



Go Extra Mile

2018

Taiwan High Speed Rail  
Corporate Social Responsibility Report

Be There



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# About this Report

In 2009, Taiwan High Speed Rail Corporation (hereinafter referred to as “THSRC”) released the first ever “THSRC Corporate Social Responsibility White Paper” to disclose its performance and actions in social responsibility. In response to international trends and compliance with non-financial information disclosure standards in Taiwan, the report has been renamed as “THSRC Corporate Social Responsibility Report” since 2015. This report is the sixth Corporate Social Responsibility (CSR) Report published by THSRC. The previous edition was issued in June 2018. THSRC continues to enhance its operational capabilities by demonstrating its efforts locally and expectations internationally through the 2018 CSR Report. In the future, CSR reports will be published periodically every year.

Current version: Issued in June 2019

## Reporting Period

This report discloses THSRC’s CSR results and performance in 2018 (from January 1, 2018 to December 31, 2018). However, as part of the content, which involves trend comparisons, the report reveals historical data at the same time.

## Basis of Preparation, Scope and Boundary

This report follows the core requirements of the Global Reporting Initiative Sustainability Reporting Standards (hereinafter referred to as “GRI Standards”) developed by the Global Sustainability Standards Board (GSSB), the “Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies,” and the “Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies.” In addition, it has been verified by third-party certification body, the British Standards Institute (BSI) that this report meets the Core option of the GRI Standards, and complies with the AA1000AS with 2018 Addendum Type 2 high-level assurance. The Independent Assurance Statement issued by BSI has also been included in the appendix to this report. Based on the requirements of the GRI Standards, this report discloses THSRC’s responses to material topics in economic, environmental and social aspects, as well as related performance.

The scope of this report is consistent with the financial statements. There is no significant difference between this report and the previous edition in terms of scope and quantitative data measurement methods. Any difference in terms of scope or data measurement from the previous edition will be indicated in the particular paragraph. All the statistical data disclosed in this report were compiled and provided by our first-level units. Financial performance data were information published publicly upon attestation by certified public accountants (CPAs), and were consistent with data in THSRC’s annual reports. The basis for calculating and estimating environmental data was derived from public data provided by the government, and was calculated by THSRC.

If you have any suggestion or question about this report, please feel free to contact us at:

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Click on the  icon in this report for further information.



Website



Corporate Social Responsibility Section



## Letter from the Chairman

In 2018, marked the 20th anniversary since the establishment of THSRC. Along the way, THSRC has always adhered to the five core values of “Discipline, Integrity, Efficiency, Innovation, and Sensibility,” and held fast to its positions, galloping between Northern and Southern Taiwan, as well as striving to provide safe, convenient and high-quality travel services to the public. With five key elements, including “Forward-Thinking, Core-Oriented, Customer-Based, Proper Innovation, and Courage to Transform” for continuous growth, THSRC is fully committed to pursuit the highest quality of services and performance.

Based on the concept of 4Ts, including Transportation - Professional Transportation, Technology - Innovative Technology, Taiwan - Enhancing Local Connection, and Touch - Sustainable Care, as our main developmental goals, and gradually realizes our vision to be the platform for advancement and enjoyment. In addition to achieving excellent performance in professional transportation, THSRC also optimizes overall service quality through innovative technology, while connecting the beauty of Taiwan through efforts to enhance our local connection, thus offering a warm travel experience to the public.

Over the past 20 years, THSRC has competed with itself to encourage itself continuously to become better and better. In 2018, we organized the “THSRC Consensus Camp” to bring together the members of the management team and jointly discuss about the formulation and implementation of medium- and long-term strategies for the next five years, with a view to continuously driving THSRC forward through strategic goals. Meanwhile, employees are the most valuable assets of the Company, while constructive proposals and open communication are the key driving forces for the stable growth of THSRC. Through the “Be There with the Chairman Forum,” we strive to create and revitalize exchanges and sharing between departments and levels, as well as promote horizontal communication and collaboration among all colleagues, while examining the major achievements of THSRC in all areas, with hopes of realizing an even more outstanding THSRC with positive energy via two-way interaction and joint participation.

THSRC continues to strive to exert its social influence by not only promoting the “localization of railway industry” to improve domestic talents in the railway industry through local industry-academia collaboration, but also incorporating the “autonomization of maintenance capabilities” and “localization of maintenance materials,” in line with government policies, as corporate goals for which THSRC continues to strive. In addition, “Taiwan High Speed Rail Opening Year of Arts” jointly organized by THSRC and the National Culture and Arts Foundation (NCAF) has also turned high speed rail (HSR) into a platform for art exhibition, and transformed HSR stations and trains into bridges of communication between the public and arts.

Our stable business status and market performance have also gained recognition from domestic and international investors. In 2018, THSRC was selected and listed in the “FTSE4Good Emerging Index” and the “Taiwan Corporate Governance 100 Index.” For the first time participated in the Corporate Governance Evaluation, THSRC ranked among the top 5%, in the Corporate Governance Evaluation. With regard to corporate social responsibility, THSRC has won the “New Star Award” in the large enterprise category of the “CommonWealth Magazine Corporate Citizen Award.” These recognitions not only are an honor to THSRC, but also motivate us to pursue performance of higher standards.

THSRC has enlivened Taiwan’s western corridor and tightly connected with one-day living circle. At the milestone of our 20th anniversary, we, along with all our employees, will continue to enhance our local connection and look to the future through the application of intelligent technologies and improvement of overall service qualities, thereby leading Taiwan to a new sustainable era!



Chairman *Y. C. Chiang*

## Letter from the President

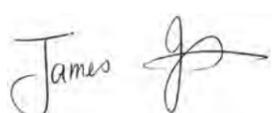
Since the commencement of operations in 2007, THSRC has always adhered to the idea of providing high-quality and safe transportation services. THSRC transported 63.96 million passengers in 2018, surpassing the 500 million passenger mark cumulatively. In 2018, THSRC provided 52,437 train services at a reliability rate of 100% and a punctuality rate of 99.76%. At the same time, THSRC's annual ridership volume hit a new record high, demonstrating continuous improvement of our transportation capabilities.

We also use information technology to promote a variety of ticketing services, as well as incorporate mobile payment services, such as "Apple Pay" and "Android Pay" into the "THSRC T Express mobile ticketing service," and payment mechanisms, such as "Taiwan Pay" into our online ticket booking system. In order to enhance the digitalization of ticketing channels, we have launched booking service on Facebook Messenger, and ticket pick-up service for senior and disabled concession tickets on our mobile ticketing app and from automatic ticketing machines. In 2018, we won the German "Red Dot Award: Communication Design" for our T Express mobile ticket purchasing app.

Furthermore, in the era of Internet connection, how to ensure that HSR passengers enjoy continuously smooth Internet connection without interruption has always been a huge challenge. In February 2018, THSRC, along with various government agencies and institutions, five major telecom operators, and first-line construction colleagues, jointly completed the setup of 4G network communications along the entire HSR line, thus achieving our ideal goal of "High speed travel with uninterrupted on-board connection." This also serves as the best evidence of our efforts to continuously improve service quality.

To ensure that passengers can truly get in touch with the magnificence of Taiwan and local art and culture, as well as experience and uncover the beauty of this land, THSRC continues to develop a diverse range of products for different customer groups, such as college students, and different purposes, such as travel, business and homecoming, in response to market needs. Our travel products can be divided into different areas, including "T Holiday" package sold by THSRC authorized travel agencies, as well as "THSR+Bus/MRT Combo Ticket," "THSR+Hotel Combo Ticket," and "THSR+Airline Combo Ticket" which meet the needs of individual travelers, thus combining travel elements provided by hotels and travel agencies in cities and counties to meet the diverse needs of travelers. In 2018, the number of travelers under the "Journey with THSR, Discover Taiwan" program reached 2.68 million people. We will continue to convey the experience of Taiwan local culture, and create more thoughtful and high-quality travel services, in order to create more happiness with you.



President 

## Performance Highlights for 2018

### Transportation — Professional Transportation



- Since THSRC commenced operations in 2007, punctuality rate and reliability have always been above **99%**.
- In 2018, punctuality rate was **99.76%**, whereas average delay time was only 0.17 minutes.
- Since the commencement of operations in 2007, THSRC continues to achieve excellent operational safety performance, resulting in **zero** casualties among passengers due to traffic accidents.
- In 2018, passengers' satisfaction toward our overall services was **96%**.
- Starting from October 8, 2018, eight additional train services were added weekly; which brought the total to **997** train services every week after the additional train services provided.

### Technology — Innovative Technology



- On October 26, 2017, THSRC launched the **TGo membership** program, which accumulated **800,000** registered members at the end of 2018.
- THSRC received the German **“Red Dot Award: Communication Design”** for the T Express mobile app.
- On February 15, 2018, THSRC completed the setup of **4G network communications** along the entire HSR line, thereby providing free 4G Internet service along the entire HSR line all year long.
- In 2018, THSRC's Facebook Page garnered **297,000** fans cumulatively, and received a total of **69,000** new fans within the year, while post reach on THSRC's Facebook Page was **59.52 million** people, with **1.97 million** interactions on these posts.

### Taiwan — Enhancing Local Connection



- THSRC shared its experiences and achievements in transportation operations. Since 2006, we have organized a number of visitations. In 2018, THSRC welcomed **46** delegations from Europe, the US, Japan, and Taiwan, comprising a total of **630** counts of visitors.
- THSRC promoted exchanges with international industry operators, with a view to improving the quality of HSR passenger services. In 2018, **two** train masters and **three** train attendants from THSRC attended an observation visit to Kyushu Railway Company (JR Kyushu), whereas **five** train attendants from JR Kyushu also visited Taiwan to attend an exchange activity in the same year.
- THSRC facilitated the localization of procurement to enhance Taiwan's industrial supply capabilities. In 2018, local procurement of labor services by THSRC exceeded **89%**, whereas local procurement of materials exceeded **70%**.

### Touch — Sustainable Care



- Based on the calculation of passenger-kilometer, compared to passenger cars, HSR significantly reduced carbon dioxide emissions by **878,468 metric tons** in 2018, which is equivalent to the carbon uptake of **2,961** Da-An Forest Parks.
- In November 2018, THSRC was given the Outstanding Award in the **“2018 Low-Carbon Product Awards”** and the “Outstanding Contribution Award” in the **“2018 Carbon Footprint Product Emission Factors Database Construction”** by the Environmental Protection Administration.
- In 2018, THSRC trained a total of **64** qualified internal lecturers. As of 2018, THSRC trained a total of **750** main lecturers, with each teaching an average of **65** hours.
- The “THSR ART Together Program” in 2018, **100** sessions were organized at nine HSR stations in 2018, involving a total of **3,166** performers.
- THSRC launched “Taiwan High Speed Rail Opening Year of Arts” together with National Culture and Arts Foundation (NCAF), in which **seven** professional performing arts groups were invited to perform in a total of **42** sessions.
- A total of **1,445** groups and more than **45,000** visitors have visited the THSR Museum since its official opening on January 5, 2017 till the end of 2018.
- In 2018, THSRC collaborated with the “After School Association of Taiwan” to raise funds for the “High-Speed Educational Endowment Program,” where more than **NT\$8 million** was raised in the process. This event has successfully raised a total of **NT\$120 million** in the past nine years, benefiting approximately **22,000** disadvantaged children and children with developmental delays.
- In 2018, the THSRC Smiling Train Program provided assistance to **808** disadvantaged groups and was participated by **139,528** individuals, thus sponsoring a total ticket amount of **NT\$2,925,688**.
- In 2018, THSRC carried out the “Disaster Relief Program” twice, donated a total of **NT\$5 million** to the “Ministry of Health and Welfare Disaster Relief Account” as post-disaster reconstruction funds, and issued approximately **1,200** HSR tickets, in order to actively support disaster relief.
- Since 2008, THSRC has organized the “HSR camps” for undergraduates, high school students, middle school students, as well as fifth and sixth grade students, during both summer and winter vacation every year. In 2018, 12 batches of camps were organized, with a total of **3,445** people signed up for these camps, out of which **360** people participated in this activity.
- THSRC participated in efforts to conserve pheasant-tailed Jacanas in Guantian, Tainan in order to fulfill our commitment to environmental protection. In 2018, the population of pheasant-tailed Jacana was **1,292**. Since its establishment in 2007 till 2018, the “Jacana Ecological Education Park” has been visited by nearly **220,000** times.

# Material Topics and Stakeholders

## Identification of Stakeholders

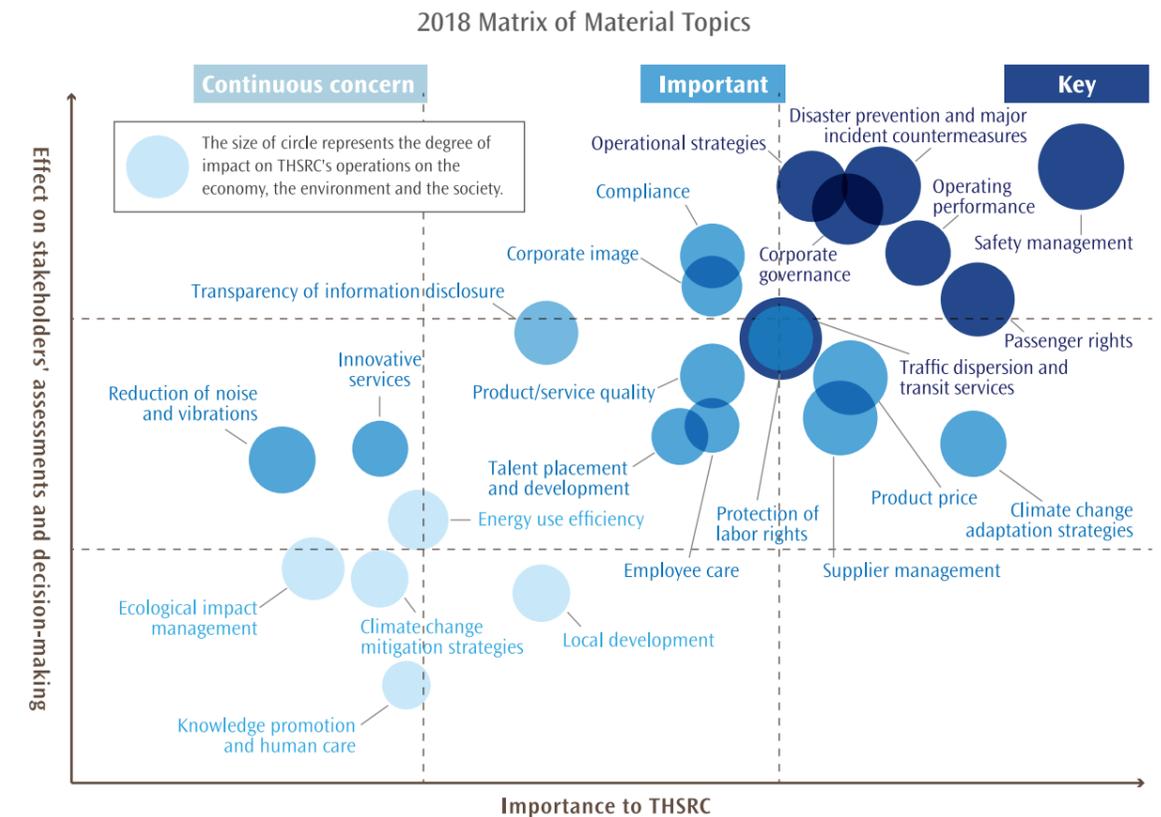
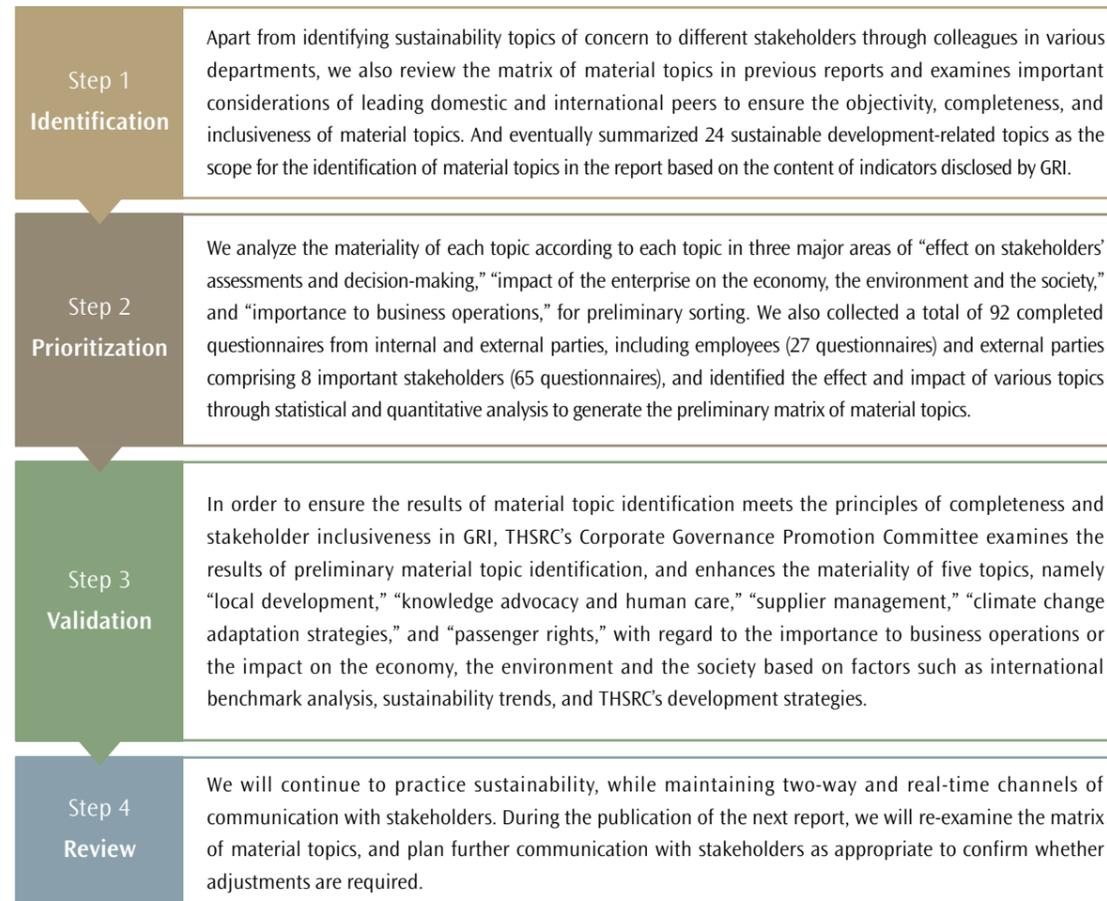
THSRC refers to the AA1000 Stakeholder Engagement Standard to carry out identification of stakeholders through open discussion, and finally selects eight important stakeholders.

The eight important stakeholders are passengers, community residents, the media, employees, shareholders and investors, partners (including non-governmental organizations and schools), suppliers and contractors, as well as government and competent authorities.



## Identification and Responses to Material Topics

THSRC prepares its CSR reports in compliance with the GRI Standards published by GSSB, and conducts analysis of material topics according to the following four steps to confirm the scope of report disclosure and comprehensively examine the effectiveness of sustainable management.



Note: After discussing and confirming the matrix of material topics, we classified the above mentioned 24 sustainability topics into seven key topics, 12 important topics and five topics of continuous concern according to the effects of three areas provided by internal and external stakeholders. “Key topics” and “important topics” form the scope of materiality disclosures in this report. On the other hand, items in “topics of continuous concern” are regarded as non-material topics, where in principle, these items will not be disclosed in this report. However, non-material topics which significantly impact material topics, will still be properly explained and disclosed in this report.



## Comparison between Material Topics and Topics in GRI Standards

● : denotes that this node may lead to impact resulted from material topics on the left. For details regarding related management approaches, please refer to the page numbers for the corresponding chapters or subchapters.

