees' legal knowledge and law-abiding concept and have fully understanding of the legal norms, TRA selected appropriate themes based on the features of each unit. Besides promoting projects through correspondence and instructing regulations related to anti-corruption, TRA also invited the prosecutors at each District Prosecutors Office to give lectures about the law connotation and important condition analysis in depth. There were 14 lectures held with about 3,000 participants.



| The law and discipline promotion at Taichung Transportation Branch



| The anti-corruption and ethics course at Yilan Transportation Branch

To cultivate the anti-corruption concept and legal culture for newly recruited employees to facilitate their execution of duties and to deepen the awareness of anti-corruption and honesty, 32 “laws and disciplines for new civil servants” courses were held. A total of 1,500 newly recruited employees attended the training programs.

(III) Social Participation

1. Root planting promotion:

11 campus anti-corruption activities were planned from March to August, 2018. The promotion was conducted through creative and cheery activities to interact with the students, promote anti-corruption awareness and enable the anti-corruption concept to root deeply in the heart of children and youths. A total of 800 teachers and students participated in the activities.



| Tiansheng Elementary School in New Taipei City



| Shui Mei Elementary School in Taoyuan City



| Xizhou Primary School in New Taipei City



| Fugung Junior High School in Taoyuan City

2. Agency feature promotion:

Combining the media exposure of the festival activities and the agency feature activities, 11 serial promotions were held at crowded stations in northern, central, southern and eastern Taiwan from January to September in 2018. Prize-winning and barricade break-through activities were arranged to interact with the public and promote the anti-corruption information. There were about 1,000 participants.



| Anti-corruption promotion during Chiayi Lantern Festival



| Anti-corruption promotion with barricade break-through and lottery drawing activities at Taipei Transportation Branch



| Anti-corruption puzzle promotion during Railway Festival



| The poke-a-present game for the anti-corruption Q&A during Railway Festival

3. TRA published and broadcast the achievements of social participation in anti-corruption promotion activities on newspaper, magazines and many other media. Also by publishing the achievements to the "Legal Affairs Newsletter," TRA effectively increased the promotion efficiency.



(IV) Anti-corruption meetings

TRA held anti-corruption meetings on September 5, 2018, to honor the models of anti-corruption and honesty and internally create the anti-corruption atmosphere. The implementation status of the TRA and the promotion of civil service ethics were reviewed in the meeting. The discussions and chairperson's instructions were sent to related units for control and evaluation to improve the anti-corruption efficiency. In addition, TRA supervised 43 branch units to hold anti-corruption meetings in 7 regional groups, and 10 regional anti-corruption meetings were held in 2018.

(V) Project audit

TRA conducted the audit of the 2018 "procurement project of cleaning and maintenance services at a big amount." An overall inspection was conducted aiming at the cleaning and maintenance projects for stations and trains at a big amount to detect risk factors with respect to regulations, fulfillment of contracts, and execution. After summarization, TRA made relevant proposals to improve the efficiency of current or future procurement of cleaning and maintenance services, improve the cleaning service quality in a timely manner, and decrease the violations of the vendors in order to ensure that railway transportation service meets public interests and fulfills people's expectation of an anti-corruption government.



| On-site audit at the station



| On-site audit on the train



| The midterm meeting



| The final meeting

V.XI

The Information Affairs

(I) Acquiring the "Information Safety ISO27001:2013" certificate

According to the information security classification of governmental agencies (institutions), TRA must carry out promotion of the ISMS information security control system, pass the third-party certification, and acquire the ISO27001:2013 certificate. TRA Information Center passed the third party (SGS Taiwan Ltd.) ISO27001:2013 review on November 17, 2018.

(II) Promoting ODF-CNS15251 as the government standard format

To respond to the publication policy of government information and to adapt itself to the diversification of the information platform and device, TRA promotes the Open Document Format (ODF) to facilitate the convenience for the public to download government information from the website and for exchange of information among the government agencies, governments and enterprises. This high compatible ODF is suitable for various operation systems and long-term storage. TRA held 4 sessions of "basic educational training of concept and application of ODF documents."

(III) Promoting new generation ticket systems

TRA was planning the new generation ticket system by integrating the timetable search, general booking, payment, ticket and meal box booking in the same web page of the passenger portal. By providing one-stop service for the passengers, TRA expected to achieve the following goals:

1. Ticket booking optimization:

Integrate the timetable search, ticket booking and payment processes, real-time ticket and seat booking, and seat selection services.

2. Smart ticketing system:

Provide automatic change of booked seats to increase available seats for sale.

3. Cloud service:

Dynamically adjust ticket system resources using virtual technology to correspond to the differences between peak and off-peak hours as well as the increased demand for ticket booking during consecutive holidays.

4. Revenue increase:

Revenue-based management was introduced to support managers' decisions and increase TRA's overall revenue.

5. Reinforced hacking prevention:

Prohibit ticket booking via software and control the pseudo demand for ticket booking.

2. Expected benefit analysis

- (1) Increase administration efficiency of the business units.
- (2) Reduction of costs via electronic and paperless operation.
- (3) Improvement of the efficiency and fairness of the personnel and attendance inspection.
- (4) Integration of information security management to solve the information security problems.



| New passenger portal



| The new mobile passenger service app with a more friendly interface for fast navigation of information

(IV) Expansion of the basic network for construction units

- I. Due to increased demand for TRA information system applications, its on-line application has been extended to each unit and closely connected to the business. There are still many basic-level units not connected to the information service network since TRA is a large organization and its basic-level units are spread in different locations in Taiwan. By taking the service demand into consideration, TRA extended the information service network to connect 49 networks of the basic-level construction units to achieve the goal of providing more information service, improving the service quality, and benefiting the passengers.



VI.

Major Construction and Investment Projects

- VI.I | 6-Year Plan for Railway Safety Improvement (2015-2022)
- VI.II | Forward-Looking Program
- VI.III | Extension of Houli East and Houli West Stations
- VI.IV | Widening Project at Xike Station
- VI.V | Rail Maintenance
- VI.VI | Electrical Engineering Maintenance

- VI.VII | New Car Purchase and Upgrade Construction
- VI.VIII | Project Construction



VI.I

6-Year Plan for Railway Safety Improvement (2015-2022)

(I) Plan

The plan was approved by the Executive Yuan with a total budget of NT\$ 27.522 billion. Duration of the plan started from January 1, 2015 to December 31, 2022. Main objects in the plan include:

1. **Level crossing improvement:** Rebuilding level crossings to a three-level structure in Nanhe, Jiannong and Taimali.
2. **Establishing fences and noise barriers in more dangerous sections:** Establishing 175 kilometers of new fences and noise barriers.
3. **Bridges rebuilding and retrofitting in accordance with current laws and regulations:** Rebuilding the Wencuobu River Bridge and 14 other bridges.
4. **Establishing early warning system to prevent slope sliding, landslide and strong wind:** Improving the slope structures, subgrade and drainage facilities in more dangerous sections along the TRA lines. Establishing slope sliding early warning system for disaster prevention.
5. **Upgrading the facilities in the stations in accordance with the legislations:** Elevating station platforms along the TRA lines. Rebuilding the male/female restrooms, and improving access-free facilities and other safety facilities in the stations.
6. **Upgrading rail facilities:** Replacing 250 kilometers of 50-kg rails, 60 kilometers of 50-kg head hardened rails and 600 sets of 50-kg PC sleeper turnovers along the TRA lines.

(II) Execution

1. Completing the constructions of aseismatic design and flood-resisting reinforcement in individual construction sections at the end of 2018. The constructions include repairing exposed steel and spalling concrete, establishing falling prevention facilities on bridges, establishing aseismatic design construction using carbon fiber, using steel (plates) to retrofit wall pillars and abutments, using concrete to reinforce the river bed for flood-resisting, and removing concrete fences and setting up new ones.
2. 139,125 meters of fences had been set up in dangerous sections till the end of 2018, reducing accidents and train delayed events due to personnel passing through railways directly.

3. The improvement construction of Taipei Main Station (Phase 2) was completed on September 20, 2018. The walls and pillars on the U-I and the first floor were covered by enamel plates and we remodeled the big and small VIP rooms to improve our service for the passengers.
4. The platform elevation construction in Chenggong, Xinwuri, Wuri and Sanyi Station was completed and in use. To make it easier to access the trains, we elevated the height of the platforms to 115 cm for the train cars. This way, we would be able to provide access-free traveling service.
5. Improvement of the restroom at Zhiben Station was completed on October 11, 2018 to improve the service quality in the station.



| Fences from Hsinchu to Xiangshan 107K+390-107K+410



| Fences from Qidu to Baifu (7K+360-7K+700)



| Noise Barriers on Yongzhi Street in Yingge



| Fences from Zhongli to Puxin (70K+953-71K)



| Phase 2 Improvement of Taipei Main Station - Big VIP Room

VI.II

Forward-Looking Program

(I) Plan

1. **Plan of connecting THSR Changhua Station and TRA station for transfer:** Realizing our goal to connect THSR Changhua Station and TRA station for seamless transfer. We also plan to connect THSR Changhua Station and the Jiji Line for tourism. The total budget is NT\$1.892 billion and the program duration is about 6 years. Main objects in the plan include:

The structure of the Tianzhong Branch Line is monorail and elevated. The total length of the line is about 3 kilometers, including the elevated bridge part for 1,350 meters and the embankment and ground ramp part for 1,650 meters. We connected the Tianzhong Branch Line and Jiji Line together for operation and established more meeting points on the Jiji Line.

2. **Jiji Branch Line infrastructure improvement plan:** We aim to rehabilitate the infrastructure in stations on Jiji Line to improve our service and promote local tourism. The total budget is NT\$2.363 billion, and we will strive to complete the plan 7 years after it is approved. Main constructions include:

- (1) Elevating and extending the platforms in the stations.
- (2) Face lifting station exterior and improving service facilities.
- (3) Improving fences and drainage facilities along the line.
- (4) Stabilizing and retrofitting the slopes and performing remote monitoring.
- (5) Rerouting and improving of bridges and tunnels.
- (6) Improving the linear curve of the rails.
- (7) Strengthening the functions of rails in stations.
- (8) Moving the level crossings.
- (9) Upgrading devices used in rail maintenance.

(II) Execution

1. The MOTC submitted the final study report of the feasibility of connecting THSR Changhua Station and TRA station for transfer to the Executive Yuan for review on July 12, 2018. The Executive Yuan emailed the MOTC, notifying it to make modification on September 4, 2018. TRA submitted the plan after modification on September 11. The MOTC submitted the report to the Executive Yuan for review on September 25, 2018 but the plan was rejected on December 21. TRA is still in the progress of modifying the plan.

2. The revised plan (the 6th version) of infrastructure improvement on Jiji Line was submitted for review on June 27, 2018. The MOTC made reply and added comments on September 6, 2018. TRA revised the plan and submitted it to the MOTC again on September 28, 2018. MOTC further submitted it to the Executive Yuan for review on October 31. However, the Executive Yuan asked the MOTC to make modifications and submit the plan again on December 28, 2018.

VI.III

Extension of Houli East and Houli West Stations

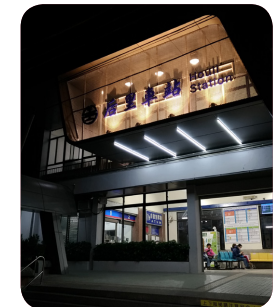
A new Houli East Station was established to connect to Taichung City Government Transfer Station for the traveling need during the "2018 Taichung World Flora Exposition". Access-free facilities and the appearance of the Houli West Station were improved to provide tourists a better service and in the meantime promote the tourist business. Relative constructions were all complete and opened for use on November 3, 2018 for the World Flora Exposition.

Chief projects at the new Houli East Station include establishing tickets vending machines and access turnstiles, temporary platforms, canopies, restrooms at new West Station, access-free passageway improvement (original underpass and footbridge extension and new elevators) and nearby landscaping.

Chief projects at the Houli West Station include rebuilding the departure waiting lobby and the exterior walls, and improving accessible toilets and underpasses.



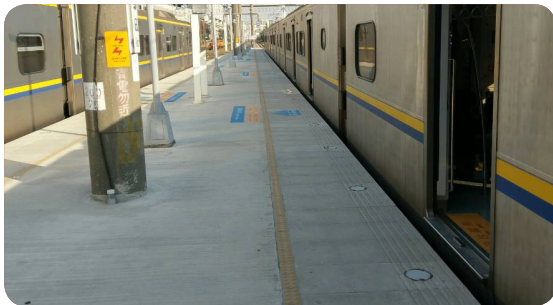
| Redesigned Houli East Station Gate



| Redesigned Houli West Station Gate



| Phase 2 Improvement of Taipei Main Station - Small VIP Room



| Platform Elevating Construction in Wuri Station



| Restroom at Zhiben Station

VI.IV Widening Project at Xike Station

The Xike Station is a new station along the Nangang to Xizhi Line launched on December 30, 2007. The station is located on the western line and rises gradually from the ground surface to the elevated section, forming a landscape lower in the south and higher in the north.

The station is designed with south and north areas, and platforms are constructed as a bridge connecting the entrances and exits at both ends. There is a side platform and an island platform in the station. Like the station building, both platforms feature a streamlined style and technological design. Accesses are available at the south and north ends of the platforms for passengers to board trains conveniently. The entrances and exits at the south and north ends, as well as the cross-railway design of the station, ensure better services for passengers who need to exit the station to the transversely oriented Lianxing Street and Zhangshu Road, and the vertically oriented Xintai 5th Road and Datong Road around the railway in Xizhi.

However, the width of the second platform is somewhat inadequate due to the streamlined design of the station and the limited land. To improve the transportation safety and comfort of passengers, TRA carried out a widening project for the second platform of the Xike Station. The works were completed on February 28, 2018.



| Widening Project at Xike Station

VI.V Rail Maintenance

TRA Construction Department was accountable for improving the rails of all lines. Its 2018 maintenance project consisted of changing 5,464 wood sleepers and 29,443 meters of rails; supplementing 21,822 cubic meters of ballast (which were 137.615 kilometers); and changing 80 sets of turnovers.