Materiality	Material topic	Corresponding to GRI topic	Corresponding to chapter or subchapter	Page No.	Impact boundary of each topic					
					Occur directly in THSRC	Occur through THSRC's commercial relationships		Occur through THSRC's other direct relationships		
					THSRC	Passengers	Suppliers and contractors	Shareholders and investors	Partners	Government and competent authorities
Key topic	Safety management	GRI 416: Customer Health and Safety GRI 403: Occupational Health and Safety	Safety Services and Responsible Transportation	19						
			Disaster Prevention and Professional Response	22	●				●	
			Convenience and Attentiveness and Maintaining Relationships	30			●			
			Protection of Rights and Considerate Care	56						
			Partner Management and Local Supply	37						
	Disaster prevention and major incident countermeasures	No direct correspondence	Disaster Prevention and Professional Response	22	●		●			●
	Operational strategies	No direct correspondence	Letter from the Chairman	3						
			Letter from the President	4	●					●
Sustainability Strategies and Goals			13							
Glide through Taiwan and Stretch Global Wide	34									
Corporate governance	GRI 205: Anti-corruption GRI 405: Diversity and Equal Opportunity	Operational Performance and Sustainable Practices	16	●		●	●			
		Sustainable Governance and Ethical Corporate Management	43							
Operational performance	GRI 201: Economic Performance	Operational Performance and Sustainable Practices	16	●						
Traffic dispersion and transit services	No direct correspondence	Smooth Travel in Adherence to Commitment	25	●						
		Glide through Taiwan and Stretch Global Wide	34							
Product price	GRI 203: Indirect Economic Impacts	Smooth Travel in Adherence to Commitment	25	●		●			●	
Important topic	Compliance	GRI 307: Environmental Compliance GRI 416: Customer Health and Safety GRI 417: Marketing and Labeling GRI 419: Socioeconomic Compliance	Sustainable Governance and Ethical Corporate Management	43	●		●	●	●	●
			Quality Services and Intelligent Transportation	28	●					
	Passenger rights	GRI 418: Customer Privacy	Convenience, Attentiveness and Maintaining Relationships	30						
Corporate image	GRI 203: Indirect Economic Impacts	Letter from the Chairman	3							
		Letter from the President	4							
		Sustainability Strategies and Goals	13							
		Glide through Taiwan and Stretch Global Wide	34	●				●		
		Partner Relationship Management and Local Supply	37			●				
		Sustainable Governance and Ethical Corporate Management	43							
Carrying for Society and Developing Local Area	59									

Materiality	Material topic	Corresponding to GRI topic	Corresponding to chapter or subchapter	Page No.	Impact boundary of each topic					
					Occur directly in THSRC	Occur through THSRC's commercial relationships		Occur through THSRC's other direct relationships		
					THSRC	Passengers	Suppliers and contractors	Shareholders and investors	Partners	Government and competent authorities
Important topic	Protection of labor rights	GRI 402: Labor/Management Relations GRI 407: Freedom of Association and Collective Bargaining	Protection of Rights and Considerate Care	56	●					●
	Product/Service quality	No direct correspondence	Smooth Travel in Adherence to Commitment Quality Services and Intelligent Transportation	25 28	●		●			
	Transparency of information disclosure	No direct correspondence	Quality Services and Intelligent Transportation	28	●					
	Climate change adaptation strategies	No direct correspondence	Disaster Prevention and Professional Response	22	●		●			
	Talent placement and development	GRI 202: Market Presence GRI 401: Employment GRI 404: Training and Education	Nurturing Talent and Value Cultivation	53	●					
	Employee care	GRI 201: Economic Performance GRI 401: Employment	Nurturing Talent and Value Cultivation Protection of Rights and Considerate Care	53 56	●					●
	Supplier management	GRI 204: Procurement Practices GRI 414: Supplier Social Assessment	Partner Relationship Management and Local Supply	37	●		●			●
	Reduction of noise and vibrations	GRI 413: Local Communities	Smooth Travel in Adherence to Commitment	25	●					●
	Innovative services	No direct correspondence	Quality Services and Intelligent Transportation Low-Carbon Train Operation and Environmental Sustainability	28 46	●		●			
Topics of continuous concern	Energy use efficiency	GRI 302: Energy GRI 303: Water and Effluents GRI 306: Effluents and Waste	Low-Carbon Train Operation and Environmental Sustainability	46	●	●				
	Ecological impact management	GRI 304: Biodiversity	Smooth Travel in Adherence to Commitment	25	●				●	
	Climate change mitigation strategies	GRI 305: Emissions	Low-Carbon Train Operation and Environmental Sustainability	46	●		●			
	Local development	GRI 203: Indirect Economic Impacts GRI 413: Local Communities	Glide through Taiwan and Stretch Global Wide Partner Relationship Management and Local Supply Carrying for Society and Developing Local Area	34 37 59	●		●			
	Knowledge promotion and Human care	GRI 203: Indirect Economic Impacts	Glide through Taiwan and Stretch Global Wide Carrying for Society and Developing Local Area	34 59	●				●	

## Performance of Communication with Important Stakeholders

In 2018, THSRC and the eight major stakeholders stimulated different results and diversified social values through a diverse range of periodic and non-periodic communication channels, as shown in the following table.

Stakeholder	Communication channel		Performance of key communication points for 2018		Material topic
 <b>Passengers</b>	<b>Periodic</b> <ul style="list-style-type: none"> <li>Taiwan High Speed Rail In-Train Magazine 《TLife》 (monthly)</li> <li>Passenger satisfaction survey (annually)</li> <li>Station and train service personnel</li> </ul>	<b>Non-periodic</b> <ul style="list-style-type: none"> <li>Company website</li> <li>Customer feedback form</li> <li>Customer service line 4066-3000</li> <li>THSRC's Facebook Page</li> <li>Railway Bureau Public Opinion Mailbox</li> <li>Notices from government agencies at all levels or consumer protection agencies</li> </ul>	<b>Periodic</b> <ul style="list-style-type: none"> <li>Passengers' satisfaction toward overall services was 96%</li> <li>Issued 100,000 copies of 《TLife》 magazines (monthly)</li> </ul>	<b>Non-periodic</b> <ul style="list-style-type: none"> <li>THSRC's Facebook Page garnered more than 290,000 fans cumulatively</li> <li>Received 3,608 customer feedback forms</li> <li>Received 776,861 calls through the customer service line</li> </ul>	<ul style="list-style-type: none"> <li>Passenger rights</li> <li>Safety management</li> <li>Disaster prevention and major incident countermeasures</li> <li>Product/service quality</li> <li>Product price</li> </ul>
 <b>Community Residents</b>		<b>Non-periodic</b> <ul style="list-style-type: none"> <li>Local environmental and ecological organizations</li> <li>Station event promotion and invitation</li> <li>Site visit invitation</li> <li>Local opinion leaders, public opinion representatives, mayors of counties or townships, etc.</li> <li>Regional communication meeting</li> <li>Participation in local activities</li> </ul>	<b>Continuous</b> <ul style="list-style-type: none"> <li>Collected 1,620 bags of blood during the "Annual THSRC Winter Outreach Blood Drive"</li> <li>High-Speed Educational Endowment Program</li> <li>Received 100 applications for performance session during the "THSR ART Together Program"</li> <li>Gifted 1,000 tree saplings to passengers during the "Travelling with Saplings" program</li> <li>Sponsored the "Jacana Ecological Education Park"</li> </ul>	<b>Non-periodic</b> <ul style="list-style-type: none"> <li>Assisted the public in improving on digital television interference problems arising from train passing</li> <li>Conducted investigations to handle 19 noise petitions addressed by the public along the HSR line, in which noise prevention measures were adopted to improve on requirements of one petition</li> </ul>	<ul style="list-style-type: none"> <li>Product/Service quality</li> <li>Product price</li> <li>Traffic dispersion and transit services</li> <li>Safety management</li> <li>Disaster prevention and major incident countermeasures</li> <li>Corporate image</li> <li>Passenger rights</li> <li>Innovative services</li> <li>Local development</li> </ul>
 <b>The Media</b>	<b>Periodic</b> <ul style="list-style-type: none"> <li>Issue press releases and news bulletins</li> <li>Organize and co-organize press conferences</li> <li>Organize media visits</li> </ul>	<b>Non-periodic</b> <ul style="list-style-type: none"> <li>Clarify erroneous reports</li> <li>Handle media inquiries</li> <li>Collaborate with THSRC on feature reports</li> </ul>	<b>Periodic</b> <ul style="list-style-type: none"> <li>Released 136 press releases</li> <li>Organized 23 press conferences/media events</li> </ul>	<b>Non-periodic</b> <ul style="list-style-type: none"> <li>Clarified erroneous reports 16 times via press releases or news bulletins</li> <li>Handled 195 media inquiries</li> <li>Published 51 feature reports</li> </ul>	<ul style="list-style-type: none"> <li>Passenger rights</li> <li>Product price</li> <li>Safety management</li> <li>Disaster prevention and major incident countermeasures</li> <li>Product/Service quality</li> <li>Traffic dispersion and transit services</li> <li>Operating strategies</li> <li>Protection of labor rights</li> <li>Employee compensation and benefits</li> </ul>
 <b>Employees</b>	<b>Periodic</b> <ul style="list-style-type: none"> <li>Labor-management meeting (quarterly)</li> <li>Corporate union (monthly)</li> <li>Industrial union (every two months)</li> <li>Town Hall meeting (quarterly)</li> <li>Quality Month (annually)</li> <li>Organize seven proposal review meetings</li> <li>HSR Outlook Newsletter (monthly)</li> </ul>	<b>Non-periodic</b> <ul style="list-style-type: none"> <li>Electronic bulletin board</li> <li>Internal website</li> <li>Briefing</li> <li>Orientation training</li> <li>Systematic employee opinion survey</li> </ul>	<b>Periodic</b> <ul style="list-style-type: none"> <li>Conducted 19 labor-management meetings every quarter, totaling 76 meetings throughout the year</li> <li>Conducted Town Hall meetings in 12 stations/each operations section every quarter, totaling 90 meetings throughout the year</li> <li>Published 169 articles in the HSR Outlook newsletter, garnering a total of 129,009 clicks throughout the year</li> <li>Conducted seven proposal review meetings and one commendation conference, as well as organized one overseas visit for outstanding proposers and one overseas visit for the winning team in the Quality Control Circle</li> <li>Conducted Quality Month in November, including proposal improvement awards, as well as two preliminary rounds and one final round in the Quality Control Circle</li> </ul>	<b>Non-periodic</b> <ul style="list-style-type: none"> <li>Conducted two environmental education sessions, with 73 counts of participation by employees</li> <li>Conducted three sessions of "Be There with the Chairman Forum," which were participated by a total of 90 individuals</li> </ul>	<ul style="list-style-type: none"> <li>Employee compensation and benefits</li> <li>Protection of labor rights</li> <li>Talent placement and development</li> <li>Safety management</li> <li>Occupational safety</li> </ul>

Stakeholder	Communication channel		Performance of key communication points for 2018		Material topic
 <p><b>Shareholders and Investors</b></p>	<p><b>Periodic</b></p> <ul style="list-style-type: none"> <li>Shareholders' meeting (annually)</li> <li>Annual report (annually)</li> </ul>	<p><b>Non-periodic</b></p> <ul style="list-style-type: none"> <li>Market Observation Post System</li> <li>Company website - Investor Relations section</li> <li>THSRC Facebook page</li> <li>Spokesperson mailbox</li> </ul>	<p><b>Periodic</b></p> <ul style="list-style-type: none"> <li>Shareholders' Meeting on May 24, 2018</li> <li>Investor Conference on March 23, 2018</li> <li>Investor Conference on June 20, 2018</li> <li>Investor Conference on September 12, 2018</li> <li>Investor Conference on December 19, 2018</li> </ul>		<ul style="list-style-type: none"> <li>Safety management</li> <li>Compliance</li> <li>Operational strategies</li> <li>Corporate governance</li> <li>Operational performance</li> </ul>
 <p><b>Partners</b> including non-governmental organizations and schools</p>	<p><b>Periodic</b></p> <ul style="list-style-type: none"> <li>Taiwan High Speed Rail In-Train Magazine 《TLife》 (monthly)</li> </ul>	<p><b>Non-periodic</b></p> <ul style="list-style-type: none"> <li>Forum, coordination meeting, briefing and seminar</li> <li>Press release</li> </ul>	<p><b>Periodic</b></p> <ul style="list-style-type: none"> <li>Collaborated with the "After School Association of Taiwan," raising a total of NT\$8 million</li> <li>The THSRC Smiling Train Program assisted 60 disadvantaged groups, and was participated by 5,185 individuals, with a total of NT\$6,508,302 worth of tickets sponsored</li> <li>Organized observation and exchange activities for train attendants from JR Kyushu and controllers from Hakata General Control Center</li> <li>Organized the Railway Safety Seminar on July 19, 2018</li> <li>Organized eight campus recruitment seminars in 2018, which were participated by approximately 490 students</li> </ul>	<p><b>Non-periodic</b></p> <ul style="list-style-type: none"> <li>Organized eight campus recruitment seminars in 2018, which were participated by approximately 490 students</li> </ul>	<ul style="list-style-type: none"> <li>Safety management</li> <li>Corporate image</li> <li>Disaster prevention and major incident countermeasures</li> <li>Climate change adaptation strategies</li> <li>Compliance</li> <li>Innovative services</li> </ul>
 <p><b>Suppliers and Contractors</b></p>	<p><b>Periodic</b></p> <ul style="list-style-type: none"> <li>Financial safety report (quarterly)</li> <li>Annual damage prevention survey</li> <li>Insurance workshop (training/ seminar)</li> <li>Contractor meeting (every two months)</li> <li>Customer service meeting (monthly)</li> </ul>	<p><b>Non-periodic</b></p> <ul style="list-style-type: none"> <li>Initiation meeting for hazard notification</li> <li>Information survey</li> <li>Supplier/contractor meeting</li> <li>Online announcement</li> <li>Overseas supplier/contractor visits</li> <li>Customer service center visits</li> <li>Supplier evaluation and discussion (acceptance of new and existing suppliers)</li> <li>Loss survey</li> <li>Insurance claims meeting</li> </ul>	<p><b>Periodic</b></p> <ul style="list-style-type: none"> <li>Published four financial safety reports</li> <li>Conducted two damage prevention surveys</li> <li>Organized two insurance workshops</li> <li>Conducted two customer service meetings a month</li> </ul>	<p><b>Non-periodic</b></p> <ul style="list-style-type: none"> <li>Conducted 132 maintenance contract initiation meetings to promote hazard notification</li> <li>Implemented contract management, in which the responsible unit organized an agreement organization meeting every month</li> <li>Conducted labor and financial evaluation and discussion on a total of 550 manufacturers</li> <li>Conducted one audit visit and one personal information audit visit at customer service centers</li> <li>Conducted six loss occurred surveys</li> <li>Organized two insurance claims meetings</li> </ul>	<ul style="list-style-type: none"> <li>Supplier management</li> <li>Compliance</li> <li>Safety management</li> <li>Corporate image</li> <li>Operational strategies</li> </ul>
 <p><b>Government and Competent Authorities</b></p>	<p><b>Periodic</b></p> <ul style="list-style-type: none"> <li>High Speed Rail Operation Coordination Meeting <sup>(Note 1)</sup> (first half of 2018, quarterly)</li> <li>Railway Operation Coordination Meeting (first half of 2018, quarterly)</li> <li>Annual regular HSR operation inspection by the Ministry of Transportation and Communications/ Railway Bureau <sup>(Note 2)</sup></li> <li>Large-scale emergency response drill (every two years)</li> <li>Supervision mechanism (annually)</li> </ul>	<p><b>Non-periodic</b></p> <ul style="list-style-type: none"> <li>Project meeting with Tourism Bureau, Ministry of Transportation and Communications</li> <li>Business visit</li> <li>Promotional briefing</li> <li>Meeting description</li> <li>Temporary inspection</li> <li>Quality assurance inspection</li> </ul>	<p><b>Periodic</b></p> <ul style="list-style-type: none"> <li>Organized two high speed rail operation coordination meetings and two railway operation coordination meetings</li> <li>Ministry of Transportation and Communications/Railway Bureau organized one annual regular HSR operation inspection</li> </ul>	<p><b>Non-periodic</b></p> <ul style="list-style-type: none"> <li>No temporary inspection in 2018</li> </ul>	<ul style="list-style-type: none"> <li>Safety management</li> <li>Disaster prevention and major incident countermeasures</li> <li>Compliance</li> <li>Product/Service quality</li> <li>Occupational health and safety</li> <li>Passenger rights</li> <li>Product price</li> <li>Traffic dispersion and transit services</li> </ul>

Note: 1. The previous "High Speed Rail Operation Coordination Meeting" was no longer convened, and was merged into the "Railway Operation Coordination Meeting."

2. In June 11, 2018, Bureau of High Speed Rail, Ministry of Transportation and Communications (MOTC) was merged into Railway Bureau in order to provide an exchange and coordination platform for the operation of existing railway institutions (agencies).



About Taiwan High  
Speed Rail Corporation

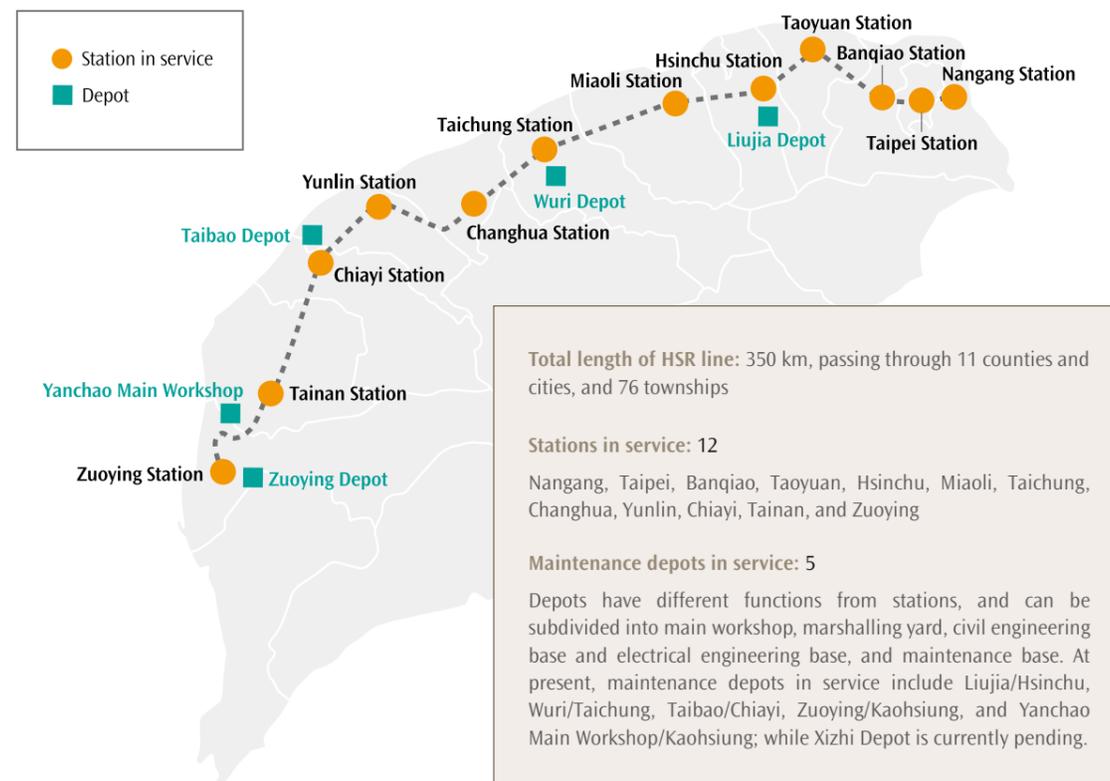
- About this Report
- Letter from the Chairman
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# About Taiwan High Speed Rail Corporation

Management Approach	Subchapter title	Material topic	Management purpose	Management method	Assessment mechanism
	Sustainability Strategies and Goals	Operational Strategies	Achieve the goals formulated by the organization and ensure that all relevant operations are carried out in order.	<ul style="list-style-type: none"> <li>Adhere to the five core values of “Discipline, Integrity, Efficiency, Innovation, and Sensibility,” and pursue the four attributes of “Real, Progressive, Passionate, and Premium” as we strive for sustainable management and innovation, in order to implement the vision and mission of THSRC.</li> </ul>	<ul style="list-style-type: none"> <li>Develop four major sustainability strategies, draw up corresponding short-, medium- and long-term goals and actions plans, and track issue development and solution performance through the relevant assessment mechanisms.</li> <li>Develop the strategic planning procedure and budget management rules, and track the progress of each unit on a quarterly basis based on THSRC’s future strategies.</li> </ul>
	Operational Performance and Sustainable Practices	Operational Performance	Manage and optimize THSRC’s financial structure to lay the foundation for sustainable management, and seek maximum benefits for employees, shareholders, and creditors. At the same time, design a logo according to THSRC’s corporate culture, philosophy, and spirit, demonstrate the corporate image of THSRC through visual communication, and to be the platform for advancement and enjoyment.	<ul style="list-style-type: none"> <li>Specify a clear dividend policy in the Articles of Incorporation in accordance with the relevant laws and regulations. Distribute the profits generated by the management team and employees at THSRC in daily operations to shareholders, so that shareholders are willing to hold THSRC shares.</li> <li>Manage the status of assets, liabilities, and equity by having CPAs to review first-, second- and third-quarter financial statements, as well as audit and attest fourth-quarter financial statements every year.</li> </ul>	<ul style="list-style-type: none"> <li>Dividends distributed according to the surplus distribution plan submitted by the Board of Directors and approved by the shareholders’ meeting to meet the requirements of the dividend policy specified in the Articles of Incorporation.</li> <li>The status of assets, liabilities, and equity disclosed in the financial statements attested or reviewed by CPAs serves as the basis for management.</li> </ul>
		Corporate Image		<ul style="list-style-type: none"> <li>Formulate the “Corporate Identity Guidelines” to develop THSRC’s identity management system to ensure the distinctiveness, originality, and value of identity.</li> <li>Implement the 4T sustainability strategies, including Transportation, Technology, Taiwan, and Touch, to guide THSRC in providing and creating high-quality transportation services, or to highlight events of positive value.</li> </ul>	<ul style="list-style-type: none"> <li>To be reviewed periodically by the responsible units in accordance with the rules and regulations listed on the left.</li> </ul>

## Operating Bases and Services

The THSRC commenced operations in 2007, headquartered in Nangang, provides transportation services to major cities in western Taiwan.