VI.VI Electrical Engineering Maintenance

(I) Sign Systems

1. Establishing larger crossing grade indicators and double-sided flash; Rebuilding emergency buttons

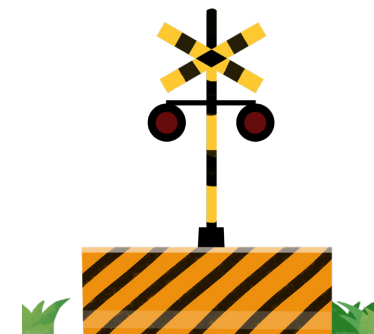
- (1) To let drivers on the road have sight of the level crossing and learn the traffic status ahead when they approach the rails, we established 155 larger crossing grade indicators.
- (2) To eliminate the influence of objects on-site that will prolong the time for turning on the emergency device, and to save the time reaching the device, we established 200 manual warning devices (emergency buttons) along the roads around the level crossings.
- (3) In some cases, the train triggers the level crossing warning system right after cars enter the clearance area of the railway field. In order to make the cars in the clearance area be aware of the coming train as soon as possible, we set up 92 level crossing flash devices along the rail sides.

2. Using optical fibers for level crossing remote surveillance transmitting

Substituting 24 optical fiber cables for the old copper cables to improve the monitoring of signal devices and meet the need of stable transmission. We have currently finished the substitution to a distance of 284 kilometers.



| Manual Warning Device



| Larger Indicator



| Double-sided Flash

(II) Telecommunication Systems

1. Improving the overall reception quality of the radio system used on car control and dispatching

- (1) To solve the poor reception issue of the radio system used on car control and dispatching, we established 6 relay stations and relay repeaters in north Nanshi, north Sanyi, north Dajia, south Dajia, north Qingshui areas and in the 5th Tunnel on Jiji Line. Hence, we were able to increase the coverage rate of radio communication.
- (2) Replacing the radio transceiver (MTP750) distributed in 2006 for car control and dispatching with the new MTP3550 type. In total, we replaced 1,129 radio transceivers in 2018. This would ensure the smooth operation of car control and the safety of maintenance staff on site.

2. 96 optical fiber establishment (Phase I)

In order to make the backbone transmission network highly stable and its life span longer, we removed the old optical fibers and upgraded them with new ones. The plan was to set up a 96 optical fiber, integrating with the existing optical fiber transmission network. We hoped the plan would cost us less on human resources and maintenance. 678 kilometers were complete until the end of 2018.

(III) Power Systems

1. 95mm² messenger wire upgrading

Replacing the 49.5mm² messengers wire with 95mm² ones. The budget for the project is NT\$867 million and rails included in the project extend to 1,260 kilometers. So far, we have finished 760 kilometers and 60.3% of the plan (by December 31, 2018) and plan to realize the project on June 30, 2021.

2. Facilities upgrade (including installation) in 9 substations

The budget for the upgrade project is NT\$268 million. We aim to substitute the 25MVA transformers for the old 15MVA ones. This will improve the load capacity and emergency transfer capability of the substations. The project is planned to be completed in June, 2020.

3. Purchased 15 work vehicles for catenary and 10 maintenance lorries for railway construction.

VI.VII New Car Purchase and Upgrade Construction

(I) TRA Car Procurement and Replacement Project (2015-2024)

Total budget: NT\$99.73 billion for purchasing 1,307 locomotives and other units. Purchased Item:

1. 600 inter-city EMUs
2. 520 commuting EMUs
3. 127 locomotives
4. 60 hybrid locomotive passenger cars on the Branch Line

The 520 commuting EMUs bid case was awarded on May 31, 2018. Units will start to be delivered in 2020. Other bid cases are still in the bidding process.

(II) Amount of locomotives, passenger cars and cargo cars

1. 256 locomotives

- (1) 86 electric locomotives
- (2) 64 push-pull electric locomotives
- (3) 90 diesel-electric locomotives
- (4) 16 diesel-hydraulic locomotives

2. 2,346 passenger cars

- (1) 285 EMUs for Tze-Chiang Limited Express.
- (2) 381 push-pull passenger cars for Tze-Chiang Limited Express
- (3) 950 commuting EMUs
- (4) 165 diesel multiple units for Tze-Chiang Limited Express
- (5) 46 diesel passenger cars
- (6) 432 AC passenger cars
- (7) 37 common passenger cars
- (8) 50 other cars

3. 1,651 cargo cars

(III) Upgrade Status of Locomotives and Cars

1. We perform car makeover to remove stairs inside the car and improve access-free facilities in cars. In total, we aim to perform the makeover project on 1,192 cars. Our contractor, China Steel Machinery Corporation, has completed the makeover on 648 trains in 2018 and plans to realize the whole project by October, 2020.



| Before Removing the Stairs - A Stair in Front of the Door



| After Removing the Stairs - Flat Ground in Front of the Door

2. Optimizing the transfer service from THSR Zuoying Station to Pintung area. Our contractor, China Steel Machinery Corporation, upgraded 15 units (60 cars) of the EMU500 commuting EMUs. The contract was awarded on December 15, 2017, and the project is planned to become complete by the end of April, 2019.



| Before the Upgrade



| After the Upgrade (schematic diagram)

3. Upgrading 252 locomotives and SIV systems on the passenger cars of the Local Train (EMU 500). The bid was awarded on June 12, 2018 by Shihlin Electric & Engineering Corporation with a plan to realize the project in 2022.

VI.VIII Project Construction

(I) Moving Kaohsiung Workshop to Chaozhou and the Development of the Original Site

Due to the railway underground program in downtown Kaohsiung, we needed to move Kaohsiung Workshop, Southern Region Supply Workshop and Kaohsiung Port Inspection Sub-branch to Chaozhou. Only by doing so could we keep the maintenance of passenger cars and cargo cars in operation, and make sure smooth supply of manufactured accessories and materials. Moreover, we had to ensure passengers and cargo were transported normally and the traffic was safe without any concern. New Workshop in Chaozhou can satisfy the repair need of EMUs after TRA's trains operate more like metros. The new Chaozhou Workshop will also become the maintenance center for cars in the southern area. The empty space of the old Kaohsiung Workshop will be developed and put into use in accordance with the rezoning project. The 1st amendment program was approved by the Executive Yuan with Letter Yuan-Tai-Jiao-Zi No. 1060016947 on June 1, 2017. The total budget of the program was adjusted to NT\$13.4818 billion, and the duration of the program was adjusted as well (from August 13, 2013 to December 31, 2021).

Main objects in the plan include:

1. Moving Kaohsiung Workshop to Chaozhou
2. Moving Southern Region Supply Workshop to Chaozhou
3. Moving Kaohsiung Port Inspection Sub-branch to Chaozhou
4. Establishing new maintenance workshops for push-pull passenger cars
5. Developing the empty space of the old Kaohsiung Workshop and putting it into use in accordance with the rezoning project.

So far, the "Main Construction of CL121 Chaozhou Workshop (including Southern Region Supply Workshop)" and "Construction of CL131 Inspection and Repair Devices" have started on March 23, 2018 and August 1, 2018. Other tenders of construction projects are also in the process.

(II) Double Track Construction between Chenggong and Zhuifen

The double track construction between Chenggong and Zhuifen will improve any bottleneck in the Taichung area, providing people with faster and more comfortable transportation services. The plan was approved by the Executive Yuan with the total budget of NT\$ 1.5405 billion. Duration of the plan was from January 1, 2017 to December 31, 2020.