In addition to providing fast, convenient and comfortable rail transport service, THSRC also offers affiliated services such as retail service and retail space leasing, thus creating added value and increasing income from affiliated services.

### Business Scope of THSRC

Item	Content
<b>Rail Transport</b>	<ul style="list-style-type: none"> <li>Fast, convenient and comfortable rail transport service, while offering different types of train services, including direct train, semi-direct train, and stopping train to meet the needs of the public.</li> </ul>
<b>Operation of Affiliated Services</b>	<ul style="list-style-type: none"> <li>Retail space leasing (e.g., convenience stores, food and beverage, and service counters), parking lots at stations, advertising sales (e.g., lightboxes, column space, wall space, product displays, and train decorations), retail, trolley sales and others.</li> </ul>

Note: For details regarding rail transport service, please refer to the subchapter titled “Quality Services and Intelligent Transportation.”

Our upstream industries mainly provide train carriages, construction services, track services, and other services related to the manufacturing and maintenance of service facilities and equipment. Midstream industries include the power supply industry, support activities for transportation related to train preparation, and operators related to the provision of transfer services, including the parking lot management industry, the freeway bus industry, the car rental industry and the taxi industry. Downstream industries comprise THSRC passengers or travel agencies which provide T Holiday packages.

In 2018, upon review and approval from the Board of Directors, the position of “Executive/Senior Vice President” was added to the organizational structure of THSRC, where this position is responsible for overlooking and supervising four major areas, including company-wide planning, operation, business, and administration. On the other hand, the “Engineering Technology Division” and the “Core Technology Service Department” were removed, while the “Core Technology Development Department” and the “Facility Engineering Department” were placed under the “Senior Vice President of Operation.” Furthermore, a unit named “Travel Business Related Department” was added under the Business Division, while the previous “Operation Safety Committee” was renamed “Safety Committee.” There were no significant changes to the supply chain in 2018.

## Sustainability Strategies and Goals

### Spirit of High Speed Rail and Mission of Sustainability

THSRC adheres to five core values of Discipline, Integrity, Efficiency, Innovation, and Sensibility, as the guiding principles for sustainable management and development. In addition to formulating the strategic planning procedure, and the development of the Company based on the Company's future development strategies, we have always adhered to the concept of "Go Extra Mile," thereby continuously improving quality and safety.

The external benefits generated from the operations of THSRC are well reflected economically, socially, and environmentally. Economically, we shorten travel time between the north and the south, and enhance time and cost benefits, while increasing the value of land use. We also foster the development capability of the local rail industry through operational activities and services in order to promote local and overall economic development. Socially, we provide a highly safe mode of transportation, which reduces social expenditures resulted from traffic accidents and brings people closer together. Environmentally, we balance various characteristics, including comfort, convenience, low carbon, low pollution and high efficiency, and reduce the impact of the public space of HSR stations on the environment by integrating green buildings.

With increasing emphasis on sustainable management internationally, external stakeholders are paying more attention to companies in the governance, social and environmental aspects. THSRC is Taiwan's first public listed company in the railway transportation industry. In 2018, THSRC was selected and listed as a constituent in the FTSE4Good Emerging Index and the Taiwan Corporate Governance 100 Index, demonstrating that THSRC has gained recognition from domestic and international investors in terms of operational performance, corporate governance and corporate social responsibility. We will strive to practice sustainability in the provision of safe and high-quality transportation service, create value through a continuously optimized business model, and focus on the pursuit of long-term interests and sustainable management, with a view to establishing a sustainable momentum for local development in Taiwan.

### THSRC Sustainability Strategy Blueprint

In 2017, THSRC developed the sustainability strategy blueprint, with 4Ts, including Transportation - Professional Transportation, Technology - Innovative Technology, Taiwan - Enhancing Local Connection, and Touch - Sustainable Care, as the backbone of sustainable management. In pursuit of better sustainable practices, we re-examined our sustainability strategy blueprint and adjusted the goals and directions of our sustainability strategy blueprint based on our operational strategies and future outlook in 2018, so as to enhance its consistency with the direction of our core businesses, thereby practicing sustainability with even greater drive.

Our sustainability strategy blueprint corresponds to eight UN Sustainable Development Goals (SDGs), thus setting the direction of deepening and practicing sustainability at THSRC. In the future, we will continue to draw up short-, medium- and long-term goals and action plans based on the four major sustainability strategies by referencing international developments and local needs, and regularly track issue development and solution performance through the relevant assessment mechanisms, with a view to effectively promoting and implementing the concept of sustainability at THSRC. The goals of each sustainability strategy and its implementation measures in 2018 are listed as follows. The relevant details are described in the following chapters and subchapters.



THSRC Sustainability Strategies, Goals, Implementation Measures in 2018 and Corresponding SDGs

4T component	Goal	Implementation measures in 2018	Corresponding SDGs	
			17 goals	169 targets
 <p>Transportation</p>	<p>Continued to improve operational safety, actively face the impact of climate change on transportation, establish relevant early warning mechanisms, develop relevant response measures in collaboration with the government, and actively interact with residents along the HSR line to create positive values for the outside world.</p>	<ul style="list-style-type: none"> <li>Set up three levels of safety committee to ensure operational safety, and a safe, hygienic and healthy workplace.</li> <li>Continued to promote the employee proposal improvement system and quality control circle activities, where proposals with the most outstanding improved performance in 2018 were “Improvement of Chemical Spraying Method for Train Washing Machines” and “Station Ticketing Information System.”</li> </ul>		<p>8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.</p> <p>8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, particular women migrants, and those in precarious employment.</p>
		<ul style="list-style-type: none"> <li>Continued to examine the weatherability of stations, equipment and routes, improved design thresholds in a timely manner and conducted drills.</li> </ul>		<p>9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.</p>
		<ul style="list-style-type: none"> <li>Established early warning systems for slope safety, strengthened protection of tunnel portal slopes, conducted risk assessment and protection designs for scoured cross-river bridges, and other adaptation measures.</li> </ul>		<p>13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.</p>
		<ul style="list-style-type: none"> <li>Continued to develop relevant early warning and response measures in collaboration with the government, such as “Memorandum of Cooperation on Cross-border Disaster Prevention.”</li> <li>Sales executives at each station participated in activities non-periodically, and continuously interacted with residents and organizations along the HSR line.</li> </ul>		<p>17.14 Enhance policy coherence for sustainable development.</p> <p>17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.</p>
 <p>Technologies</p>	<p>Actively innovate and enhance technical capabilities, adopt new technologies and promote intelligent transportation, continue to improve operations, services, safety and the efficiency and quality of emergency response, as well as adopt big data and digitalization to optimize customer experience and create a more convenient life.</p>	<ul style="list-style-type: none"> <li>Monitored train running status in real time via IoT facilities.</li> <li>Monitored weather information in collaboration with the government and professional organizations.</li> </ul>		<p>9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.</p>
		<ul style="list-style-type: none"> <li>Continued to improve services, software, hardware and packages for the convenience of specific groups, such as passenger guidance for elderly or disabled passengers traveling alone.</li> </ul>		<p>11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and senior citizens.</p>
		<ul style="list-style-type: none"> <li>Promoted e-tickets and mobile payment, and introduced mobile payment services, including “Taiwan Pay (Debit Card)” and “GAMA Pay (Credit Card),” in order to reduce paper consumption.</li> </ul>		<p>12.2 By 2030, achieve the sustainable management and efficient use of natural resources.</p> <p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.</p>
		<ul style="list-style-type: none"> <li>Joined the International Union of Railways (UIC) and tracked weather items on the NAZCA platform under UIC and the United Nations Framework Convention on Climate Change (UNFCCC). (Note)</li> </ul>		<p>17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technologies and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.</p>

Note: UIC is committed to reducing carbon emissions by 50% in 2030 and 75% in 2050 based on carbon emission levels in 1990.

THSRC Sustainability Strategies, Goals, Implementation Measures in 2018 and Corresponding SDGs

4T component



Taiwan



Touch

4T component	Goal	Implementation measures in 2018	Corresponding SDGs	
			17 goals	169 targets
<p>Actively cultivate local talents and establish industry-academia collaboration, strive to create opportunities for diverse products and different industries through our business model, become the platform for local life enjoyment and promote the prosperity and development of local industries by fostering the development capabilities of the local railway industry. At the same time, establish a sustainable supply chain management mechanism, and become the leader which guides the railway industry to sustainability.</p>		<ul style="list-style-type: none"> <li>Established collaboration with colleges and universities, and promoted talent cultivation in Taiwan's railway industry through industry-academia collaboration and internship programs, where a total of 50 station interns and 17 maintenance interns were accepted into our "College Summer Internship Experience Program" in 2018, and a total of 30 station interns and 20 service interns were accepted into our internship program for the academic year.</li> </ul>		<p>4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.</p>
		<ul style="list-style-type: none"> <li>Actively promoted local supply and enhanced the capabilities of local vendors.</li> <li>Provided equal employment opportunities through talent recruitment and development.</li> <li>Enhanced the professional competencies of personnel based on assessment and training.</li> <li>Launched the "Journey with THSR, Discover Taiwan" initiative and established collaboration with a diverse range of industries, collaborated with MRT services in various locations and the Taiwan Tourist Shuttle service through the "THSR Combo Tickets," and organized the "Big Fun holiday break" event to drive the overall growth of combo ticket sales, where sales grew by more than 50% compared to that in 2017.</li> </ul>		<p>8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.</p> <p>8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.</p> <p>8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training.</p> <p>8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.</p>
		<ul style="list-style-type: none"> <li>Marketed various attractions in Taiwan through HSR to promote tourism benefits and the development of local tourism industry, reaching a total of 2.68 million passengers.</li> </ul>		<p>12.B Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products.</p>
		<ul style="list-style-type: none"> <li>Conducted exchanges and visits with domestic and international transportation operators by welcoming 46 delegations, comprising a total of 630 counts of visitors, in 2018.</li> <li>Organized observation and exchange activities with JR Kyushu Railway Company (JR Kyushu).</li> </ul>		<p>17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technologies, and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.</p>
<p>Comprehensively improve the CSR governance mechanism, and strengthen the integration of governance and sustainable development by incorporating the CSR vision into corporate culture. In addition, promote employee development, implement energy conversation and carbon reduction to create positive environmental benefits, and actively support charity events, arts and ecological development as an important platform for strengthening the cohesion of Taiwan's society.</p>		<ul style="list-style-type: none"> <li>Organized the "High-Speed Educational Endowment Program" in collaboration with the "After School Association of Taiwan" to help economically disadvantaged groups obtain education opportunities.</li> </ul>		<p>4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.</p>
		<ul style="list-style-type: none"> <li>Leased out the rooftop of maintenance depots to energy suppliers for the installation of solar power equipment in line with the government's effort to promote renewable energy, thereby generating 7,140 MWh of electric power throughout the entire year.</li> <li>Installed solar panels at HSR stations to generate electric power for use by HSR stations. In 2018, completed application for Renewable Electricity Certificate for solar power generation systems at Miaoli, Changhua and Yunlin Stations, which were approved by the Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs.</li> </ul>		<p>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.</p> <p>7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries (LDCs) and small island developing states (SIDS).</p>
		<ul style="list-style-type: none"> <li>Set up the "Corporate Governance Promotion Committee" to develop strategies for optimizing corporate governance systems and functions, and review CSR policies.</li> <li>Organized "Taiwan High Speed Rail Opening Year of Arts" to exert the influence of HSR and support the development of arts in Taiwan.</li> </ul>		<p>8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.</p>
		<ul style="list-style-type: none"> <li>Established collaboration with education and charitable organizations in order to help disadvantaged groups fulfill their dreams of taking the HSR train for free.</li> <li>Offer concession tickets for the elderly and disabled local passengers.</li> </ul>		<p>11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.</p>
		<ul style="list-style-type: none"> <li>Continued to improve and management operational energy efficiency through trains energy- saving driving and equipment settings.</li> </ul>		<p>9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.</p>
		<ul style="list-style-type: none"> <li>Reduced the impact of public transportation on the environment through energy management and waste recycling mechanisms.</li> <li>Increased the procurement of eco-friendly products to reduce the impact of supply chain on the environment.</li> </ul>		<p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.</p> <p>12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities.</p>

## Operational Performance and Sustainable Practices

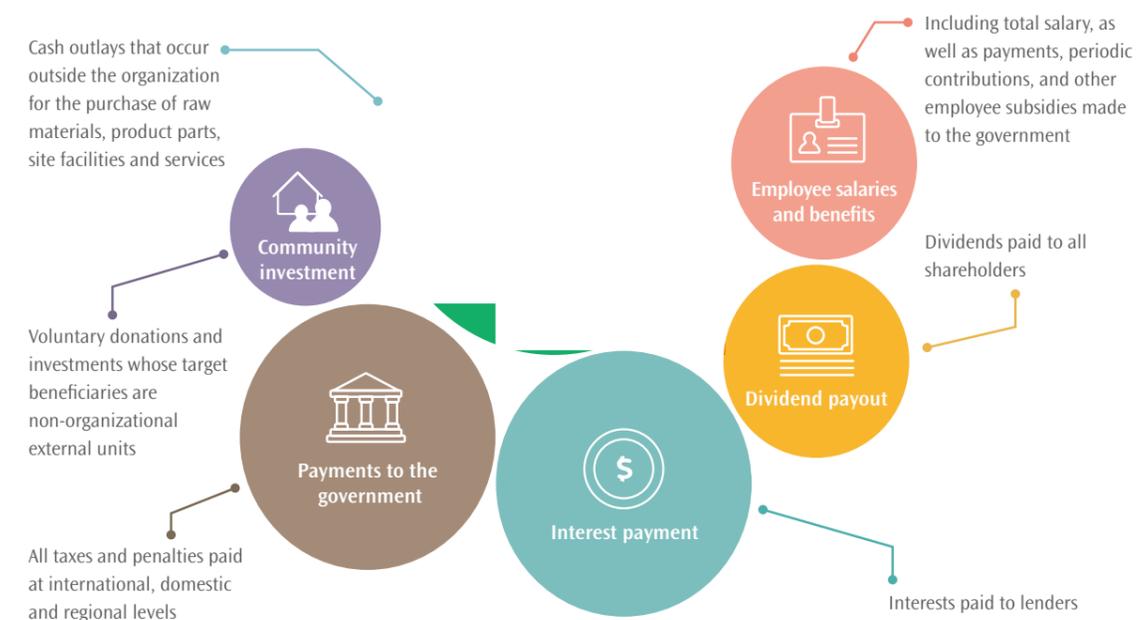
### Financial Performance

Item	Unit	2016	2017	2018
Sales volume (rail transport)	thousands of passenger-km	10,488,340	11,103,359	11,558,787
<b>Sales value</b>				
Rail transport	NT\$ thousands	39,433,807	42,221,888	44,098,796
Sales revenue	NT\$ thousands	198,547	189,262	208,683
Other income such as rent	NT\$ thousands	978,552	1,023,892	1,107,528
<b>Operating ratios</b>				
Rail transport		97.10%	97.21%	97.10%
Sales income		0.49%	0.43%	0.46%
Other income such as rent		2.41%	2.36%	2.44%
<b>EBITDA and EBTDA <sup>(note)</sup></b>				
EBITDA	NT\$ thousands	29,416,483	31,657,691	32,921,179
EBTDA	NT\$ thousands	21,156,372	24,290,438	26,409,766
<b>Turnover and profitability</b>				
Operating revenue	NT\$ thousands	40,610,906	43,435,042	45,415,007
Gross profit	NT\$ thousands	14,637,733	18,821,397	20,333,613
Net operating margin	NT\$ thousands	13,699,496	17,754,984	19,144,964
Net income before tax	NT\$ thousands	4,997,575	6,478,500	7,311,823
Net income after tax	NT\$ thousands	4,149,098	5,339,905	10,696,381
<b>Assets, liabilities and equity</b>				
Total assets	NT\$ thousands	461,207,372	440,060,457	433,057,069
Total liabilities	NT\$ thousands	400,143,691	377,042,108	363,644,056
Total shareholders' equity	NT\$ thousands	61,063,681	63,018,349	69,413,013

Note: 1. EBITDA: Earnings before interest, taxes, depreciation and amortization

2. EBTDA: Earnings before taxes, depreciation and amortization

### Economic Value Distribution



Unit: NT\$ thousands		2016	2017	2018
Operating costs	Operating costs (total)	25,973,173	24,613,645	25,081,394
	Operating expenses (total)	938,237	1,066,413	1,188,649
Employee salaries and benefits		3,983,519	4,361,246	4,650,413
Dividend payout		3,376,976	4,221,220	6,303,688 <sup>(Note 1)</sup>
Interest payment		8,375,559	7,463,329	6,618,272
Payments to the government	Taxes <sup>(Note 2)</sup>	2,152,961	1,930,247 <sup>(Note 3)</sup>	2,078,937
	Feedback fund	1,883,383	3,180,612	647,850
	Rental expenses	704,739	831,722	835,601
Community investment		3,026	4,784	11,758

Note: 1. It refers to the amount proposed by the Board of Directors. The Company's surplus distribution plan for 2018 was approved in the annual shareholders' meeting convened on May 30, 2019.

2. Government tax payments include business tax, profit-seeking enterprise income tax and other taxes.

3. Due to the fact that the Company applied for and obtained the approval of the Ministry of Finance for exemption from profit-seeking enterprise income tax in 2018 in accordance with the "Statute for Encouragement of Private Participation in Transportation Infrastructure Projects," taxes for the year were recalculated.

## Government Subsidies

Unit: NT\$ thousands

Type	Purpose/Description	2016	2017	2018
Tax deduction and credit	Tax credit applicable to capital expenditures invested in personnel training specified in Article 29 of the "Statute for Encouragement of Private Participation in Transportation Infrastructure Projects" (Note 1)	2,272	4,351	3,687
	Five-year tax exemption specified in Article 28 of the "Statute for Encouragement of Private Participation in Transportation Infrastructure Projects" (Note 2)	-	1,264,751	2,841,765
Investment subsidies, research and development subsidies and other related subsidies	Subsidy for the "2016 Upgrade Plan for Highway Public Transportation - Taiwan High Speed Rail Multi-Card Ticket Integration Transfer Service Project" issued by the Bureau of High Speed Rail, Ministry of Transportation and Communications (MOTC)	9,171	3,930	-
	Subsidy program for 4G Smart Broadband Application in Cities (Taiwan High Speed Rail iTaiwan Application Service Project) - High Speed Rail Wi-Fi Smart Application Project issued by the Industrial Development Bureau, Ministry of Economic Affairs	-	-	24,049

Note: 1. The amount of deductible tax return in 2016 and 2017 have been verified by CPAs, whereas the amount of deductible tax return in 2018 is yet to be verified by CPAs.