Main objects in the plan include:

1. Increasing the capacity of the line
2. Narrowing the headway
3. Satisfying the need for commuting passengers and making the function similar to metros
4. Improving the bottleneck in the Taichung area.

The civil work, rail, telecommunication, signal, electricity constructions and other main constructions were all contracted in 2018. The electricity and signal constructions started on September 21, 2018. Other construction tender cases are also in the bidding process. Our goal is to make the double track open to traffic at the end of 2020.



— Annex

Major Events in 2018



Annex Major Events in 2018

01/02	<p>Successful dispatch during the New Year Holiday</p> <p>To reduce traffic congestion during the five-day New Year's holiday from December 29, 2017 to January 2, 2018, TRA dispatched 232 additional trains (141 trains on the East Line, 74 trains on the West Line, 17 trains on South-link Line) and 490 cars in order to transport up to 3,880,738 passengers. The average daily operation volume was 776,148 passengers, which was 4% more than in the previous year. The total revenue during the period was NT\$ 340,182,989 with an average of NT\$ 68,036,598 per day. The number increased 6% compared to the previous year.</p>	02/06	<p>Forestry Bureau and TRA building "Satoyama Animal Decorated Train" together and holding an inaugural ceremony at Nangang Station</p> <p>Forestry Bureau, Council of Agriculture, Executive Yuan and TRA built the "Satoyama Animal Decorated Train" together. They held an inaugural ceremony at Nangang Station at 10:30 am. The host of the ceremony was Forestry Bureau Director General Hua-Ching Lin. In the ceremony, TRA Director General Chieh-Shen Lu, along with COA Minister Tsung-Hsien Lin and MOTC Minister Tan Hochen, started the inaugural ceremony. To educate people the importance of reserving low elevation mountains and ecological system on farms, Forestry Bureau launched the "Satoyama Animal Decorated Train". The LCD monitors inside the cars played various educational ecosystem videos of plants and animals, allowing the passengers to appreciate the beauty of the biodiversity in Taiwan and learn more about conservation.</p>
01/10	<p>Groundbreaking ceremony for moving Kaohsiung Workshop to Chaozhou</p> <p>The groundbreaking ceremony for moving Kaohsiung Workshop to Chaozhou started at 10:30 am. It was hosted by Director General Chieh-Shen Lu. Minister Tan Hochen of MOTC, Pingtung County Magistrate Meng-An Pan and Chaozhou Town Mayor Ming-Chiang Hung were invited to participate in the ceremony. The newly established Chaozhou Workshop would become the maintenance center for trains in the Southern area. Its overall design could foster the interaction between the building itself and the environment and decrease the impact on natural landscape and the ecology system during the development. We would also make good use of the space to reach the goal of "resource sharing".</p>	02/14	<p>TRA Director General Chieh-Shen Lu accompanied Premier Ching-Te Lai inspecting the train dispatching status during Chinese New Year holiday at Taipei Main Station</p> <p>MOTC Minister Tan Hochen, TRA Director General Chieh-Shen Lu, Director General Hsiang-Lin Hu from Bureau of THSR and Directorate General of Highways Director General Yen-Po Chen presented the transportation dispatch measures to Premier Ching-Te Lai right before Chinese New Year Holiday. They also accompanied him inspecting the dispatching status during Chinese New Year Holiday at Taipei Main Station.</p>
01/25	<p>TRA, MOTC Tourism Bureau and THSR signed a cooperation Memorandum for railway tourism of Jiji Line</p> <p>TRA, MOTC Tourism Bureau and THSR held the "Jiji Railway Tourism Development Forum" together. Under the witness of MOTC Minister Tan Hochen, TRA Director General Chieh-Shen Lu, MOTC Tourism Bureau Director General Yung-Hui Chou and THSR President Yao-Tsung Chiang signed the "Jiji Railway Tourism Development Cooperation Memorandum". The Jiji Line was the longest line among the 3 Branch Lines of TRA and was transformed into a tourist railway. In addition to the cooperation with THSR, we also held the "Jiji Railway Tourism Development Forum", hoping to bring the resources the 3 parties had together to develop the Jiji tourist railway. We hoped to put heads in the industry, government and university together to form a base for future promotion and building local prosperity.</p>	02/16	<p>TRA Director General Chieh-Shen Lu inspected the dispatching status of every unit in each section on the whole line during Chinese New Year Holiday</p> <p>TRA Director General Chieh-Shen Lu inspected the dispatching status of every unit in each section on the whole line. The inspection lasted for 5 days from February 12, 13, 14, 15 and 16 during Chinese New Year Holiday. Meanwhile, he showed his gratitude to employees at work.</p>
01/30	<p>Holding the 6th "Meeting of the Taiwan/UK Railway Forum"</p> <p>Lord Faulkner of Worcester, Deputy Speaker of the House of Lords of the United Kingdom, led 14 British business managers, 19 experts, and members of the UK Railway Industry Association to visit TRA. Moreover, they participated in the 6th "Meeting of the Taiwan/UK Railway Forum". It was hosted by TRA Director General Chieh-Shen Lu and participating members included Railway Reconstruction Bureau Chief Secretary Tai-Hsin Wen, Deputy Chief Engineer Hsin-Hsi Lu from Bureau of THSR, THSR Manager Kuo-Li Li and Hsing-Min Tao, Chief Executive Officers and employees responsible for relative business in TRA (90 people in total). We hoped to exchange the railway technology of both parties and continued to deepen our cooperation in the future. Moreover, we could promote industry cooperation between Taiwan and the UK to create business benefits.</p>	02/21	<p>Successful dispatch during Chinese New Year Holiday</p> <p>To reduce traffic congestion during the 9-day Chinese New Year's holiday from February 13-21, 2018, TRA dispatched 384 additional trains, including 288 trains on the East Line (South-link Line included) and 96 trains on the West Line with 1,098 additional cars in order to transport up to 6,180,121 passengers. The average daily operation volume was 686,680 passengers, which was 0.4% less than in the previous year. The total revenue during the period was NT\$ 594,511,698 with an average of NT\$ 66,056,855 per day. The number decreased 2.2% compared to the previous year.</p>





03/01	Representative of Directors in Iwate Galaxy Railway Co., Ltd, Masayoshi Kikuchi, visited TRA Representative of Directors in Iwate Galaxy Railway Co., Ltd, Masayoshi Kikuchi, and Director of its Tourism Department, Yukio Oshita, visited TRA at 3:30 pm. Deputy Director General Wei Tu received them.
03/14	Transportation Committee of the Legislative Yuan accompanied by Director General, Chieh-Shen Lu, to inspect traffic infrastructure in Hualien area Legislator Bi-Khim Hsiao, Chen-Wei Hsu and other legislators in the Transportation Committee inspected the traffic infrastructure and tourism rebuilding status after the disaster in Hualien area. They were accompanied by MOTC Minister Tan Hochen, Tourism Bureau Director General Yung-Hui Chou, Directorate General of Highways Director General Yen-Po Chen, Maritime and Port Bureau Director General Wei-Chun Hsieh, Port of Hualien of Taiwan International Ports Corporation President Chan-Yu Lu and TRA Director General, Chieh-Shen Lu. The officers presented the report in the meeting room in Hualien Construction Section.
03/16	ACRI visited TRA President of the Association of Czech Railway Industry (ACRI), Ms. MarieVopalenska, and 8 others visited TRA at 2:00 pm. They were received by Deputy Director General Hsien-Lin Ho.
03/20	Kintetsu Group Holdings Co., Ltd. visited TRA Representative Operating Officer of Kintetsu Group Holdings Co., Ltd., Akimasa Yoneda, and 7 others visited TRA at 2:00 pm. TRA Director General, Chieh-Shen Lu received them.