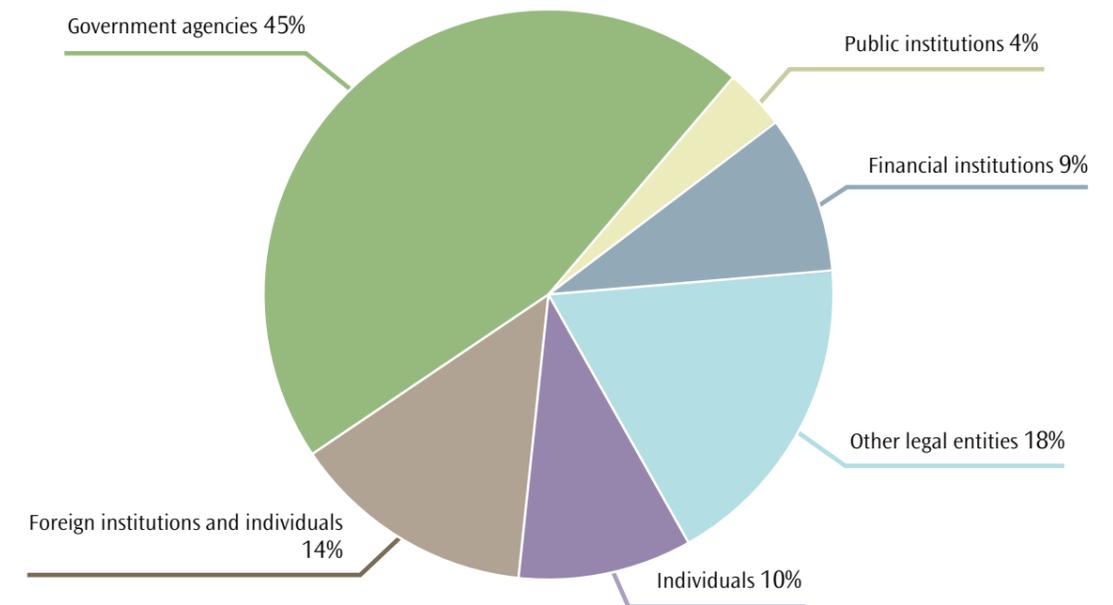
2. The Company applied for five-year exemption from profit-seeking enterprise income tax in accordance with Article 28 of the "Statute for Encouragement of Private Participation in Transportation Infrastructure Projects." On April 13, 2018, exemption from profit-seeking enterprise income tax for this case was approved by the Ministry of Finance, and the scope of tax exemption was determined in accordance with ticket fare income for passenger transit and transportation charge income for cargoes specified in Subparagraph 1, Paragraph 1, Article 3 of the "Regulations Governing Application of Profit-seeking Enterprise Income Tax Exemption to Private Institutions Participating in Transportation and Communication Infrastructure Projects." In addition, the Company has chosen to delay the start of tax exemption period to January 1, 2017 for exemption from profit-seeking enterprise income tax for five consecutive years within the scope of statutory tax exemption in accordance with Paragraph 2, Article 28 of the "Statute for Encouragement of Private Participation in Transportation Infrastructure Projects."

## Operational Performance

Indicator	Unit	2016	2017	2018
Number of train services	times	51,106	51,751	52,437
Passenger volume	thousands	56,586	60,571	63,963
Punctuality rate (arrival within five minutes of scheduled time, excluding delays due to force majeure)	%	99.58	99.78	99.76
Reliability rate (excluding delays due to force majeure)	%	100	100	100
Average delay time for arrival at terminal station	minutes	0.250	0.102	0.170

## Shareholding Structure

THSRC was officially listed on the Taiwan Stock Exchange on October 27, 2016, and was the first rail transportation operator to be listed in Taiwan. As of April 1, 2019, the shareholding structure of THSRC is shown as follows:



## Financial Performance in 2018

After the implementation of the "High Speed Rail Financial Solutions," THSRC has a sound financial structure, thereby laying a solid foundation for sustainable development. We continue to optimize our financial structure and improve our operating profits. With a sound financial structure, we conduct assessments and decision-making with regard to governance, operations, and development planning from the perspective of sustainable management, leading the growth of THSRC.



### Performance Highlights

In 2018, our cumulative revenue was **NT\$45.42 billion**, an increase of **4.6%** from the previous year. Meanwhile, our net income before tax was **NT\$7.31 billion**, an increase of **12.8%** from the same period last year, and our net income after tax was **NT\$10.7 billion**, a significant increase of 100.4% from the same period last year.

### Action Plan

- THSRC successfully reduced interest rates of syndicated loans through negotiations with bank consortiums to save on interest expenses.
- In July 2018, THSRC once again repaid the principal for Tranche A Facility of syndicated loan totaled **NT\$10 billion** in advance. From 2016 to 2018, THSRC has settled the principal for long-term syndicated loans up to **NT\$72.2 billion**.
- THSRC successfully obtained the "5-year tax exemption" from the government.





Transportation

Professional Transportation

# Transportation — Professional Transportation

Management Approach	Subchapter title	Material topic	Management purpose	Management method	Assessment mechanism
Safety Services and Responsible Transportation		Safety management	Ensure the safety of every passenger, employee and other public users.	<ul style="list-style-type: none"> <li>Establish the Safety Committee covering different levels and functions to manage issues such as reviewing safety performance, verifying the implementation of safety management, etc., and regularly supervise, review, and manage abnormal events in train services due to natural disasters.</li> </ul>	<ul style="list-style-type: none"> <li>Perform audits to examine whether the implementation of safety management meets specific standards, assess whether each unit has fulfilled its safety responsibilities and carry out its functions according to the relevant regulations, and confirm whether the system is continuously operating in an effective manner.</li> </ul>
		Product/Service quality		<ul style="list-style-type: none"> <li>Implement the ISO 9001 Quality Management System, and establish quality policy.</li> </ul>	<ul style="list-style-type: none"> <li>Each unit has established QKPI for quality goals including safety, reliability, efficiency, and customer satisfaction, and developed a review mechanism for regular review, discussion, and examination.</li> </ul>
Disaster Prevention and Professional Response		Climate change adaptation strategies	Reduce possible hazards caused by climate change impacts to travel services, strengthen the climate resilience of our operations and enhance disaster prevention and response.	<ul style="list-style-type: none"> <li>Set up "Disaster Warning System" (DWS) in train operations along the HSR line to reduce the threat of natural disasters and external factors to train services, and prevent accidents and disruption of operations.</li> </ul>	<ul style="list-style-type: none"> <li>The Operational Safety Committee will periodically supervise, review, and manage abnormal incidents in train services caused by natural disasters to continuously improve operational safety and strengthen climate change adaptation capabilities.</li> </ul>
		Disaster prevention and major incident countermeasures		<ul style="list-style-type: none"> <li>Plan overall preventive and response measures for three major risk factors affecting the safety of HSR train services, namely "natural environment," "human factor," and "equipment anomalies."</li> <li>Provide the necessary procedures, principles, and guidelines through the emergency management plan so that our personnel possess the ability to cope with various types of emergencies that endanger the safety of railway personnel or railway systems.</li> </ul>	<ul style="list-style-type: none"> <li>Each responsible unit shall organize disaster prevention and response drills based on plans.</li> </ul>
Smooth Travel in Adherence to Commitment		Passenger rights	Maximize capacity and efficiency with flexible train schedule and train stopping patterns, in order to satisfy the travel needs of all types of passengers. Furthermore, in order to reduce the impact of operational activities on neighboring communities, THSRC has established management regulations, effective communications and tracking operations, in hopes of creating a win-win situation involving corporate sustainability and mutual benefits for communities.	<ul style="list-style-type: none"> <li>Publish important information, such as "Passenger Transportation Contract" and related notices, station operating hours, train schedules, ticket fares, miscellaneous fees that may be derived from passenger transport services, in noticeable areas on THSRC's website and at each HSR station. At the same time, establish the "THSRC Corporate Website and Subwebsites Development Regulation" to ensure the implementation of information update-related management.</li> </ul>	<ul style="list-style-type: none"> <li>Understand customers' feelings and aspects of services that require improvement by conducting customer satisfaction survey every year, and submit customer feedback to the quality management process at each department and customer feedback review meetings among departments, so as to facilitate the implementation of improvements.</li> </ul>
		Product price		<ul style="list-style-type: none"> <li>Establish the "Ticket Price Management Regulation," and implement the regulation in accordance with the relevant laws and regulations, construction and operation contracts, market conditions, and marketing needs.</li> </ul>	<ul style="list-style-type: none"> <li>Periodically track the achievement rate of budgets and marketing projects, and report the implementation of discount fares marketing in the previous year to the Board of Directors every May.</li> </ul>
		Traffic dispersion and transit services		<ul style="list-style-type: none"> <li>Formulate each traffic dispersion plan through rigorous internal procedures, and implement them after being submitted to the Ministry of Transportation and Communications (MOTC) for future reference.</li> </ul>	<ul style="list-style-type: none"> <li>Periodically track and observe the status of train reservation during traffic dispersion periods, discuss the need and feasibility of additional train runs, and reserve spare trains for ad hoc scheduling.</li> </ul>
		Reduction of noise and vibrations		<ul style="list-style-type: none"> <li>Establish the "High Speed Rail Noise Autonomous Improvement Plan" and the "Work Plan for Noise Prevention and Improvement among Sporadic Households along the High Speed Rail Line."</li> </ul>	<ul style="list-style-type: none"> <li>Formulate the "High Speed Rail Noise Case Handling Process" and set up the "Noise Prevention Project Team" to continuously control the impact of noise on communities along the HSR line.</li> </ul>

## Safety Services and Responsible Transportation

THSRC celebrated its 11th anniversary of operation in 2018 and has maintained zero operational accident. In 2018, THSRC's punctuality rate was 99.76%, whereas the average delay time was only 0.17 minutes and has demonstrated performance of international level in the railway industry. With an average passenger volume of approximately 175,000 people per day, we bear the responsibility of ensuring the safety of every passenger and providing high-quality travel. All the decisions and actions are formulated and implemented with safety as the highest guiding principle.

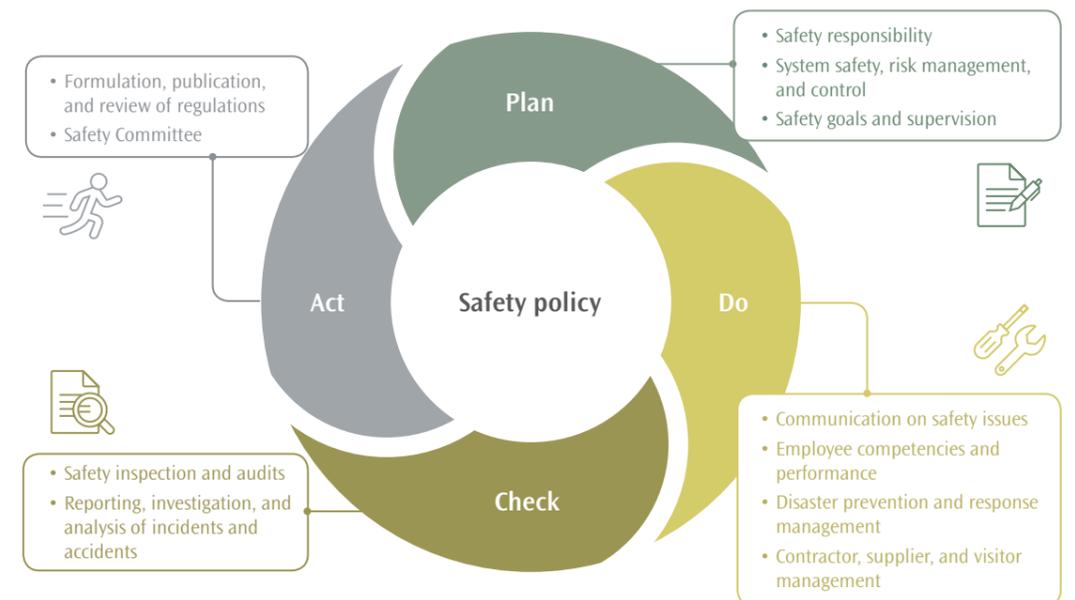
### Safety Management and Culture

We are committed to building an operational safety management mechanism with risk management as the backbone, properly applying internationally recognized risk assessment and safety management methods, and implementing risk prevention and full personnel participation. Each section must follow the relevant operating procedures to ensure operational safety and maintain a high-quality safety culture.

### Spirit of Safety Service

The "Operational Safety Plan" is adopted as the highest level of safety regulations for safety management at THSRC. The plan combines railway operations and maintenance, high speed rail systems and related new businesses, development and implementation, as well as integrates the principles of Plan-Do-Check-Act (P-D-C-A), thereby effectively achieving the strategies and goals of THSRC through the implementation and continuous improvement of 12 safety management elements.

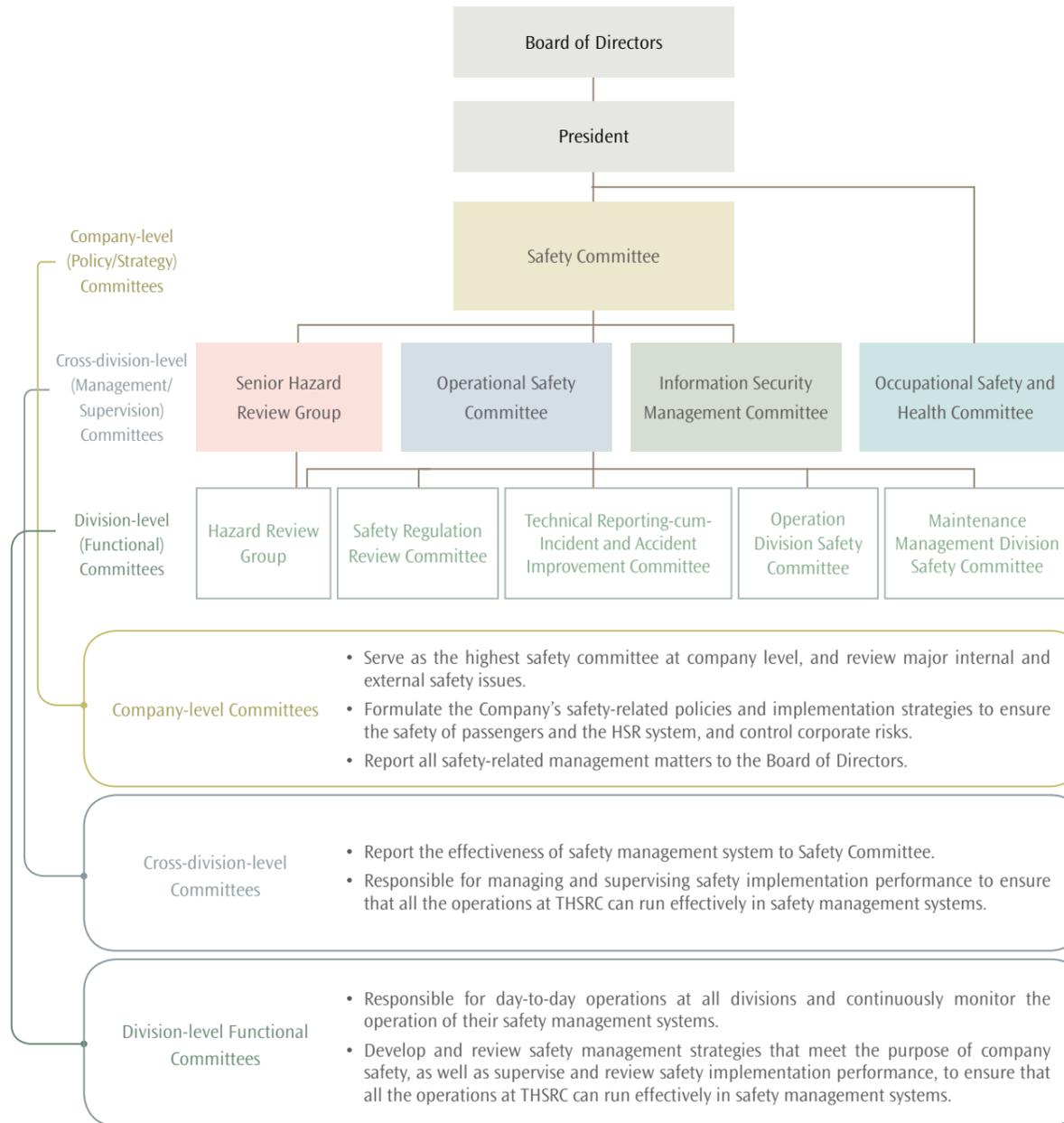
## Safety Management System — Operational Safety Plan



## Dedicated Safety Management Framework

We have established three levels of safety committees to implement full personnel participation and provide a platform to jointly learn about the implementation of safety management and relevant improvement measures, with a view to ensuring operation safety and workplace safety and health.

Organizational Structure of Safety Committees in 2018



Note: 1. The Company-level Safety Committee convenes a meeting every six months. The Occupational Safety and Health Committee, as well as the Operational Safety Committee and the Information Safety Management Committee at cross-division-level convene a meeting every quarter. The Operation Division Committee and the Maintenance Management Division Safety Committee at division-level convene a meeting every month.

2. In 2018, the title "Chief Executive Officer" was changed to "President" in line with the amendment of THSRC's Articles of Incorporation. Furthermore, in line with organizational restructuring at THSRC, "Operation Sub-division" and "Maintenance Sub-division" were amended to "Operation Division" and "Maintenance Management Division." The Construction Management Division was included in the operation of the Maintenance Management Division Safety Committee and the Operational Safety Committee as the Construction Management Division was transferred to the Maintenance Management Division due to organizational restructuring, or certain units were placed directly under the Executive Vice President.

3. The Occupational Safety and Health Committee is parallel to other safety committees, and is tightly connected to employee safety. For more details, refer to the subchapter titled "Protection of Rights and Considerate Care." 🌐

According to the safety and health policy of THSRC, every colleague is responsible for maintaining his/her personal safety, and protecting the safety of service targets and HSR assets for which he/she is responsible. Furthermore, our colleagues are given the appropriate management or execution responsibilities according to their positions as indicated in their work instructions, in order to fully implement safety management.

To implement operational safety, we carry out safety policy planning, formulate strategies and supervise the implementation of these strategies through safety committees at various levels, so that every employee understands and adopts THSRC's safety regulations, with a view to providing our passengers and colleagues with a safety first operational environment.

## Safety and Quality Services

Providing safety and quality services are important mission of THSRC. We promote our quality policy from top to bottom, extending from the Quality Management Committee chaired by the President to all employees, with a view to internalizing quality into our DNA.

## Safety and Quality Management System

THSRC's quality management system is built on the requirements of ISO 9001 Quality Management System, and ensures the implementation of quality policies through regular meetings.

### Quality Review Mechanism

<b>Annual quality management review meeting</b>	This meeting is convened annually, hosted by the President, and participated by the head of each division and office at THSRC.	It serves to review the implementation of THSRC's quality management system and the continued applicability of THSRC's quality management system.
<b>Quarterly quality representative meeting</b>	This meeting is hosted by THSRC's quality representative (Head of Quality Assurance Office), and participated by quality representatives designated by each unit.	It ensures the implementation of quality policy from top to bottom.

We conduct quality control and inspection of internal operations in three major areas of "operations," "maintenance," and "customer service," in order to ensure full implementation of quality management. During traffic dispersion of long holiday periods, crowd control and service status are observed at stations and on trains, and the observation results are reported for the reference of operating units. Each opportunity for improvement is regularly tracked, reviewed, improved, and concluded so as to provide rail transport service with "safety," "reliability," "efficiency," and "customer satisfaction" to the public. From the perspective of life cycle, we have configuration baseline for operation-related facilities, equipment, and related system hardware and software components, and conducts regular review to ensure that passengers can enjoy safe and quality services when trains are traveling on the track at high speed.

### Configuration Identification

Item	Content
<b>Main categories</b>	Core, trackside equipment, track, closed circuit television, facility, station, maintenance depot, and depot equipment
<b>Total monitored items</b>	34,955
<b>Percentage of configuration monitored items</b>	80.78%
<b>Verification method/frequency</b>	Internal verification by the Quality Assurance Office/once every quarter

To continuously improve the quality of operation and maintenance, and ensure that THSRC's quality management system moves with the times, THSRC appointed a third party to conduct certification on overall core business covering "HSR management, maintenance and passenger service" in 2018 according to the new version of ISO 9001 published by the International Standards Organization (ISO) in 2015. No non-compliance was found in this round of certification; thus, THSRC successfully passed this round of version transfer. In addition, the government also plays a supervisory role in external quality assurance, while the Railway Bureau, Ministry of Transportation and Communications (MOTC) conducts regular inspection, temporary inspection and other items on the HSR operations every year.

### External Quality Inspection Items

External unit	Item	2016	2017	2018
Certification company	Certification of ISO 9001	Certification/renewal	Routine audit	ISO 9001 certification of version transfer
Government units	Annual regular operational inspection and temporary inspection	Three times	Four times	Once

In 2011, THSRC launched the employee proposal improvement system to encourage employee participation, so that quality and service are closer to customer needs. We also incorporated Quality Control Circle (QCC) activities to drive toward continuous improvement of quality, safety, and operational efficiency, which not only improves the timeliness of overall operations, but also achieves positive benefits such as lowering operating costs.



#### The most outstanding quantifiable improved performance in 2018 — Improvement of Chemical Spraying Method for Train Washing Machines

Chemical spraying methods for train washing machines were analyzed to determine the best improvement mode, saving approximately NT\$3 million worth of chemicals used for train washing machines while reducing water and electricity costs.



#### The most outstanding quantifiable improved performance in 2018 — Station Ticketing Information System

It allows the website to provide real-time ticketing information to all managers as reference through the updated design of ticketing information system, which greatly assists in decision-making during traffic dispersion.

In addition, in order to improve the overall safety awareness toward domestic railway operations and encourage horizontal exchanges and experience sharing in the industry, THSRC organized the "Railway Safety Seminar," which revolved mainly around railway safety risk management, on July 19, 2018, and invited supervisors and managers from various domestic railway operators to exchange management experiences on related issues.

The seminar was full of enthusiastic discussions and produced fruitful results, in which a total of seven railway safety-related topics were presented. Discussion topics in the seminar mainly focused on areas including "Analysis and Outlook of Railway Accident Investigation and Safety Supervision Mechanism," "System Operation Reliability Management Practices and Promotion," and "Disaster Management and Emergency Response." The seminar was attended by a total of 37 participants from domestic railway institutions, such as Taiwan Railways Administration, Taipei Rapid Transit Corporation, Taoyuan Metro Corporation, and Institute of Transportation, Ministry of Transportation and Communications (MOTC), as well as Railway Bureau. Through exploration, exchange and experience learning, we achieve the goal of raising overall safety awareness toward railway operations, and improve the quality of passenger, public and operational safety while promoting the safety culture of teamwork.



THSRC Chairman Chiang Yao-Chung presented the certificate of appreciation to the members of the Red Star Circle Team from the Rolling Stock Maintenance Department who won the Golden Tower Award in the unity category during the 31st Taiwan Continuous Improvement Awards.



Group photo of participants during the 2018 Railway Safety Seminar.

### Quality Advancement Direction and Review

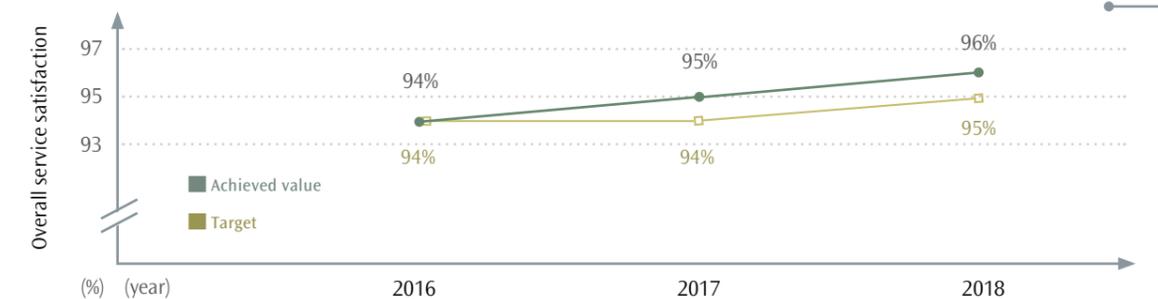
Since 2008, THSRC has facilitated internally and established quantitative quality performance indicators (QKPI) to continuously improve various operations. We track the implementation status of these indicators every quarter, and conduct review and improvements on related operations that are yet to meet targets to ensure that the operations meet the performance of four categories, including passenger safety, reliability, efficiency, and customer satisfaction.

In terms of operational safety, we are proud of our zero-accident record, no accidents or injuries to passengers or to the general public were caused by train service operations in 2018. Along with the efforts of our colleagues, we also successfully met the targets of performance indicators (passenger injury rate) associated with passengers.

### Quality Performance Indicators

Area	Item	Formula	2016		2017		2018	
			Target/Estimated value	Achieved value	Target/Estimated value	Achieved value	Target/Estimated value	Achieved value
Safety	<b>Passenger injury rate (severe injury and death)</b>	Passenger injury (severe injury and death) per million trips	0	0	0	0	0	0
	<b>Passenger injury rate (minor injury and medical treatment)</b>	Passenger injury (minor injury and medical treatment) per million trips	<0.08	0	<0.04	0	≤0.04	0.03
	<b>Passenger injury rate (minor injury)</b>	Passenger injury (minor injury) per million trips	<0.20	0.05	<0.10	0.08	≤0.10	0.06
Reliability	<b>Five-minute punctuality rate</b>	Number of train runs with delays within five minutes of scheduled time/Total number of train services	>99.0%	99.58%	>99.1%	99.78%	>99.5%	99.8%
	<b>Automatic Fare Collection System (AFCS) station equipment availability rate</b>	[(Total operating time of main equipment every season - Total downtime of main equipment every season)/Total operating time of main equipment every season]*100%	99.60%	99.99%	99.90%	99.99%	This item was canceled in 2018	This item was canceled in 2018 (Note)
Efficiency	<b>Customer feedback response rate</b>	Number of cases replied within 7 days/Total number of cases	≥99%	100%	≥99%	100%	≥99%	100%
Customer Satisfaction	<b>Overall service satisfaction</b>	Number of respondents giving 5 points and 4 points in the customer satisfaction category/Total number of respondents	≥94%	94%	≥94%	95%	≥95%	96%

Note: THSRC re-examines the KPIs of each item every year, and revises as appropriate. The maintenance of the Automatic Fare Collection System (AFCS) was originally outsourced, but has been taken over by THSRC since 2018 and placed under the maintenance of information systems at THSRC. Since the statistics on the maintenance of AFCS equipment was not listed separately, this KPI was removed in 2018.



## Station and Route Safety and Risk Management

After daily train operations, railway maintenance personnel conducts routine inspections to ensure the safety of rail tracks and civil works. In 2018, a total of 1,800 turnouts were inspected, while routine rail track inspections and rail track irregularity inspections were completed over a distance of 8,389 km. In addition to rail track maintenance, daily inspection and maintenance of HSR facilities, including stations, trains, mechanical and electrical facilities, civil structures, route safety, etc., include safety inspection of various facilities.

In addition, the hazard management mechanism is a mandatory part of safety management at THSRC to ensure the operational safety of the HSR system and effectively manage possible hazards arising from operations, maintenance, and engineering projects. THSRC's Hazard Review Group (HRG) is an independent group whose members originate from different professional fields. The group convenes regular meetings every month to review reported hazard information and the appropriateness of related risk assessment, as well as whether hazard controller proposes mitigations in compliance with proper procedures and techniques, so that risks can be reduced to ALARP (As Low As Reasonably Practicable) level. As of 2018, the hazard risk levels identified by the HRG meetings for three consecutive years have lied within the risk tolerance range.

Inspection and Maintenance Performance for 2018

Category	Cycle	Number of trainsets maintained
Daily inspection	Every two days	5,062 trainsets
Monthly inspection	Every 30 days or 30,000 km	652 trainsets
Bogie inspection	Every 18 months or 600,000 km	30 trainsets
General inspection	Every 36 months or 1.2 million km	16 trainsets



## Disaster Prevention and Professional Response

### Climate Change Adaptation

THSRC actively faces the impact of climate change. With regard to the "Adaptation Strategy to Climate Change in Taiwan" proposed by the National Development Council, we continue to assist the Institute of Transportation, Ministry of Transportation and Communications (MOTC) in conducting research related to climate change adaptation, participate in the development of the railway and highway climate change adaptation information platform and the expansion of its functions, and strengthen the analytical functions regarding vulnerability and risk of the information platform, with a view to supporting decision-making analysis of climate change by railway and highway competent authorities. Furthermore, THSRC has also signed the "Memorandum of Cooperation on Cross-border Disaster Prevention" with the Central Weather Bureau, Ministry of Transportation and Communications (MOTC) to enhance meteorological interpretation capabilities through mutual cooperation, while serving as an important reference for THSRC to make traffic dispersion decisions and assess track safety during disasters. All the facilities built by THSRC for "flood prevention, earthquake prevention and wind damage prevention" comply with domestic and international regulations.

In order to develop risk maps and examine adaptation gaps, based on the "Research of Climate Change Adaptation Action Plan of Railway and Highway Systems" conducted by the Institute of Transportation, Ministry of Transportation and Communications (MOTC), and "Taiwan Climate Change Projection and Information Platform" executed by the "National Science and Technology Center for Disaster Reduction" (NCDR), THSRC set climate change scenarios and analyze the recurrence period for climate change with different frequencies. The effects of climate change on railways mainly include increase in rainfall and rainfall intensity, as well as increase in the frequency and intensity of extreme weather phenomena such as typhoons and cyclones. The HSR core system has referenced past climate change data during the design stage, and has incorporated the relevant protection and monitoring devices into its overall design, in order to reduce potential damage to operations caused by climate change.

THSRC's Climate Change Adaptation Measures (2018-2022)

Establishment of warning system for slope safety	Compiling the experience in slope management and prevention over the past 11 years of operation, and planning to construct a warning system for slope safety based on rainfall intensity.
Strengthen protection of tunnel portal slopes	Taking into account of future increasing frequency of extreme rainstorms, the inspection and protection works of HSR tunnel portal slopes along sections in Hsinchu and Miaoli will be strengthened in the future.
Risk assessment and protection designs for scoured cross-river bridges	Conducting risk assessment and protection of scoured cross-river bridges annually to ensure HSR facility and operational safety.

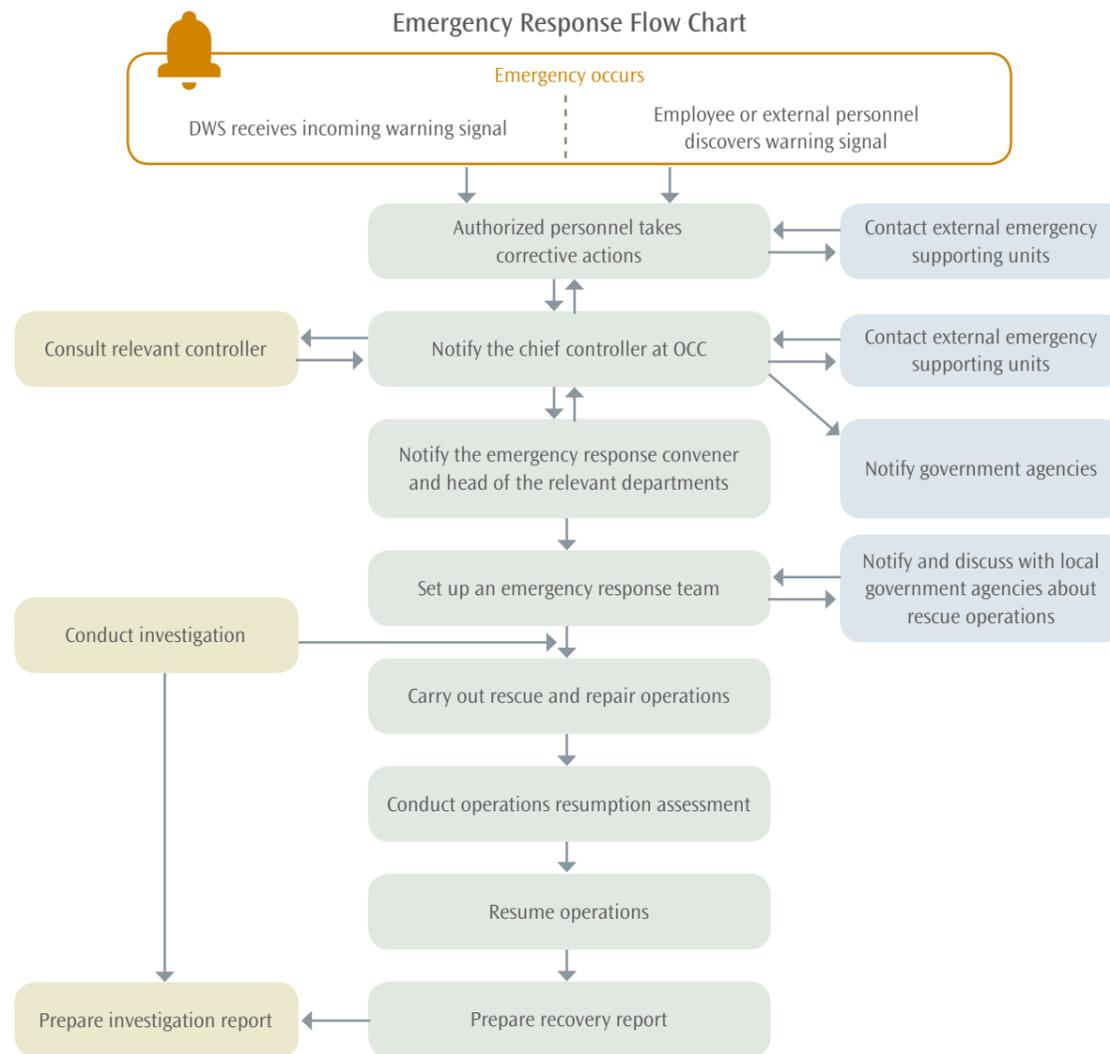
According to results from the "Research of Climate Change Adaptation Strategies and Vulnerability Assessment Indicators of Major Highway and Railways Constructions" conducted by the Institute of Transportation, Ministry of Transportation and Communications (MOTC) in 2015, there were no high-vulnerability hotspots in the current status of the HSR system. On the other hand, only the northern section of Changhua was a high-exposure area, mainly because of the potential impact of geological disasters on the embankments and cuts along this section, whereas no potential impact was identified in the elevated section along other central and southern regions. Due to the high adaptability of existing facilities and management mechanisms of HSR, including maintenance and protection of facility structure, disaster warning system (DWS) (please refer to "Real-time Detection and Disaster Prevention - Disaster Warning System" for more details), emergency response mechanism, etc., sections with medium or high potential impact are yet to be considered as vulnerability hotspots after assessment has been conducted. We will continue to utilize existing monitoring and management mechanisms along the HSR line in order to cope with operational safety risks.

The operational insurance plan at THSRC has taken into account various risk effects in a reasonable manner, including natural disasters (e.g., earthquakes, typhoons, torrential rain, slope sliding, rockfalls, etc.), human factors (e.g., vandalism on equipment, arson, explosives, violent attacks, hostage-taking, etc.), and equipment anomalies (e.g., system failures). In addition to taking out adequate operational asset insurance on important operational assets, THSRC also takes out business interruption insurance to compensate for the financial impact of possible decrease in revenue and additional operating expenses resulted from damage to operating assets.

## Train Safety and Disaster Prevention and Response

The risk factors affecting HSR train safety can mainly be divided into three types, namely natural disasters (e.g., earthquakes, typhoons, torrential rain, slope sliding, rockfalls, etc.), human factors (e.g., vandalism on equipment, arson, explosives, violent attacks, hostage-taking, etc.), and equipment anomalies (e.g., signaling system failures, turnout failures, train bogie failures, power line sag, etc.). We plan overall prevention and response measures by prioritizing passenger and personnel safety according to the three types of risk factor. During emergency repair of equipment, we try to avoid damages or delays from spreading as the primary considerations.

To ensure that our colleagues at all levels familiarize themselves with various emergency procedures, we formulate training programs every year to conduct drills regularly and without warning for various hypothetical scenarios, and disclose our prevention and response measures to the outside world via this report and our corporate website. Besides, in order to keep train operations in a safe state at all times, we have built a train safety system of high standards, while monitoring the operating status of trains at all times using advanced track technology and ensuring the safety of each passenger using safety technology.



### Natural Disaster Warning Mechanism

Apart from the climate change adaptations above, THSRC has formulated internal plans and regulations in accordance with regulations related to disaster prevention and fire prevention, and promotes various disaster prevention works at all stations and depots according to requirements. Standard operating procedures for various disaster responses are examined independently by international experts at the stage of government inspection, which adequately responds to various disasters that may affect the safety of passengers and HSR.

## Natural Disaster Prevention Measures

Type of prevention	Passive prevention	Predicted or knowable disaster prevention	Detection and prevention along operating routes	Earthquake prevention for civil structural facilities
Position of prevention	Station facilities and operating trains	HSR operation sites and operating trains	Operating trains	Elevated bridges, tunnels and flat sections
Content of prevention measures	Construct station facilities and operating trains using fire-retardant, fire-resistant, low-smoke, and non-toxic materials according to fire prevention and environmental protection regulations, as well as regulations of the US National Fire Protection Association.	<ul style="list-style-type: none"> <li>Initiate typhoon/rain prevention preparations in advance through interpretation of typhoon/torrential rain warnings and weather information.</li> <li>Formulate the "Overall Disaster Prevention and Response Plan for Taiwan High Speed Rail Traffic Accidents" with the Ministry of Transportation and Communications (MOTC), and establish supporting and assistance mechanisms with central and local rescue units.</li> </ul>	Install natural disaster warning detectors along the HSR line, which are directly connected to the automatic train control system and can automatically stop trains immediately if there are earthquakes, slope sliding, and rockfalls which directly affect train safety.	Civil structural facilities can still resume safe operation after earthquakes under the impact of structures equivalent to earthquakes with a 950-year return period.

THSRC fully considered the earthquake resistance of civil facilities according to national specifications and standards at the beginning of the design and construction of the HSR system, and established corresponding response methods for natural disasters, such as earthquakes, typhoons, and torrential rain. Although Taiwan is located in the Pacific Rim which results in high incidence of earthquake, THSRC possesses the ability to quickly integrate the mobilization and recovery of domestic and foreign resources. During an unexpected dramatic change, THSRC is able to quickly resume operation to reduce the inconvenience caused to passengers, thereby providing the public with safe, convenient, and high-quality travel services.

THSRC conducts an earthquake disaster drill in mainline areas every year to enhance the ability of colleagues to cope with responses. After more than three months of discussion and preparations, THSRC held an earthquake response drill in the evening of September 12, 2018 at the Shulin elevated section of the mainline. In addition, THSRC has also designed the scenario of train masters being attacked and injured by impatient customers during evacuation preparations, and conducts joint disaster and rescue drills for this scenario. In addition to mobilizing relevant employees at THSRC to participate in the drill, THSRC also mobilized the New Taipei City Fire Department, the Police Department, the Department of Health (including the designated district hospital - Yadong Hospital), the Railway Police Bureau, and other units. More than 250 people participated in this drill.



### Natural Disaster Events Affecting Operations

Event	2018	Response methods
Earthquakes <sup>(Note)</sup>	February 6, March 20, May 4, August 18, October 3, and November 26	These events did not cause any damage to the railway system facilities. After warning was sent by the earthquake detector, trains traveling along the affected sections were stopped according to automatic system setting. Besides, the necessary civil structure inspections and visual inspection of trains were conducted according to the relevant procedures. The facilities resumed normal operation after confirming that no anomalies were found.
Typhoons and torrential rain	June 13, June 19, July 2, August 8, August 22, and September 9	These events did not cause any damage to the railway system facilities. Temporary speed limitation and train operation scheduling were conducted according to typhoon forecast and monitoring of rainfall and wind speed by natural disaster warning detectors.

Note: For THSRC's earthquake response plan and passenger response, please refer to THSRC's "High Speed Rail Encyclopedia - High Speed Rail Earthquake Prevention and Response."

### Man-made Disaster Prevention Mechanism

At the beginning of the construction of HSR, the HSR police force was set up to assist in maintaining order and train safety at HSR stations with help from the Ministry of Transportation and Communications (MOTC) and the Ministry of the Interior. Besides, security companies were also commissioned to assist in maintaining order, equipment and train safety at HSR stations. At the same time, CCTVs were installed in vital maintenance facility rooms or tunnels at all stations along the HSR line, while dedicated personnel was deployed to conduct monitoring. Moreover, THSRC has also established implementation and response plans for disaster prevention and security. For details regarding security management, refer to the subchapter titled “Partner Management and Local Supply” in this report.

Regarding man-made hazardous disasters, in order to ensure the safety of HSR facilities and the public, we have reviewed our standard operating procedures for responding to events that endanger HSR safety, and conducts safety inspections on various scenarios, including at HSR stations, on trains which are parked at stations, and on trains which are traveling between stations. The relevant key prevention points have been included in the planning of drills.