03/23	TRA Director General, Chieh-Shen Lu, participated in the ceremony celebrating its multiple i-Mailbox marching services into Taipei Main Station Chunghwa Post held a ceremony celebrating the use of i-mailbox at Taipei Main Station at 2:00 pm. Chunghwa Post President Hsien-Cho Chen and TRA Director General, Chieh-Shen Lu, together hosted the ceremony to celebrate the service location extension. To expand the diverse service for the public, Chunghwa Post provided its service in 47 stations and set up 56 i-mailboxes. It hoped to offer the public a convenient service for picking up mails and packages in stations.
03/26	TRA and Shinano Railway signed a contract of friendly relationship TRA signed a contract with Shinano Railway to build a friendly a relationship. Both parties established an affiliated relationship for their stations. They held a ceremony at Tianzhong Station at 11:00 am. TRA Director General, Chieh-Shen Lu, along with Director Chin-Sung Chang of the Transportation Department, Tianzhong Station Master Ming-Sung Yu, President Atsushi Tamaki and Tanaka Station Master Hikoya Sakai from Shinano Railway signed a contract of friendly relationship and established an affiliated relationship for their stations. TRA invited Changhua County Deputy Magistrate Min-Yu Lin, Tianzhong Town Mayor Wen-Hsien Hsieh, Ershui Township Mayor Tsang-Yang Cheng, elected representatives and 12 guests from Shinano Railway to participate in the ceremony. We hoped to promote exchange events between Taiwan and Japan and boost railway tourism in both countries.





04/09	Successful dispatch during Tomb Sweeping Holiday During the 7-day Tomb Sweeping Holiday from April 3, 2018 to April 9, 2018, TRA dispatched 342 additional trains and 716 cars in order to transport up to 5,283,352 passengers. The average daily operation volume was 754,765 passengers. April 4 had the highest operation volume, which was 826,208 people. The total revenue during the period was NT\$ 495,393,921 with an average of NT\$ 70,770,560 per day. April 4 had the highest revenue, which was NT\$ 81,995,750.
04/19	2018 Labor Day Commendation Rally Director General Chieh-Shen Lu and President Wen-Cheng Chang of Taiwan Railway Labor Union hosted the 2018 Labor Day Commendation Rally together. TRA invited MOTC Chief Secretary Chi-Kuo Lin, Administrative Deputy Minister San-Kuei Lin from Ministry of Labor, Board Director Chung-Fa Huang from Taiwan Highways Workers' Union and Director General Hsu-Hsin Hsu from Railway Police Bureau to participate in the rally. There were 65 model workers being commended in the rally.
04/23	Adjusting headway of trains in the morning and at night to buy more time for mechanical, constructional and electrical maintenance TRA adjusted the headway of trains in the morning and at night starting from today to buy more time for mechanical, constructional and electrical maintenance. 2 Tze-Chiang Limited Expresses and 15 Local Trains were affected. The maintenance time at night was extended from 2 hours to 4 hours. This would give Rolling Stock Department, Electrical Engineering Department and Construction Department enough time to upgrade and repair parts and components of the devices and maintain subgrade of all lines. Meanwhile, it could help decrease risks during operation and strengthen overall traffic safety.
04/25	Österreichische Bundesbahnen (ÖBB) and Austrian Office Taipei visited TRA CEO Johann Pluy from ÖBB and Austrian Office Taipei Ambassador Christian Fuchssteiner along with 13 others visited TRA at 4:45 pm. Director General Chieh-Shen Lu led Chief Executive Officers to receive them. Together they exchanged business ideas and shared experiences in the 1st meeting room(Conference Room I).

05/11	JR-EAST and JRE Business Development Taiwan, Inc. visited TRA Operating Officer Mie Miwa from JR-EAST and Chairman Youichi Ishiguro from JRE Business Development Taiwan, Inc. and 5 others visited TRA at 9:30 am. They were received by Director General Chieh-Shen Lu.
05/15	Mayor Shingo Mimura of Aomori Prefecture and Chairman Kouetsu Chiba of Aomori Railway Co., Ltd. along with 14 people visited TRA Mayor Shingo Mimura of Aomori Prefecture and Chairman Kouetsu Chiba of Aomori Railway Co., Ltd. along with 14 people visited TRA at 4:45 pm and were received by Director General Chieh-Shen Lu.
05/18	TRA held the "Presentation of Manufacturing Sources Used in Railway System Maintenance and Procurement in 2018" TRA held "Presentation of Manufacturing Sources Used in Railway System Maintenance and Procurement in 2018" at Fugang Vehicle Depot at 10:00 am. It was hosted by Director General Chieh-Shen Lu and TRA invited MOTC Minister Tan Hochen, Minister Jung-Chin Shen of Ministry of Economic Affairs, domestic manufacturers in the railway field, government-industry-academia cooperation universities, research units and operational organizations to participate in the Presentation. We hoped to promote machining supplier matching between the railway field and operational organizations by holding this Presentation of Manufacturing Sources. Moreover, we hoped to form an industry chain to help the development of domestic railway industries.
05/18-21	Deputy Director General Wei Tu led officers to Japan and signed a contract of friendly relations with Heisei Chikuho Railway Deputy Director General Wei Tu led Section chief Wen-Qian Wang of the Transportation Department, Ruifang Station Master Yi-Zhong Chen, and Assistant Clerk Hui-Hsuan Chen from Secretariat to Japan to visit Heisei Chikuho Railway. Deputy Director General Wei Du and Vice President of Heisei Chikuho Railway signed the "Contract of Friendly Relationship" on May 19 under the witness of Tagawa City Mayor Futaba Kimito. This represented the friendly relationship between the railway industries in Taiwan and Japan. We hoped we could promote railway traveling by the collaboration.
05/22	TRA, Tourism Bureau and THSR collaborated to form a Railway Tourism Branch Team and presented a decorated train together TRA, Tourism Bureau and THSR held the presentation of the decorated train created by Railway Tourism Branch Team at Tianzhong Station at 10:00 am. MOTC Minister Tan Hochen gave a speech at the ceremony. TRA Director General Chieh-Shen Lu, Director General Yung-Hui Chou from MOTC Tourism Bureau and THSR President Yao-Tsung Chiang signed the "Jiji Line Railway Tourism Memorandum of Cooperation". We hoped to combine resources in 3 parties to promote railway traveling together and help boost local tourism.



06/01	President Atsushi Tamaki of Shinano Railway Co., Ltd. visited TRA President Atsushi Tamaki of Shinano Railway Co., Ltd. visited TRA at 3:30 pm and was received by Director General Chieh-Shen Lu.
06/07	President Ichiro Ogami of South Hokkaido Railway Company and 3 others visited TRA President Ichiro Ogami of South Hokkaido Railway Company and 3 others visited TRA at 10:30 am and they were received by Director General Chieh-Shen Lu.
06/08	We held the Railway Festival celebration event for the 131st anniversary of TRA with the slogan "TRA 131, the heartwarming service"
06/09	Director General Chieh-Shen Lu took part in the press conference for signing "Software Construction for Transforming Taipei Workshop into a Railway Museum Park" Ministry of Culture and MOTC held a ceremony for signing "Software Construction for Transforming Taipei Workshop into a Railway Museum Park" at Taipei Workshop (Songshan Workshop) at 10:00 am. Minister Li-Chiun Cheng of Ministry of Culture and MOTC Minister Tan Hochen signed the "Blue Train Maintenance Collaboration Project" together. In the ribbon cutting ceremony, legislator Szu-Yao Wu, TRA Director General Chieh-Shen Lu, Director Teng-Chin Chen from Department of Cultural Resources were invited and they picked up a repairing tool, welding gun, using it to weld the top of the blue diesel passenger car. It represented the start of the blue train repair project and we hoped to build the Taipei Workshop into the first railway museum in Asia in the future.
06/18	Successful dispatch during Dragon Boat Festival in 2018 To reduce traffic congestion during the 5-day Dragon Boat Festival holiday from June 15 to 19, 2018, TRA dispatched 202 additional trains with 395 additional cars. The total revenue during the period was NT\$ 306,413,068 with an average of NT\$ 61,282,641 per day. TRA transported 3,302,524 passengers during the period with an average of 660,505 passengers per day.

06/19	President Takashi Ueda of Hisatsu Orange Railway Co., Ltd. and 4 others visited TRA President Takashi Ueda of Hisatsu Orange Railway Co., Ltd. and 4 others visited TRA at 4:00 pm, and they were received by Director General Chieh-Shen Lu.
06/27	Director Shigetomo Shiraishi of Railway System Business Department in Toshiba Infrastructure Systems & Solutions Corporation and 6 others visited TRA Director Shigetomo Shiraishi of Railway System Business Department in Toshiba Infrastructure Systems & Solutions Corporation and 6 others visited TRA at 10:00 am. Chief Secretary Lai-Shun Chu received them.
06/27	CEO Fernando Lehner of MGBahn and 2 others visited TRA CEO Fernando Lehner of MGBahn and 2 others visited TRA at 9:30 am. Director General Chieh-Shen Lu led directors of Transportation Department, Rolling Stock Department and Catering Service Department, and other relative personnel to receive them. They also discussed collaborative marketing plans together in the 1st meeting room.
07/06	Director General Chieh-Shen Lu led officers in visiting Kyushu Railway Company (JR Kyushu) in Japan. They participated in Kinki Nippon Railways - Opening of Photo Exhibition of Railways in Taiwan and Japan Director General Chieh-Shen Lu led Director Chen-Chao Huang of General Affairs Department, Deputy Director Yu-Mou Chen of Transportation Department, Deputy Chief Chuan-Hsing Wang from Secretariat to Japan for business. They visited Kyushu Railway Company (JR Kyushu) on July 3. They were received by President Toshihiko Aoyagi. They exchanged opinions and discussed issues regarding railway traveling, operation and marketing strategies. They visited stations of Kintetsu Railway Co.,Ltd. and saw facilities in stations, as well as visiting its subsidiaries on July 4. They participated in the opening of the photo exhibition of railways in Taiwan and Japan, and the inaugural ceremony of the exclusive train on July 5. On the same day, they paid a visit at Abeno Harukas Station and Uehommachi Station of Kintetsu Railway to check their facilities. We hoped to learn the precious experiences of railway business operation from them and refer to the experiences for our future development and sustainable operation.



07/10	Linrong Shin Kong Station opening TRA held an opening ceremony at Linrong Shin Kong Station at 10:30 am. The host of the ceremony was Director General Chieh-Shen Lu, and we invited Chief Secretary Tai-Hsing Li from MOTC, legislator Bi-Khim Hsiao and Tian-Tsair Jeng, Chairman Pang-Sheng Wu of Shin Kong Chao Feng Co., Ltd., Chairman Tung-Liang Wu of Shin Kong Financial Holding Co., Ltd., and other guests to participate in the ceremony. Linrong Shin Kong Station was the 229th station of TRA, and it also made lots of "exceptions". It was the only privately-donated station whose original land was for private use. The money used in building the station was donated as well. It was the only underground station on the line between Hualien and Taitung. Linrong Shin Kong Station was also the only "Simple Station" with Tze-Chiang Limited Express stopping by. We hoped with the vitalization of the station, we could bring local prosperity success and promote tourism.
07/10	Director Takashi Kawano of the Administrative Center of Electric Network and Signal System in JR-EAST and 6 others visited TRA Director Takashi Kawano of the Administrative Center of Electric Network and Signal System in JR-EAST and 6 others visited General Transport Dispatcher Office and looked over the car control system in Taipei Main Station at 9:00 am. Both parties exchanged technology and shared experiences in the afternoon. Director Jui-Tsung Chen of Electrical Engineering Department in TRA led staff in relative business departments to take part in the exchange meeting.
07/10	Executing the "6-Year Plan for Railway Safety Improvement". Double track electrified construction complete from Ruisui to Sanmin To execute the "6-Year Plan for Railway Safety Improvement", we actively improved the bottleneck on the line between Hualien and Taitung to boost the transport capacity. One line (west mainline) of the double track electrified construction from Ruisui to Sanmin had been allowing trains from both directions to go through since September 26, 2017. We spared no efforts in building the east mainline, and it was finally complete on this day. Both lines of the double track electrified construction were officially open to traffic from Ruisui to Sanmin (east mainline). This decreased 3 to 10 minutes of the train meeting time, increased the transport capacity, and improved our service quality effectively.
07/13	JR-EAST and JRE Business Development Taiwan, Inc. visited TRA Executive Director Kenichiro Arai from JR-EAST and Chairman Youichi Ishiguro from JRE Business Development Taiwan, Inc. along with 6 others visited TRA at 2:30 pm. They were received by Director General Chieh-Shen Lu.
07/24	Kintetsu Group Holdings Co., Ltd. visited TRA Representative Operating Officer of Kintetsu Group Holdings Co., Ltd., Akimasa Yoneda, and President Shuji Okane of the Kinki Sharyo Co. Ltd., along with 5 others visited TRA at 4:30 pm. TRA Director General Chieh-Shen Lu received them.