### All-day Monitoring and Safety First - Operational Control Center (OCC)

The command hub for the overall system of THSRC is located in the automated and computerized Operational Control Center (OCC) at the Taoyuan OMC Building, and is equipped with route control, signaling and safety interlock, power control, communication, data transmission or monitoring and warning equipment required for system operation scheduling. In order to monitor the status of operation and night maintenance along the entire HSR line in real time all day long, we have designated controllers specializing in operations and maintenance to serve in OCC, while maintaining close contact with station control centers, depot control centers, and external emergency supporting units, in order to maintain normal system operations and implement passenger safety.

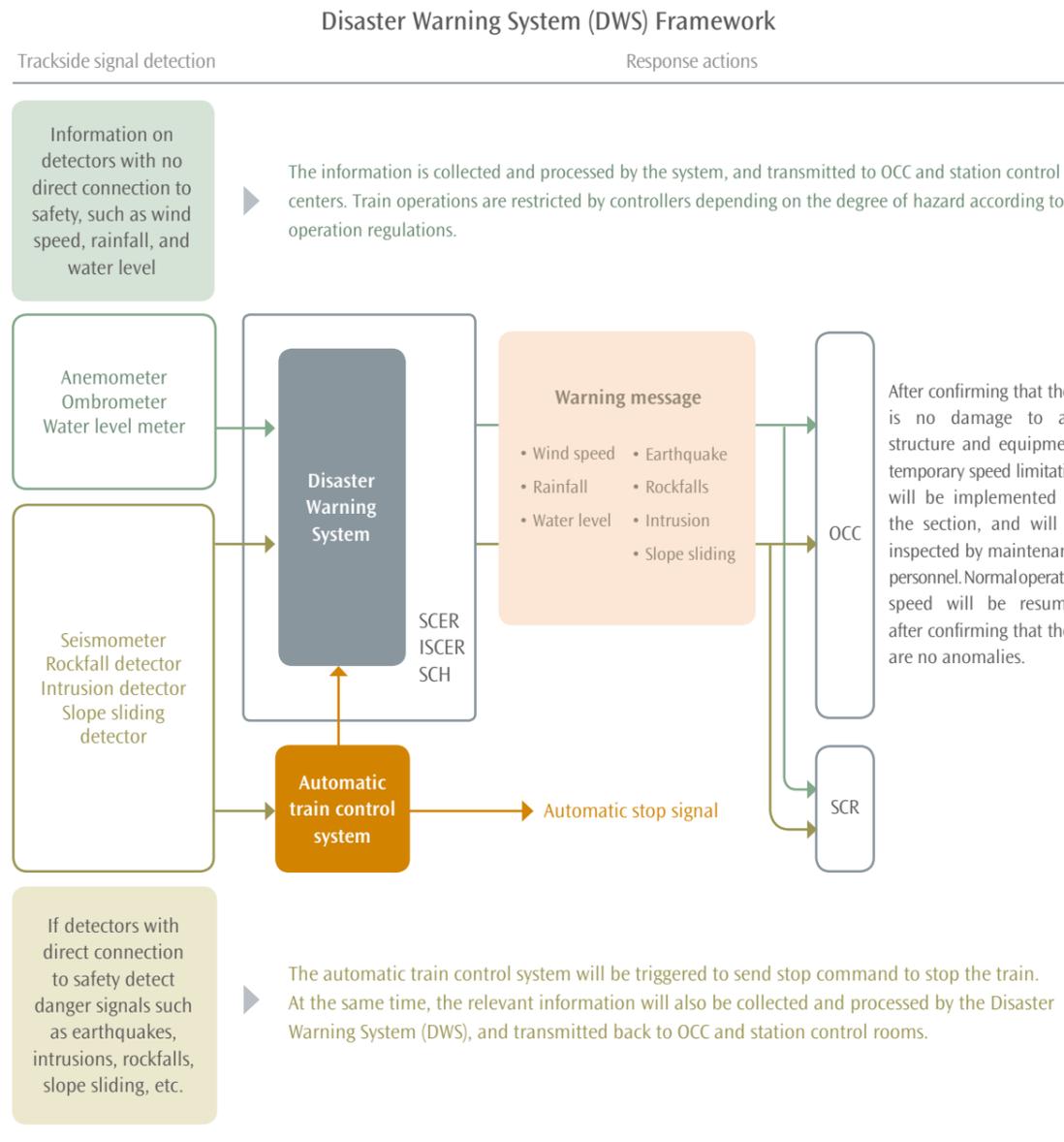
### Real-time Detection and Disaster Prevention - Disaster Warning System (DWS)

THSRC has installed the “Disaster Warning System” (DWS) in train operations along the HSR line, including detection facilities for strong winds, torrential rain, floods, earthquakes, intrusion of foreign bodies, slope sliding, and rockfalls, in order to reduce the threat of natural disasters and external factors to train safety, and prevent such incidents and interruption of operations. If earthquakes, intrusion of foreign bodies, slope sliding, rockfalls, and other danger signals which are directly related to safety are detected, the Automatic Train Control (ATC) System, will be triggered to send a stop command to stop the train, so as to ensure train safety. THSRC continues to improve equipment quality by adding earthquake detectors under the DWS framework to rapidly monitor the range of regional earthquakes in a more accurate manner, and improve earthquake early warning capabilities along the HSR line in order to provide the safest transportation service.

### Disaster Prevention and Response Information System

The THSRC disaster prevention and response information system includes train operation management system, disaster warning information system, real-time disaster investigation system, and disaster prevention geographic information system. The disaster database is usually used to collect disaster information and assist personnel in simulation training. Once a disaster occurs, this database is used as a source of reference for rescue and repair units. In 2018, THSRC's existing disaster prevention and response management mechanism is continuously advanced and enhanced on the existing basis.

#### Operational Control Center (OCC) at THSRC



Note: 1. SCER: Signaling and Communication Equipment Room  
 2. IS CER: Intermediate Signaling and Communication Equipment Room  
 3. SCR: Station Control Room  
 4. SCH: Signaling and Communication Hut

#### Application Process of Geographic Information System for Disaster Prevention

#### Geographic Information System for Disaster Prevention

Meteorological, hydrological, earthquake, debris flow, HSR train, signaling facility room, power system, structural, disaster warning and other information along the entire HSR line are overlapped simultaneously to provide and integrate timely disaster prevention geospatial information and attribute data.

- Disaster response process**

Allow decision-makers to formulate appropriate operational and resource allocation strategies during the disaster response process, thereby facilitating the integration of decision support for disaster prevention.
- Disaster prevention and response**

Provide disaster warning function so that our colleagues are calmer and more able to cope with disaster prevention and response appropriately.

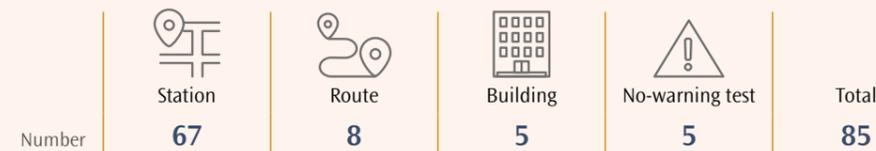
## Safety Training

In order to ensure and enhance operational safety, we continuously refer to domestic and international experiences in various railway incidents and the "Taiwan High Speed Rail Overall Disaster Prevention and Response Plan" approved by the Central Disaster Prevention and Response Council, Executive Yuan, plan and launch various types of disaster prevention training and rescue drills with external supporting units to familiarize with the joint command response mechanism and improve on-site rescue capabilities, and carry out various types of preparations for disaster prevention. In 2018, the operating mechanism for THSRC's disaster prevention and response management is continuously advanced and enhanced based on the existing foundation. A total of 85 disaster prevention drills and training activities were completed in various locations, including stations, depots, and routes.

### Safety Training in 2018

Internal training for site commanders and disaster relief engineers	Disaster prevention and response mechanisms seminar	Disaster prevention drills and training
A total of 60 site commanders and disaster relief engineers completed internal training.	On November 14 and 22, various external supporting units along the HSR line (including firefighters, police, health units, environmental protection units and Northern, Central and Southern medical response centers) were invited to attend the seminar on HSR disaster prevention and response mechanisms. A total of 85 people participated in this seminar.	THSRC invites various external supporting units and emergency shuttle bus transport operators to jointly survey the 184 emergency escape exits along HSR line once every six months, in order to continuously familiarize with the disaster relief routes and emergency escape routes along the HSR line.

### Number of Disaster Prevention Drills and Training Sessions in 2019



### Large-scale Joint Drills and Training Events in 2018

- THSRC held a joint training session for station explosions in the evening of June 7 at Yunlin Station. In addition to mobilizing relevant employees at THSRC to participate in the drill, we also mobilized the Railway Police Bureau, the Yunlin County Police Bureau and the 5th Investigation Brigade, of the Criminal Investigation Bureau, the Fire-Fighting Department, the Public Health Bureau, and the Yunlin Branch of the National Taiwan University Hospital. More than 120 people participated in this drill.

### Photographs of Joint Training Session for Station Explosions



## Smooth Travel in Adherence to Commitment

### Scheduling Policy and Traffic Dispersion

At present, THSRC can provide up to 34 trainsets for operational services. Train schedules are planned to meet travel needs at different time periods. THSRC makes the best attempt to maximize trainsets for passenger transportation, thereby providing maximum operating capacity to meet travel needs via HSR.

### Traffic Dispersion Scheduling Measures

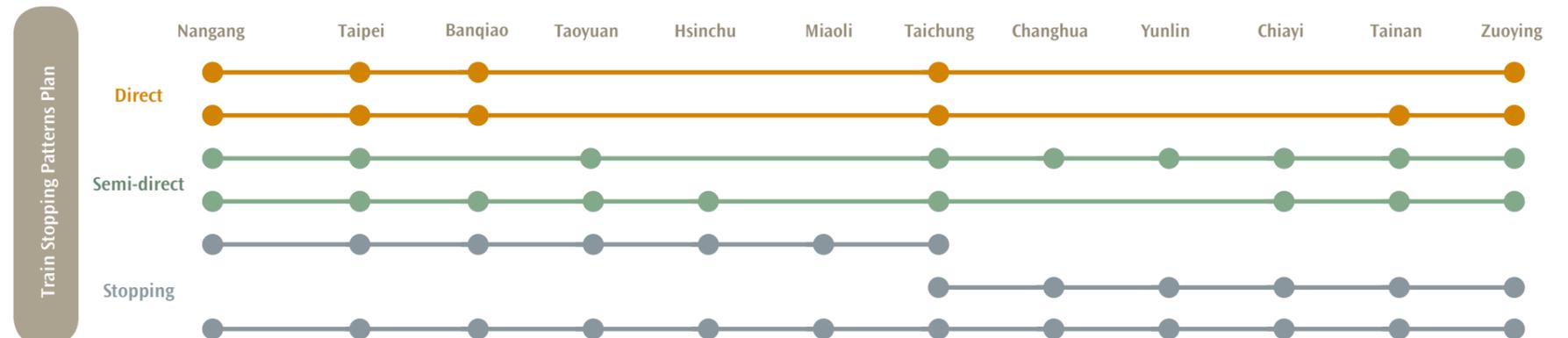
Occurrence period	Traffic dispersion scheduling measure
Weekdays (Mondays to Thursdays)	Temporarily increase the number of trains according to the number of passengers on the current day.
Peak weekend periods (Fridays to Sundays)	Move part of the maintenance operations to weekdays to increase the number of usable trains during holidays, and temporarily increase the number of trains on the current day according to the number of passengers on the current day during the peak weekend period.
Traffic dispersion during long holidays (e.g., Lunar New Year, Tomb-Sweeping Day, etc.)	Control maintenance operations and provide maximum operating capacity to meet transportation demand, and temporarily increase the number of trains according to passenger demand on the current day during the traffic dispersion period for long holidays, in order to disperse large numbers of passengers.

In response to the continuous growth of ridership, as well as to meet travel demand during weekdays, we have added 8 train runs per week (4 southbound train runs and 4 northbound train runs) starting October 8, 2018 upon review of train operation status. These include 4 southbound train runs from Nangang Station in the afternoon and 4 northbound train runs from Zuoying Station in the afternoon. Besides, 2 train runs which were originally added on Fridays and Sundays, have been added from Mondays to Thursdays this year, providing business travelers with more travel options for business purposes on weekdays. A total of 997 train runs were provided every week after the addition of train runs.

In response to the travel needs of long-, medium- and short-haul passengers, HSR train stopping patterns are categorized into three types, namely "direct train," "semi-direct train," and "stopping train." "Direct train" can meet demand for fast and convenient travel among long-haul passengers, whereas "semi-direct train" can closely satisfy demand for travel between different departure and destination stations among medium- and long-haul passengers. On the other hand, "stopping train" can fulfill demand for travel between stations among medium- and short-haul passengers at all stations.

Moreover, in response to travel needs of passengers who transfer from HSR to Taoyuan International Airport, we have also adjusted a total of 12 stops every week starting July 1, 2018, with the previous stop of Banqiao Station being changed to Taoyuan Station in order to strengthen services for passengers who travel to and from Taoyuan International Airport via HSR. THSRC's traffic dispersion plans are drawn up based on rigorous internal procedures, and are implemented after being submitted to the Ministry of Transportation and Communications (MOTC) for reference.

### Train Stopping Patterns Plan



Note: For the latest information on HSR train services, please visit the webpage <http://www.thsrc.com.tw/tw/TimeTable/SearchResult>, or use the search service on the "T Express" mobile app.

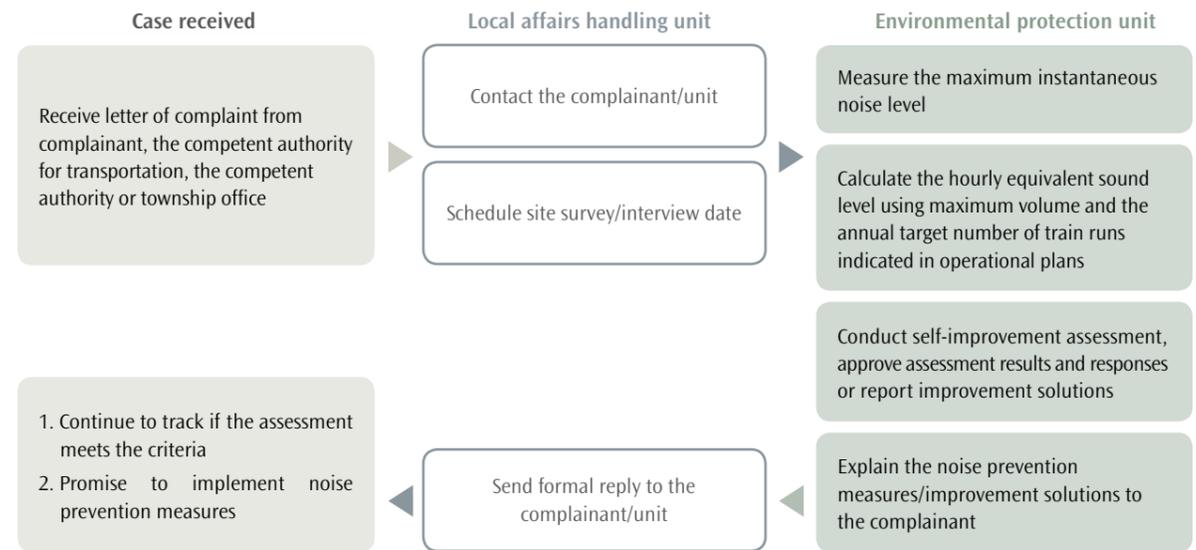
## Sustainability Commitment

### Neighboring Care

We care about the land of Taiwan and the residents along the HSR line. Sales executives at various stations participate in activities from time to time in order to establish communication with local opinion leaders and residents. Facing different needs of community residents, we have established different management regulations and established effective communication and tracking, in hopes of achieving win-win results.

We continue to implement environmental monitoring and environmental protection works through environmental management systems, so that our environmental protection projects comply with the relevant laws and regulations. With regard to the current environmental and noise problems under HSR bridges, which are most frequently reflected by residents along the HSR line, THSRC periodically organizes environments and waterway facilities under these bridges, and implements improvement measures such as installing soundproof doors and windows at homes or building soundproof walls to reduce the impact of noise. At the same time, we have established the “High Speed Rail Noise Improvement Plan” and the “Work Plan for Noise Prevention and Improvement among Sporadic Households along the High Speed Rail Line,” formulated the “High Speed Rail Noise Case Handling Process,” and set up the “Noise Prevention Project Team” to handle improvement needs (of dense settlements or sporadic households) from time to time according to cases, and convene meetings to discuss and decide on improvement solutions (building soundproof walls or installing soundproof doors and windows at homes) and related costs. In 2018, we handled 19 cases of HSR noise problem reported by residents along the HSR line. Except in one case which occurred along Abao Lane at Yuanlin City, Changhua County, there was no need for further noise prevention measures to be implemented and no noise prevention and improvement expenses were required for the remaining cases. In addition, one meeting was convened to handle the noise improvement case of indoor sound insulation along Abao Lane at Yuanlin City, Chuanghua County.

#### Procedures for Handling Noise Petitions



Number of Noise Petitions and Related Handling Statuses in the Three Most Recent Years (2016 to 2018)

Year	Number of cases	Need to be improved	Remarks
2016	23	1	Improved
2017	26	1	The improvement plan was approved by the Department of Environmental Protection, Taoyuan City Government on September 22, 2018. Improvements are expected to be completed in Q1 2021.
2018	19	1	Improved
<b>Total</b>	<b>68</b>	<b>3</b>	





Technology

Innovative Technology

## Technology — Innovative Technology

Management Approach	Subchapter title	Material topic	Management purpose	Management method	Assessment mechanism
Management Approach	Quality Services and Intelligent Transportation	Passenger rights	Continue applying new technologies in order to improve the convenience of ticketing services, the smoothness of ticket purchase channels, and the efficiency of train operations, while deepening customer relationships through digital innovation and strengthening communication.	<ul style="list-style-type: none"> <li>Specify the rights and obligations of both THSRC and passengers through "Passenger Transportation Contract" which complies with regulations related to the Railway Act, and has been submitted to the Ministry of Transportation and Communications (MOTC) for reference, and announced and implemented in public. Handle other unspecified matters involving passenger rights in accordance with the relevant regulations and practices, as well as the principles of equality, reciprocity, honesty, and trust. Establish safety inspection and certification mechanisms for goods sold, and state the relevant specifications in supplier contracts, such as providing inspection reports, examining and accepting goods in accordance with the relevant regulations, and requiring manufacturers to obtain the relevant certifications of products.</li> </ul>	<ul style="list-style-type: none"> <li>Understand customers' experiences and aspects of services that require improvement by conducting an annually customer satisfaction survey, and submit customer feedback to the quality management process at each department and customer feedback review meetings among departments, to facilitate implementation of improvements.</li> </ul>
		Innovative services		<ul style="list-style-type: none"> <li>For medium- and long-term strategic planning, the responsible units are in charge of collecting and evaluating information of communication technologies or products, and provide the relevant information to sales units to implement the application and strategies for innovative services in order to integrate the technical and application aspects of these plans.</li> </ul>	<ul style="list-style-type: none"> <li>Establish the "Origination Process of Business Process Computerization Regulation" and "Acquisition of IT System and System Development Regulation" to ensure that collaborative operations among all units can smoothly promote innovative services.</li> </ul>
	Convenience, Attentiveness and Maintaining Relationships	Transparency of information disclosure		<ul style="list-style-type: none"> <li>Establish the "THSRC Corporate Website and Subwebsites Development Regulation" as the basis for the implementation of real-time updates.</li> </ul>	<ul style="list-style-type: none"> <li>The website management unit completes the webpage information, and arranges online time schedule after the demanding unit has reviewed and confirmed the information via e-mail. Each demanding unit should periodically check the webpage information (at least once a year) to maintain correct and timely information. For webpage contents requiring constant maintenance, apply for background management system operational authority to the website management unit, in order to perform maintenance and maintain webpage contents.</li> </ul>
		Safety management	Provide passengers with safe, convenient, and reliable information services, including the collection, processing or utilizing of passengers personal information, in order to ensure internal and external stakeholders' trust in THSRC's information environment. At the same time, through periodic customer satisfaction survey to learn about customer feedbacks and suggestions to improve service quality and maintain customer relationships. Moreover, through inspecting products sold at HSR stations and on trains to ensure product safety and to protect passenger rights.	<ul style="list-style-type: none"> <li>Establish the ISO 27001 Information Security Management System, and formulate the "Information Security Policy" to supervise our colleagues and vendors in implementing information security protection. Implement regular audit to examine whether the implementation of information security system is up to standards, and evaluate whether each unit performs its information security responsibilities and matters related to the relevant regulations.</li> </ul>	<ul style="list-style-type: none"> <li>Formulate the procedure for the "Plan of Security Measures for Personal Information File," and set up the "Personal Information Protection Implementation Group" to hold regular meetings and conduct regular training sessions on personal information awareness annually and personal information inventory audit twice a year to ensure that internal employees have adequate awareness towards information security.</li> </ul>
		Passenger rights		<ul style="list-style-type: none"> <li>Establish the "Customer Feedback Management Regulation," and set up a dedicated customer response department and a variety of response channels to ensure passengers' opinion and feedback are being fully expressed.</li> </ul>	<ul style="list-style-type: none"> <li>Understand customers' experience and aspects of services for improvement by conducting annually customer satisfaction survey, and submit customer feedback to the quality management process at each department and customer feedback review meetings among departments, to facilitate the implementation of improvements.</li> </ul>

### Quality Services and Intelligent Transportation

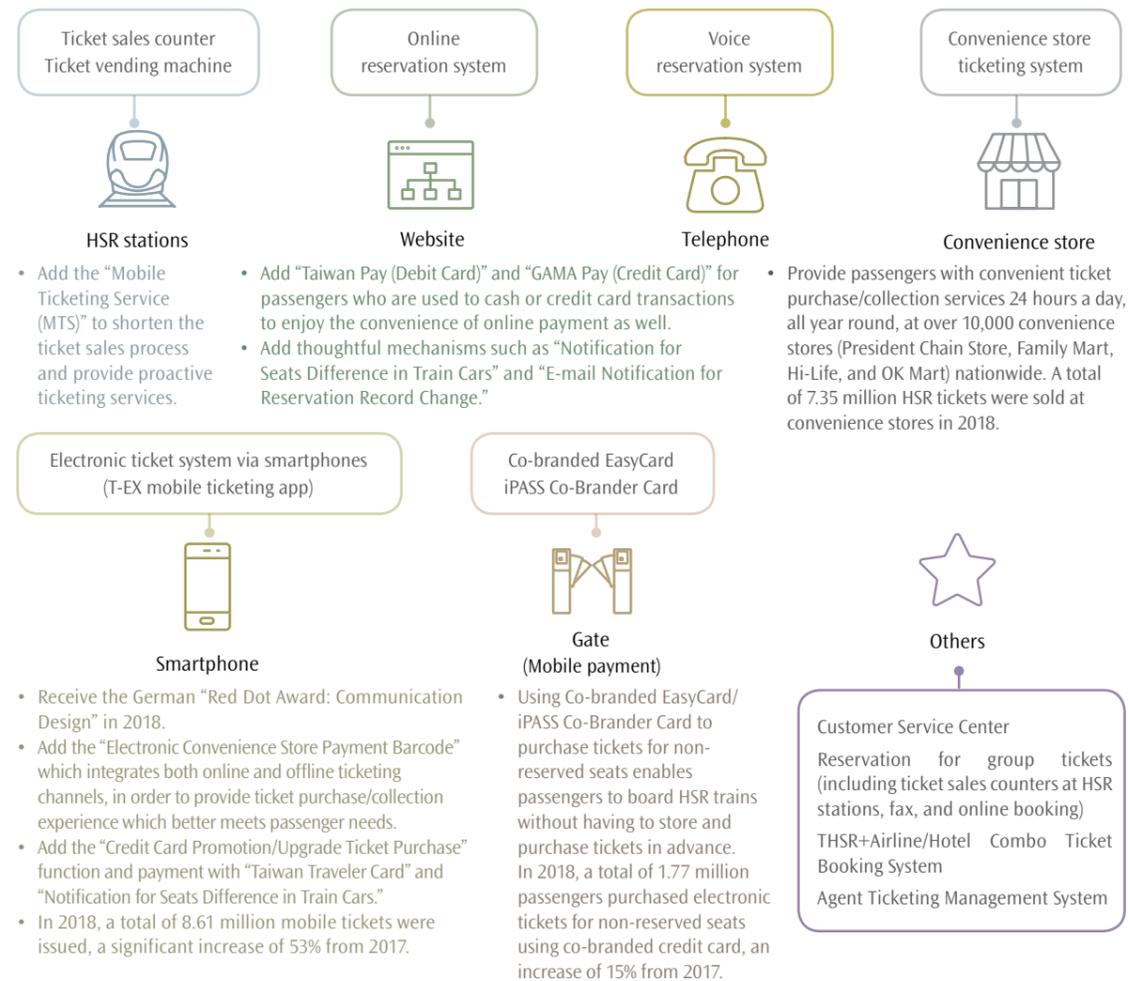
In recent years, in order to implement intelligent transportation, THSRC continues to apply the latest technologies to optimize operational efficiency and service quality. Our outstanding performance has gained high recognition from all parties. Through intelligent transportation technologies, which enables passengers to fully enjoy convenient, comfortable and safety of high-quality services brought by "intelligent transportation" throughout the journey, ranging from ticket reservation, ticket purchasing and boarding to subsequent transit and shuttle services.



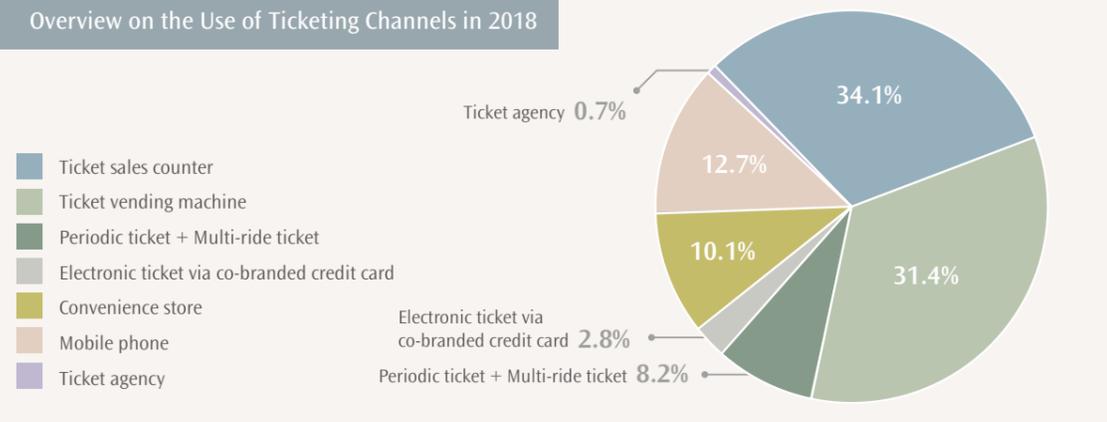
## Ticketing Services

THSRC is committed to expanding ticket sales channels to improve service quality. We not only ensure smooth operations of conventional ticket purchase channels, but also respond to mobile payment and expand payment methods to enhance the convenience of ticketing services. Furthermore, in order to ensure the fairness of ticket purchase transactions, THSRC has introduced mechanisms to prevent bots from snatching huge numbers of tickets. Any abnormal situation found will be dealt with by taking appropriate blocking measures against specific sources. In the near future, THSRC will continue to optimize and set up relevant blocking mechanisms through system monitoring.

### Ticket Purchase Channels



### Overview on the Use of Ticketing Channels in 2018



## Ticket Types and Promotions

THSRC not only actively improve service convenience, but also plans multiple types of tickets base on customer needs. We will continue to maximize our resources through the development and design of ticketing products and services, as well as discounts and promotions, with a view to achieving maximum revenue.

Every year, we review the fares of existing ticket types based on prices approved by the Ministry of Transportation and Communications (MOTC), and report to the MOTC upon discussion and approval by the Board of Directors. In addition to senior and disabled concession tickets and child tickets, as well as discounts for non-reserved seats and group tickets, we also launch a wide variety of marketing programs, products, and services to meet the needs of different passengers. In addition, we implement price control and detailed revenue management by launching product and service designs for different customer groups and time slots while actively expanding customer base. In order to fully communicate the nature of products and ensure passenger rights, we clearly present the content and description of ticket types and discount products, fare discounts, ticket sales channels, changes and cancellation rules, as well as other notices via our corporate website. 🌐

In order to revitalize local tourism, THSRC manages the "Journey with THSR, Discover Taiwan" tourism market and expand its market share through various sales channels, including travel agency, airline/hotel reservation webpages, and our corporate website, along with support systems such as "Add-on Car Rental" and "T Holiday System Platform," 🌐 and using a diverse range of products and collaboration with other industries. For overseas markets, passengers can purchase "Taiwan High Speed Rail Pass" through overseas travel agency using the "Taiwan High Speed Rail Pass" electronic ticketing system, or via online through our corporate website. For more details, please refer to the subchapter titled "Connecting with Local Area." 🌐

## Passenger Services

### Strengthening Customer Relationships with Beautiful Experience

THSRC's mission is to provide customers with the most thoughtful services. We have planned a diverse range of product choices to continuously strengthen and manage customer relationships. THSRC launched the TGo membership program in October 2017, enabling customers to purchase tickets as members and accumulate points to redeem HSR tickets or enjoy discounts. The membership program was a hit among consumers as the cumulative number of registered members reached 800,000 people at the end of 2018. For discounts and rights related to the TGo membership program, visit our corporate website. 🌐

Promotional Visual for the TGo Membership Program



### Innovative, Digital and Real-time Communication

To convey important operational messages in real time, we have installed passenger information displays in the lobby and waiting areas at HSR stations to announce operation information, notices and precautions, as well as promotional videos for HSR service. We have also set up our own Facebook Page to provide the latest product, service or brand information. In 2018, THSRC's Facebook Page garnered 297,000 fans cumulatively, and received a total of 69,000 new fans within the year, while posts reach on THSRC's Facebook Page was 59.52 million people, with 1.97 million interactions on these posts.



With regard to the enhancement of digital communications, THSRC not only offers professional personalized ticketing services through the T-EX App, but also launches the Taiwan High Speed Rail App 🌐, which mainly focuses on multi-functional travel services, to provide customers with more comprehensive digital services. As of the end of December 2018, the Taiwan High Speed Rail app has been downloaded by more than 250,000 times, and registered with over 180,000 TGo members.



In 2018, THSRC was not involved in any non-compliance events, such as penalties, resulted from violation of regulations related to marketing and labeling of products and services.

### High-quality Products with Smart Selling

Since November 2017, THSRC has set up intelligent souvenirs vending machines at seven HSR stations. Not only are these machines equipped with the EasyCard payment function, but inventory of merchandises in these machines are also monitored via remote network to reduce the frequency of inventory replenishment, and reducing carbon emissions resulted from the transportation of goods. In 2018, we moved smart automatic vending machines installed at Banqiao Station to Taichung Station, and installed smart automatic vending machines at Yunlin Station. Furthermore, we have also included the inspection of HSR Themed Souvenirs into the scope of contract, and passed relevant safety inspections and certifications to comply with legal procedures and regulations, to ensure the best protection of passenger rights.

THSRC has also set up automatic vending machines and sold goods from train trolleys on HSR trains to service passengers. On the other hand, the acceptance criteria for goods sold from train trolleys follows company regulations to ensure that the quality and labeling of products comply with the relevant rules and regulations. We require vendors to provide inspection reports based on contracts, as well as examine and accept goods in accordance with regulations, such as products with third-party food inspection reports (e.g., E. coli inspection reports) or have good reputation in the market, excellent quality and no safety concerns. In order to ensure the safety and health of passengers, products sold at HSR stations are controlled according to company regulations. For products that should be inspected or labeled in accordance with requirements set by the competent authority or the relevant laws and regulations, THSRC requires vendors to be responsible for obtaining the relevant certifications for the launch of these products in contracts, to ensure the safety of passengers.

In 2018, THSRC was not involved in any non-compliance events, such as penalties and ban on the sale of controversial products, resulted from violation of health and safety regulations related to products and services. THSRC will continue to strictly protect the safety and health of passengers in the future.



## Passenger Information Services

To reduce passengers' waiting costs and increase tourism benefits, THSRC not only establishes marketing collaboration with local transport operators around each HSR station to provide free shuttle buses, but also collaborates with MRT operators, regional rail transport operators, and regional bus and taxi operators to provide seamless access to and from certain stations. Moreover, in order to provide passengers with smart access and transfer information, HSR stations are also equipped with "Interactive Transfer Information Search Machine" and "Dynamic Bus Information System" for passengers to access relevant information.

## Smart Train Operation Management

Smart transportation not only enhances passengers' travel experience, but also optimizes the management efficiency of train operations. We continue to use the "Train Operation Management Information System" (TOMIS) for effectively integrate information such as train number, travel position, train schedule, etc., in order to provide downstream management needs for involving trainset utilization, HSR routes, and train personnel service. Furthermore, THSRC incorporates data visualization and cross-search functions into various systems, to enhancing the management efficiency of train operations.

In order to further enhance the operational efficiency of train assignment and utilization, in 2018, THSRC developed the "Rolling Stock Scheduling & Utilization Management System" (RSUMS) to integrate and cascade operation schedule and interface required for train assignment. This system can display changes in planned upstream operation schedule in real time. When implementing train assignment, this system will also automatically remove trains under maintenance according to maintenance schedule, in order to effectively reduce manual input operation time, enhance the immediacy of real-time data and digitize records.

## Smooth 4G Communications Along the Entire HSR Line

As HSR travels at a maximum speed of 300 km/h on complex terrains along the entire line, passengers often encounter interruption of mobile network connections while traveling on HSR. In order to improve this scenario and improve the quality of HSR travel, we have overcome construction time constraints and difficulties, and successfully launched 4G networks along the section north of Hsinchu before the Taipei 2017 Universiade, so that international athletes and passengers can enjoy free WiFi services while traveling on HSR. On February 15, 2018, THSRC, along with various government agencies and institutions, five major telecom operators, and first-line construction colleagues, jointly completed the setup of 4G network communications along the entire HSR line, which enables passengers to enjoy free 4G connection at 12 stations and on 408 train compartments along the entire 350 km HSR line throughout the year and all the time, thus achieving our ideal goal of "high speed travel with uninterrupted on-board connection."

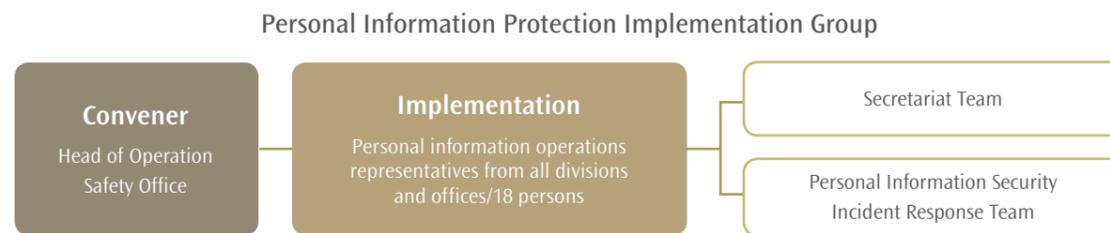
## Convenience, Attentiveness and Maintaining Relationships

### Information Security Management

In addition to provide safety transportation services, THSRC strives to maintain information security. Since the construction period, THSRC has set up an overall information security management system based on the ISO 27001 Management System. We provide passengers with convenient, safe and reliable information services using the Plan-Do-Check-Act (P-D-C-A) cycle operation and successfully passed the ISO 27001 third-party verification in 2018. In addition, we regularly review and publish the "Information Security Policy" so that each employee inculcates awareness of information security into daily operations, continue to enhance internal control mechanisms, and supervise the implementation of information security protection among our colleagues and vendors.

In order to ensure complete protection of personal information, we have formulated the procedure for the "Plan of Security Measures for Personal Information File," and set up the "Personal Information Protection Implementation Group" with regular meetings. Moreover, we regularly organize training sessions on personal information awareness, and perform personal information inventory audit twice per year. To enhance awareness of personal information protection at THSRC, we conduct related training sessions for all employees. In 2018, a total of 4,392 employees attended related training, with 100% completion rate.

As regards customer information protection, THSRC adopts high standards to protect customers' rights and interests. Taking the TGo Membership Program as an example, member information is encrypted before being transmitted, whereas anti-theft mechanism is applied during the transmission process. The system imposes access control based on the business scope of internal units, where certain services can only be accessed using member card number, to effectively reduce the use of information on identity card. On the other hand, strict rules on member information and rights have been established through the "Terms of Use for TGo Membership Service" published on our corporate website. We have also set up the "Personal Information Protection" section on our corporate website, published the "Personal Information Protection Policy" and the "Rights and Interests Regarding Customer Information Protection" to ensure the security of personal information of all customers. In 2018, THSRC received zero customer complaints regarding infringement of customer privacy or loss of customer information.

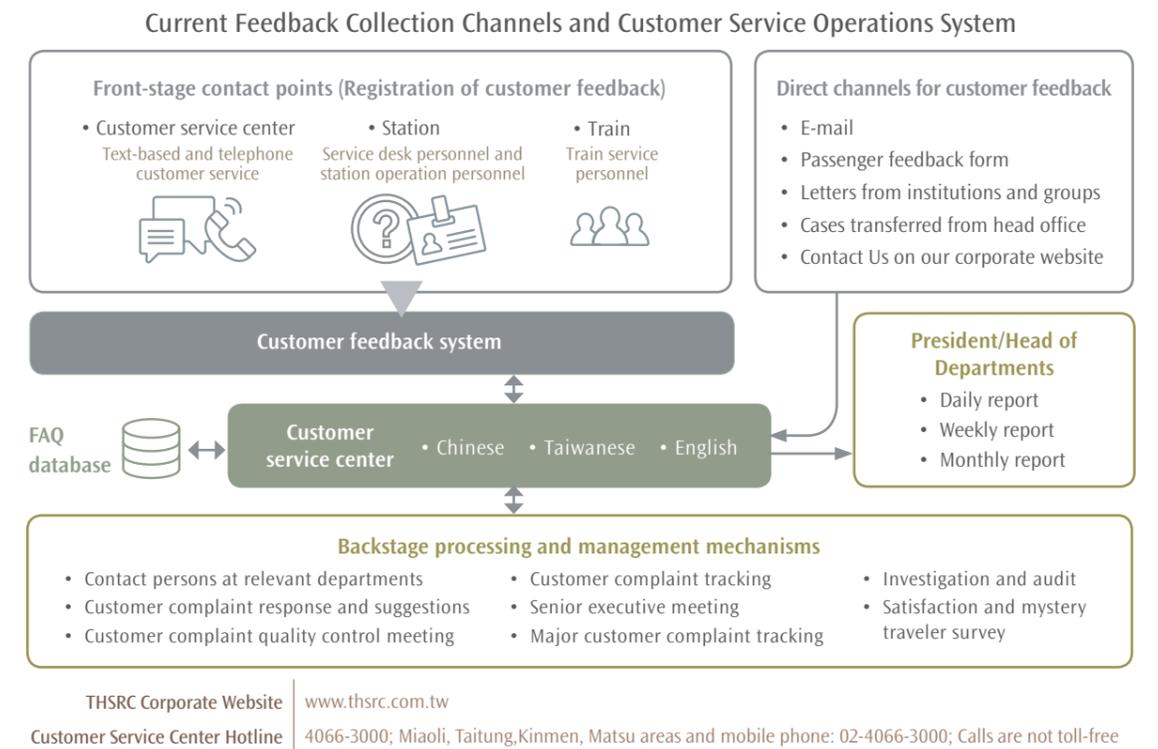


### Implementation of Safety Maintenance Measures

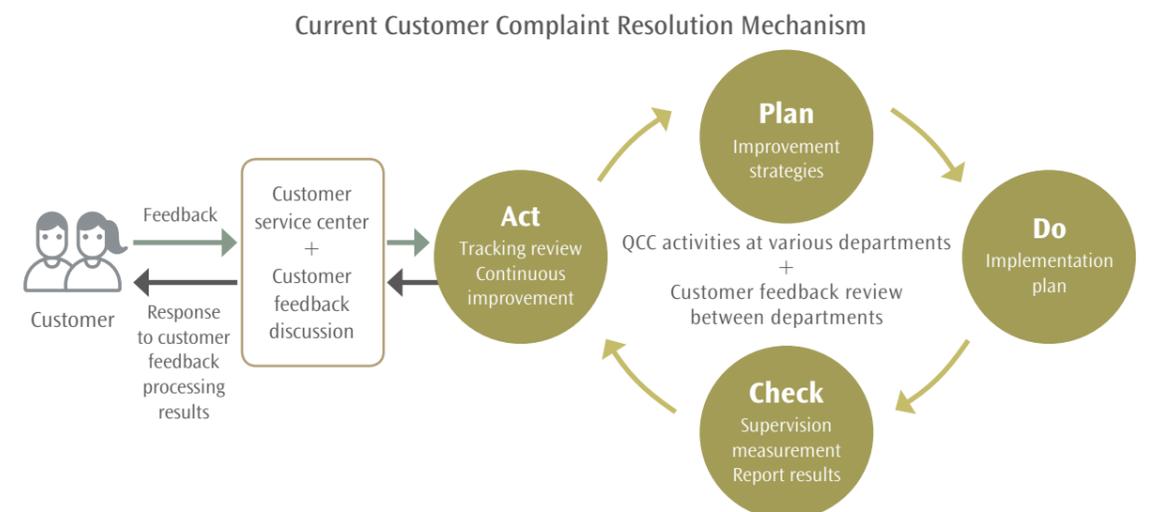
Safety maintenance measures for personal information protection management	Status of implementation
Establish a management organization and allocate considerable resources	Department representatives formed the "Personal Information Protection Implementation Group" (attended by 24 personal information representatives on March 20, 2018)
Define the scope of personal information	Conduct personal information inventory audit twice every year, and update the "Personal Information File Inventory" every year
Risk assessment and management mechanism for personal information	Adopt three-level management based on the level of personal information file security
Accident prevention, notification and response mechanisms	Establish the "Personal Information Security Incident Response Team"
Information security management	Implement control procedures based on three forms, namely written forms, electronic files, and system files
Awareness promotion and training	Conduct annual training for new employees
Equipment safety management	Implement safety protection management on terminal equipment (including personal computers, notebook computers, and mobile devices) and various types of servers according to the relevant regulations at THSRC
Overall continuous improvement of personal information security maintenance	Continuous improvements through audit, regular reviews during meetings, and training

## Customer Relationship Management

THSRC focuses on providing passengers with thoughtful services as its core principle. We have set up a dedicated customer feedback department to manage customer relationships, while listening to customer recommendations to improve overall service quality. In addition, we have also established a diverse range of channels to actively respond to customer feedback. For instance, not only are customer service centers equipped with Chinese and Taiwanese language-speaking personnel, but foreign language-speaking colleagues are also assigned to answer inquiries from international passengers.