07/26	Director General Chieh-Shen Lu hosted the opening and press conference of "Beauty of TRA and Kintetsu - Charm of Railways" photography exhibition Both parties from Taiwan and Japan held the opening of "Beauty of TRA and Kintetsu - Charm of Railways" photography exhibition at the Main Hall of Taipei Main Station at 10:00 am. Director General Chieh-Shen Lu hosted the opening with the participation of Representative Operating Officer of Kintetsu Group Holdings Co., Ltd., Akimasa Yoneda and its staff. To commemorate the 1st anniversary of the friendly railway relationship contract, we held a photography contest together from March to May. The awarded photography works for the competition would then be exhibited in the west wing corridor in Taipei Main Station for one month until August 24. We hoped passengers from Taiwan and Japan could see the beauty and charms of railway traveling, and this would help deepen our emotional connection.
08/13	Signing Ceremony of the government-run urban renewal in Nangang type-3 business district "Heart of Nangang" TRA and Taipei Urban Regeneration Center worked together to execute the government-run urban renewal case, "Heart of Nangang". They held a signing ceremony at Courtyard Taipei at 2:00 pm. TRA Director General Chieh-Shen Lu, Deputy Taipei City Mayor Chin-Jung Lin and Chairman Tsang-Tsun Chien of Ruentex Development Co., Ltd., signed the contract. Urban renewal would help the development of the business nearby, create new economic opportunities and build Nangang into a new hub.
09/03	TRA Pingtung Station and THSR Xinzuoing - The optimized train transit inaugural ceremony To implement "The Forward-looking Infrastructure Development Program," TRA strengthened the connection between TRA and THSR to form a track system network and spent NT\$200,000,000 optimizing the service facilities of EMU500. The optimized train inaugural ceremony was held at 11:00 am at Pingtung Station and hosted by Minister of MOTC Hung-Mou Wu. In the ceremony, Director General Chieh-Shen Lu accompanied Pingtung County Major Meng-An Pan and Legislative Yuan legislator Chia-Pin Chung to jointly launch the inaugural ceremony to achieve goals of the seamless transport of THSR, convenient transit and service optimization for the Pingtung people.
09/12	TRA held the "MOTC 19th Golden Road Award ceremony" TRA was in charge of the "2018 MOTC 19th Golden Road Award ceremony" held at 2:00 p.m. at TRA Auditorium. Minister of MOTC Hung-Mou Wu hosted the ceremony to honor the outstanding units in the following six major categories of the railway, highway: good landscaping, station area environmental maintenance, road maintenance, equipment maintenance, road user information, and remarkable engineer. TRA received awards in the three major categories of station area environmental maintenance, road maintenance and equipment maintenance.





09/20	UK Trade Envoy Lord Faulkner along with 4 of his men visited TRA UK Trade Envoy Lord Faulkner along with 4 others visited TRA at 11:00 am. and were received by Director General Chieh-Shen Lu.
09/24	Smooth traffic distribution during the Moon Festival holidays in 2018 To reduce the traffic congestion during the 5-day Moon Festival holidays from 21 September to 25 September in 2018, TRA dispatched 238 additional trains and 400 coaches on all TRA lines in order to transport up to 3,616,710 passengers. The average daily operation volume was 723,342 passengers. The total revenue of all lines was NT\$340,111,933, equal to an average of NT\$ 68,022,387 per day.
10/03	Hualien New Station Opening We held an opening ceremony for Hualien New Station at 11:10 am. The ceremony was hosted by MOTC Minister Hong-Mou Wu. TRA Director General Chieh-Shen Lu invited Proxy Hualien County Magistrate Pi-Chung Tsai, legislator Chen-Wei Hsu, Bi-Khim Hsiao, Director General Hsiang-Lin Hu from Railway Bureau, Director General Kuo-Hsien Lin of Civil Aeronautics Administration, CEO Chuan-Sheng Hsu and Director Hsin-Shih Nien from Eastern Taiwan Joint Services Center to participate in the opening. A bridge linked 2 buildings together to become the new Hualien Station. It had the capacity of 50 thousand people per day. The linking bridge between the 2 station buildings allowed people to watch trains coming in and going out and planes taking off and landing. On the station floor, there was a large public art "Huilan Whale Flag" and the painting of Huang-Yueh Lin "God Bless Hualien" was hung in the Station Hall. These brought the beauty of humanities and landscaping in Hualien and Taitung to domestic and international passengers right after they arrive Hualien.
10/14	Kaohsiung railway underground section opened to traffic. Premier Ching-Te Lai attended the inaugural ceremony Kaohsiung railway underground section officially opened to traffic. Premier Ching-Te Lai attended the inaugural ceremony at Kaohsiung Station at 10:00 am. Director General Hsiang-Lin Hu from Railway Bureau and TRA Director General Chieh-Shen Lu hosted the ceremony. TRA invited Secretary-general to the President Chu Chen, MOTC Minister Hong-Mou Wu, Proxy Kaohsiung City Mayor Li-Min Hsu, legislator Chao-Shun Huang, Kun-Tse Li, Bi-Ling Kuan, Tien-Lin Chao, Chih-Chieh Hsu, Shyh -Fang Liu, Yi-Min Chen, Tai-Hua Li, MOTC Tourism Bureau Director General Yung-Hui Chou and other guests to participate in the ceremony. The 10 new stations were also open to traffic on the same day as the ceremony. To celebrate this meaningful event, TRA launched the commemorative carnet "Perfect & Convenient Kaohsiung". The carnet set was limited, and only 2000 sets were available. This represented the perfection of Kaohsiung railway underground section.

10/16	MOTC 2018 Business Alliance Conference was held on the 5th floor of the GIS MOTC Convention Center. Director General Chieh-Shen Lu represented TRA and participated in the conference MOTC 2018 Business Alliance Conference was held on the 5th floor of the GIS MOTC Convention Center. The organizer of the conference was Taiwan International Ports Corporation Ltd., the co-organizer was TRA and the host was MOTC Minister Hong-Mou Wu. We invited all directors from units that were under the governance of the MOTC. Director General Chieh-Shen Lu and other guests participated in the conference. We hoped affiliations could come up with marketing strategies and promote private participation in infrastructure projects efficiently. This way, we could collaborate to create business opportunities.
10/21	Puyuma Express (No.6432) derailment at Xinma Station A Puyuma Express (No.6432) derailed at Xinma Station on its way to Taitung on October 21 at 4:50 pm. The derailment caused 5 cars to overturn, the death of 18 people and 276 people were injured in the accident. TRA formed an Emergency Response Team right away and asked the local government, army unit, police department, fire agency, and medical division (public health bureau) for help. All units collaborated together for medical work, emergency repair and other rescue work. As for the injured passengers in the accident and their relatives, MOTC and TRA organized to form a Service Team responsible for inquiry and other work 24/7. Moreover, TRA sincerely apologized to the public. The Railway Accident Investigation Team in the Executive Yuan and the Railway Bureau took the responsibility of investigating the cause of the accident.
10/28	Taichung railway elevated section (Phase 2) completed and opened to traffic Taichung railway elevated section (Phase 2) was completed and opened to traffic on this day. The elevated section started at Fengyuan Station in the north and ended at Daqing Station in the South. TRA established 5 new stations (Lilin, Toujiacuo, Songzhu, Jingwu and Wuquan Station) in between the 5 old stations. The railway track elevation of these 10 stations between Taichung and Fengyuan was linked to the MRT Green Line, forming an annular rail system. This enabled the railway system to work like MRT and represented a new era for railway system in Taichung.



Taiwan Railways Administration handover ceremony for Director General Chieh-Shen Lu (relieved) and Director General Cheng-Yuan Chang (new appointed)

TRA held a handover ceremony at the auditorium at 8:00 am this day. Under the witness of Premier Ching-Te Lai and the supervision of MOTC Minister Hong-Mo Wu, Cheng-Yuan Chang was sworn in as the 22nd Director General of TRA. He would use his profession in transportation and management to lead all staff, upgrade facilities, solve issues in route and operating systems, and also resolve organizational, financial, and human resources problems. This would improve our safety awareness and re-establish the confidence of the public in TRA with resolution. We would spare no efforts to live up to the expectation of the people in the country. In the future, we would march toward the 6 goals: "ensuring traffic safety", "transforming TRA's culture", "enhancing service quality", "improving work environment", "upgrading facilities of trains and tracks", and "promoting corporate management". We would provide a "safe journey home" for every passenger.

11/09



Photo by Yu-En Tseng

Wakasa Machi Deputy Mayor Seiichi Morita from Tottori Prefecture in Japan and 2 others visited TRA

11/09

Wakasa Machi Deputy Mayor Seiichi Morita from Tottori Prefecture in Japan and 2 others visited TRA at 4:00 pm. Chief Secretary Lai-Shun Chu received them.

Director General Cheng-Yuan Chang went to Tainan area for breakfast meeting during holidays

Director General Cheng-Yuan Chang went to Tainan area for breakfast meeting during holidays. He encouraged the staff and boosted the morale. He also invited directors of all levels and employees in the southern area to have "Appointment with the Director General - Breakfast Meeting" with him. With actions, he showed his concern for the staff and took the opinions from junior employees. Those opinions would serve as the base for future improvement. Director General Cheng-Yuan Chang also hoped all staff could "be united", "tide over difficulties together", "revive" and "create the glory again".

11/17



11/21

Tenryu Hamanako Railroad visited TRA

President Hirohiko Hasegawa of Tenryu Hamanako Railroad and 3 others visited TRA at 2:00 pm. Director General Cheng-Yuan Chang received them. President Hirohiko Hasegawa especially showed his gratitude to TRA for playing its railway tourist site video on the west TV wall at Taipei Main Station. Thanks to that, the tourist amount gradually increased. We hope we would have more exchange events with them.



11/22

Izukyu Holding Co.,Ltd. visited TRA

President Hideki Kobayashi of Izukyu Holding Co.,Ltd. and 5 others visited TRA at 1:45 pm. Director General Cheng-Yuan Chang received them. During the visit, both parties showed great expectation on railway traveling collaboration. Izukyu Holding Co.,Ltd. hoped to have the chance to hold actual exchange events with TRA in the future.



11/23

Prince Hotel, Inc. Taipei Branch visited TRA

General Manager Natsuki Yasuda of Prince Hotel, Inc. Taipei Branch visited TRA and 2 others visited TRA at 3:00 pm. Chief Engineer Ming-Yun Kao received them.

11/30

President Kazuyuki Harada of Keikyu Corporation led 26 employees to visit TRA

President Kazuyuki Harada of Keikyu Corporation led 26 employees to visit TRA at 3:00 pm. Deputy Director General Jen-Tsai Hsu received them and they had opinion exchange events.

12/06

Deputy Leader Mr Lim Siong Tiong of Land Transport Authority (LTA) and Chief Secretary Mr Melvin Yong of National Transportation Workers Union (NTWU) in Singapore visited TRA

15 people from LTA and NTWU visited TRA at 10:00 am. Deputy Director General Wei Tu received them, and together they exchanged business ideas and shared experiences. Moreover, both parties prepared presentations to discuss railway systems and the future development.

TRA and Te Chang Construction Co., Ltd., held the signing ceremony for the development of "Taichung Station Railway Culture Park"

TRA and Te Chang Construction Co., Ltd., developed "Taichung Station Railway Culture Park" together. They held a signing ceremony at the square in front of Taichung Station at 10:00 am. Director General Cheng-Yuan Chang and Chairman Cheng-Yung Huang of Jing Dian International Co., Ltd., served as representatives to sign the contract. We would create a new railway highlight for the Central District in Taichung, achieve railway business sustainability, and use the resources we had flexibly. In addition to helping business development in nearby areas and creating job opportunities, the Park would speed up the overall growth of the Station and transform the old city area. These would bring benefits to the government, private businesses and local people at the same time.

12/07



Director General Cheng-Yuan Chang went to Taichung area to hold "Appointment with the Director General - Lunch Meeting"

Director General Cheng-Yuan Chang put his caring into actions, appreciated the employees' service and boosted the morale. He invited directors of all levels and employees in the central area to have "Appointment with the Director General - Lunch Meeting" with him so that he could hear the opinions from them. He also chose the suncake with a "heart shape" to encourage people to "be confident", "be attentive" and "be creative". From the bottom of our hearts, we viewed "transportation safety" as our first priority. We would actively improve our service quality.

12/07



12/07

Study group of excellent employees from JR-EAST (27 people) visited TRA

The study group of excellent employees from JR-EAST (27 people) visited TRA at 9:00 am. Director Chen-Chao Huang of TRA General Affairs Department led directors of relative units to receive them. After the meeting, they visited Taipei Main Station and Hsinchu Station.

To improve the safety management of TRA, “Operation Safety Department” was officially established

To make sure of people's safety when they take public transportation, TRA officially established the “Operation Safety Department”. We held a press conference for its establishment at the VIP room at Taipei Main Station. Director General Cheng-Yuan Chang hosted it, and we held an unveiling ceremony as well. From this day forth, the designated unit would be responsible for planning, executing, reviewing, examining, supervising and auditing work related to operation, train operation and disaster prevention. We also established 4 units including investigation, prevention, audit and disaster prevention units. TRA also hired external members to form a “Traffic Accident Review Committee” to review the accidents. We planned to have the safety management system open for operation in April, 2019. We hoped to collaborate with National Transport Safety Board Taiwan and Railway Bureau on safety requirements, showing our resolution of seeking changes.

12/11



Kintetsu Group Holdings Co., Ltd. visited TRA

Representative Operating Officer of Kintetsu Group Holdings Co., Ltd., Akimasa Yoneda, and 2 others visited TRA at 4:30 pm. TRA Deputy Director General, Jen-Tsai Hsu received them.

12/14

6-Year Plan for Railway Safety Improvement - Construction of rebuilding hillside drainage bridge on western line started

The “construction of hillside drainage bridge” is a coordinated plan with the “Taichung City Nanshan Catch Drain Management Plan”. The catch drain was built in 1976. Its abutment and pier are direct foundations, which do not comply with the regulations for aseismatic and scouring design now. After our review, the canal bottom is not high enough and will cause severe shrinkage even after modification. These problems need to be solved. We hope we can secure traffic safety and improve the ride quality for passengers after the construction is complete.

12/14

President Tsutomu Tokodai of Kyosan Electric Manufacturing Co., Ltd., and 4 others visited TRA

President Tsutomu Tokodai of Kyosan Electric Manufacturing Co., Ltd., and 4 others visited TRA at 4:30 pm. Deputy Director General Jen-Tsai Hsu, Director Jui-Tsung Chen from Electrical Engineering Department, Section chief Wen-Hung Chen and other directors received them.

12/17

TRA established QR Code scan devices for ticket inspection at 68 stations

To let passengers go through ticket inspection more quickly, TRA established QR Code scan devices on 409 entrance gates for ticket inspection at 68 stations (second class station and third class station). Passengers with the tickets collected from the convenience stores can simply enter and leave the station using the QR Code scan device without the need to have the ticket inspected manually.

12/21

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