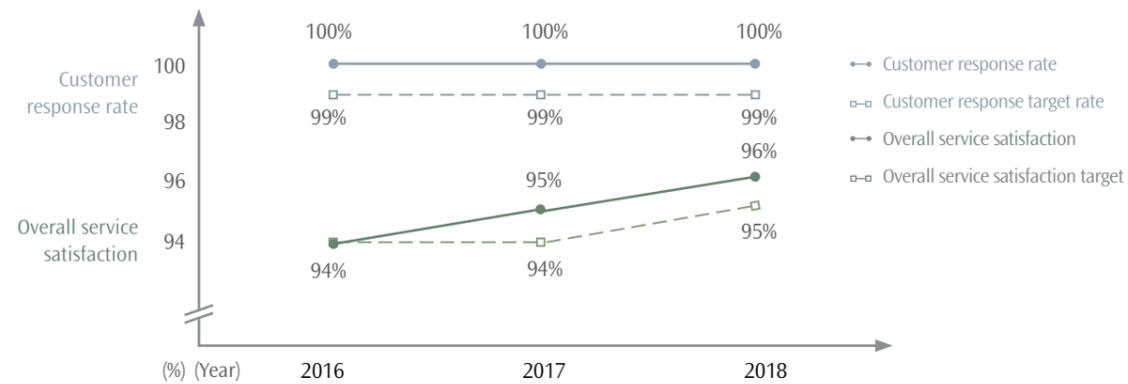
Customer feedback processing is one of the parts we attach great importance to. Continuing our passenger complaint resolution mechanism at THSRC in 2018, we not only provide immediate consolation and attention, but also submit customer feedback to the quality management process at each department and customer feedback review meetings among departments, so as to truly incorporate into management and implement improvements. According to statistics, approximately 790,000 customer inquiries were handled by our customer service centers in 2018, and were mainly about ticketing and discount events.



## Customer Affirmation

Customer service is one of the three cores of quality management at THSRC. We have planned a series of corresponding quantitative key performance indicators and track them every quarter. Since the commencement of operations in 2007, we have commissioned third parties to investigate customer satisfaction every year.

In 2018, our questionnaire survey included four major areas, including “ticketing service,” “train equipment and services,” “station facilities and services,” and “train schedule planning.” According to the statistical results, the overall satisfaction toward THSRC services was 96%.



Year	2016	2017	2018
Number of passenger satisfaction questionnaires collected at HSR stations	1,661	1,674	1,669

Note: 1. Customer response rate = Number of cases responded within seven working days/Total number of cases.  
2. Based on the analysis of satisfaction survey conducted by a consulting firm, our overall satisfaction in 2018 was 96%, which was similar to that in 2017, demonstrating a slight increase in the process.



After conducting customer satisfaction survey, we actively respond to customer needs and truly implement optimization measures to provide customers with the most thoughtful and highest quality of services. The key points for improvement in 2019 include the following:



### 1. Improve the “proactivity of window service personnel for assisting passenger needs and problems” and “overall ticket purchase time at ticket windows, including queuing time”

Station supervisors will strengthen management by walking around, and require colleagues to smile while on duty, express empathy, and take the initiative to understand the needs of passengers.



### 2. Optimize the “stability of online ticket reservation system” and the “ease of reservation system”

The information unit has launched the peak-period offline ticket booking mechanism to improve ticket booking time and system service effectiveness during peak periods. Additionally, in order to continuously enhance the convenience of online ticket booking, we have planned to integrate the interface of the “online general ticket booking” and “college student discount” ticket reservation systems, to satisfy passenger needs.



### 3. Improve the “cleanliness of toilets”

Each station will continuously improve the cleanliness and maintenance of toilets to ensure that quality is maintained at certain level during each period, and improve the level of spatial comfort.



### 4. Increase the “types of stores at HSR stations to meet passenger needs”

Continue to invite businesses to occupy commercial spaces on mezzanine floors at HSR stations and to incorporate other types of business (e.g., take-away light meals), as well as to coordinate with convenience stores to add souvenir items.



### 5. Improve “quietness in train compartments”

Affixed “Please keep quiet on the train” stickers to entrance doors of business class compartments, and will also broadcast announcements to ensure quiet train compartments according to site conditions. At the same time, we also use swinging signboards during selling goods from train trolley in general compartments/business class compartments to remind passengers.



### 6. Improve the “product items sold from train trolleys to meet passenger needs”

Arrange product or combination set promotional events from time to time in order to increase product sales, and continue to increase the number of festive products incorporated with HSR design elements.



### 7. Improve “train schedule planning”

Continue to analyze and assess the condition of passenger rides and congestion, as well as available trainsets as the basis for adjusting train services based on subsequent recommendations.

For more details regarding the quality management implementation framework and actions at THSRC, please refer to the section titled “Safe and Quality Services.”



Taiwan

Enhancing Local Connection

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## Taiwan — Enhancing Local Connection

Management Approach	Subchapter title	Material topic	Management objective	Management method	Assessment mechanism
Glide through Taiwan and Stretch Global Wide		Corporate Image	Transmit THSRC brand image through related travel products, and ensure that all types of passengers, including senior citizens and persons with disabilities can enjoy convenient and smooth travel, transit, and shuttle services at all operating locations, thereby enhancing the connection between THSRC and the public. In addition, to implement organizational business goals through domestic and international exchanges and cooperation plans.	<ul style="list-style-type: none"> <li>In accordance with relevant laws and regulations, construction and operation agreements, “Ticket Price Management Regulation” at THSRC, market conditions, and marketing needs; as well as confirm the content of marketing projects through internal approval, for planning related products.</li> </ul>	<ul style="list-style-type: none"> <li>Track and manage the implementation of each marketing project and achievement of related targets through weekly business meetings, and report the implementation of discount fares from previous year to the Board of Directors during May of each year.</li> </ul>
		Traffic dispersion and transit services		<ul style="list-style-type: none"> <li>Participate in local government traffic dispersion coordination meetings to confirm traffic management plans meet the needs of passengers and HSR stations. Through contractual mechanism, taxi scheduling &amp; planning and addition of express bus services to ensure sufficient supply.</li> <li>Each HSR station is equipped with disability access facilities in accordance with the “Design Specifications of Accessible and Usable Buildings and Facilities,” as well as establish passenger guidance procedures and ensure that personnel complies with regulations during implementation through management and system control.</li> </ul>	<ul style="list-style-type: none"> <li>Assess the effectiveness of transfer services through express bus passenger statistics, taxi scheduling and shortage statistics, as well as customer feedback channels.</li> </ul>
		Operational strategies		<ul style="list-style-type: none"> <li>Establish an industry peer exchange window and an industry-academia research project management platform, as well as seek suitable collaborating units for all development needs and include rail industry promotion board.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct a comprehensive stocktake of potential opportunities for localization of each system, set targets for feasible procurement of local materials and include these targets in the quality key performance indicators, and regularly track and review these targets each month.</li> </ul>
Partner Relationship Management and Local Supply		Supplier management	Establish railway industry localization project to further practice supply chain management policy, to improve the technical capabilities of domestic manufacturers and to avoid joint and several liabilities caused to THSRC and affect corporate image, due to oversight of suppliers.	<ul style="list-style-type: none"> <li>Indicate in each procurement case that suppliers may not violate national laws and regulations, including the Labor Standards Act and environmental protection-related laws.</li> <li>Formulate safety and health policies in procurement cases, and require manufacturers to meet occupational safety and health requirements when performing contracts.</li> <li>Employees of contractors must not only complete training, but also obtain safety certification related to High Speed Rail Operations Regulations (HSROR) before carrying out operations at the workplaces of THSR.</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of procurement process is participated by corresponding auditing units and provide grievance channels, for corresponding personnel to provide assistance to suppliers have any doubts.</li> </ul>

The flow of passengers from northern to southern Taiwan and vice versa has increased significantly due to the establishment of HSR, thus leading to emerge of large numbers of business opportunities. THSRC not only serves as a mode of transportation, but also serves as a platform and catalyst to enable passengers to enjoy the beauty of Taiwan through a diverse range of travel options, and creates diverse values, including economic and social values.

We actively cooperate with the government, research institutes and suppliers to localize the HSR supply chain which can only rely on imports in the past, and plan the relevant verification systems to lead Taiwan’s railway industry chain, thus driving further the development of local economy.

### Glide through Taiwan and Stretch Global Wide

#### Connecting with Local Area

In addition to travel services, THSRC has launched the “Journey with THSR, Discover Taiwan” program in collaboration with the tourism industry by working with local tourism operators to promote travel packages which can be ordered, paid, acquired, and refunded electronically. These packages have not only increased sales volume, but also promoted local economic development and enlivened the tourism industry. To promote travel products related to the “Journey with THSR, Discover Taiwan” program, we have participated in the 2018 Taipei International Travel Fair, and won the attention of the entire fair with the largest booth and the most magnificent design among individual exhibitors. Not only was our booth visited by over 16,000 visitors, but also won the “Best Booth Award” at the fair.

Our travel products can be divided into different areas, including “T Holiday” planned by THSRC and sold through authorized travel agencies, as well as “THSR+Bus/MRT Combo Ticket,” “THSR+Hotel Combo Ticket,” and “THSR+Airline Combo Ticket” which combine travel elements provided by hotels and travel agencies in cities and counties to meet the diverse needs of travelers.

Before the fourth quarter of each year, THSRC plans marketing strategies and product contents for the following year using a variety of themed vacations based on extensive experiences in the tourism industry and keen sense of market preference and trend changes, in order to ensure a lively low season and an even more prosperous peak season, to achieve sales targets. At the same

time, we continue to review current developments and hot topics in the tourism market, and make appropriate adjustments to travel tours in order to effectively stimulate the public’s willingness to travel.

From March to May 2018, THSRC took the lead by launching the “Special Offers For Taipei-Kaohsiung Round Trip” which combines round-trip tickets plus NT\$10 for free accommodation, followed by the “Taipei-Taichung Value Plan” in response to market changes. In line with the Tourism Bureau policies, THSRC has also launched the “Value Deals For THSR City Breaks” and the “T Holiday Taipei ITF Plan,” which have received positive responses from the market. These plans enabled T Holiday to become the key to developing the HSR travel market whose performance has continued to grow outstandingly throughout the year.

As a leading brand in HSR travel, T Holiday endeavor to satisfy every customer group, while continuously creating new horizons and striving for excellence. The parent-child market is a key market of continuous attention to the product team. In addition to launching the Family Vacation For Summer 2019 annually, THSRC also offers other regular products for purchase throughout the year in order to alleviate parent-child travel concerns. On the other hand, the “Fun And Ease Seniors Travel” launched in response to population aging in Taiwan, uses the appeal of “Never too old to play” which enables senior adults to enjoy never aging adolescence.

The “THSR+Hotel Combo Ticket Promotion Plan” launched exclusively in collaboration with many hotels, and the “THSR+BUS/MRT Combo Ticket Promotion: 35% off designated routes” launched in collaboration with “Taiwan Tourist Shuttle” also received a warm response from the market. In 2018, the target number of travelers set by THSRC was 2.5 million passengers, but the actual number of travelers achieved was 2.68 million passengers, with an achievement rate of 107%.



THSRC's booth at the 2018 Taipei International Travel Fair

### Major Travel Products

Self-arranged	Early bird discounts	Group Ticket 25-People Group Travel, School Group Travel, etc.
	THSR+Event Combo Ticket Sport games, art festivals, concerts, etc.	THSR+Bus/MRT Combo Ticket Along with Kaohsiung MRT, Kaohsiung iPASS, Taipei MRT + Double Decker Bus, Tainan iPASS, Taiwan Tourist Shuttle-Kenting, Tainan Anping Trip, Alishan, Sun Moon Lake, Xitou, Jiaoxi, and Dongshan River Route
	THSR+Airline Combo Ticket China Airlines, EVA Air, China Eastern Airlines	
	THSR+Hotel Combo Ticket 169 hotels	
Ticket agency	Group Ticket 25-People Group Travel, School Group Travel, etc.	T Holiday
	Tours organized by travel agency	THSR Pass 3-day Pass and Flexible 2-day Pass
	Joint Pass 5-day Standard Joint Pass and 5-day Express Joint Pass	One-Way Ticket

Through the “Winter Travel to Yilan-Hualien-Taitung and Kaohsiung-Pingtung” subsidy program jointly launched with the Tourism Bureau, Ministry of Transportation and Communications (MOTC) in November 2018, THSRC actively promotes domestic tourism through T Holiday and THSR+Hotel Combo Ticket, thereby creating travel business opportunities involving approximately 20,000 travelers. International travelers can purchase “THSR Pass” on THSRC’s corporate website, or purchase “One-Way Ticket” through Overseas travel agency to flexibly arrange their travel itineraries. We have also traveled to Thailand, Singapore, Malaysia, and Vietnam to promote these services. In November, we collaborated with the Tourism Bureau to launch the “Buy One Get One Free Pass Event for Foreign Travelers,” which provides travelers traveling to the south of Taichung with related discounts. This event is expected to attract approximately 100,000 international travelers, thereby driving business opportunities for related industries in local areas.

### Transfer Service

THSRC offers transit services in collaboration with various modes of public transportation and provides passengers with shuttle services at various operating locations, such as free shuttle bus, TRA train, MRT, public bus/express bus, taxis, parking lots, car rental, as well as pickup and drop-off services for the disabled. Moreover, THSRC has also prepared transit maps at each HSR station and established transit information system, while providing transit information for each HSR station on our corporate website.

#### “Love without Barriers” - THSRC Disability Access Services

In order for senior or disabled passengers to enjoy a smooth HSR rides, we offer passengers guidance service for assisting during the entering HSR stations. In addition, we have also set up ticket purchase services, as well as disability access facilities at HSR stations and on HSR trains, for passengers to enjoy a smooth experience from purchasing tickets to entering HSR stations, getting on HSR trains and leaving HSR stations. Passengers using wheelchairs or with reduced mobility can book wheelchair-accessible seats via our customer service hotline or by visiting ticket windows at HSR stations personally. Each HSR station is equipped with elevators and parking lots to make it convenient for passengers to take HSR rides. THSRC is committed to providing a passenger-friendly and disabled accessible riding environment, and also plans comprehensive service plans so that disabled passengers can also enjoy convenient, warm, and thoughtful travel services, just like other passengers.

### Technical Exchanges

To maintain good interactions with the transportation and railway industries and take into account of business needs, THSRC joined as members of 20 trade organizations and associations in 2018.

#### Technical Visitations

THSRC has accumulated numerous impressive achievements and records along the way. Itinerary for visitations and guided tours that we have organized include visits to HSR stations, maintenance depots, the Operational Control Center (OCC) building and THSR Museum, enabling representatives from the industry, the government and the academia, as well as transport operators from all over the world to learn about THSRC’s operations, services and innovations through observation and study.

In 2018, companies and groups, including Taipei Rapid Transit Corporation, Department of Logistics Management at the National Defense University, Congressional Staff from the United States, West Japan Railway Company, East Japan Railway Company, Japan Railway Company (JR), etc., visited THSRC and we welcomed a total of 46 groups and 630 visitors during that year.



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1. Promotion of the Buy One Get One Free Pass Event for Foreign Travelers
2. “Love without Barriers” - THSRC disability access services
3. Representatives during technical exchanges and visitations in 2018



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## International Exchange Activities

Since 2013, THSRC has continuously cooperated with the Japan Kyushu Railway Company (JR Kyushu) for the “Train Attendant Job Observation and Experience Exchange Program” to learn different passenger service skills through visitations, exchanges, on-train learning and observations during practice, with a view to providing passengers with better services and qualities.

In November 2018, THSRC sent two train masters and three train attendants to attend a 10-day observation learning trip in Kyushu, Japan, while five train attendants from JR Kyushu joined an exchange session in Taiwan during the same year. Besides, the THSRC Operation Control Center (OCC) and the JR Kyushu Hakata General Control Center jointly organized the very first two-way exchange activity, which serves as a good reference for response techniques and operation efficiency in the future operation events.

## Local Industry-Academia Collaboration to Nurture Talents

In order to enhance the understanding of HSR among college students, cultivate talents in the railway industry, and promote interactions and exchanges between the industry and the academia, we have actively launched a number of collaboration projects as explained below:

### ► Cultivating Future Talents — College Student Summer Internship Experience Program

THSRC has long been organizing the “College Student Summer Internship Experience Program,” where a total of 50 station interns were accepted in 2018. These interns acquired a diverse range of knowledge and attended practice courses during the two-month summer internship program.

Moreover, in order to assist students in understanding the railway industry and attract outstanding maintenance professionals, THSRC, along with national universities, jointly launched summer maintenance internship programs since July 2017, enabling students to participate in project planning, integration, and implementation, as well as learning about on-site maintenance procedures. A total of 17 students were accepted into the program in 2018.

### ► Cultivating Future Talents — Academic Year Internship Program

We have established long-term collaboration with numerous technical institutions, such as National Kaohsiung University of Science and Technology, National Taipei University of Technology, Oriental Institute of Technology, etc., to launch and promote the maintenance internship program, assisting a total of 11 students in exploring their future careers in 2018. We have also collaborated with universities in the areas of station operations and services, and provide one-year internship opportunities to final-year students. The main collaborating universities include National Kaohsiung University of Hospitality and Tourism, Overseas Chinese University, China University of Science and Technology, Vanung University, Shu-Te University, Wenzao Ursuline University of Languages, and Chang Jung Christian University. A total of 30 station attendant interns and 20 train attendant interns were accepted into the program in 2018.

### ► Establishing Industry-Academia — Railway Equipment Laboratory

In order to promote technology upgrade in the domestic railway industry, THSRC and National Kaohsiung University of Science and Technology jointly established the Railway Equipment Laboratory in 2015, with over NT\$40 million in research and development funds invested, as well as developed over 26 systems and 4 proprietary instruments, and obtained nearly 20 patents, thus jointly enhancing the industry-academia collaborative capabilities. In addition, THSRC has established a railway-related certification center in line with the university’s plans, thus working together to create a new milestone in the railway industry. In 2018, we actively participated in the “Railway Technical Talent Development Strategic Alliance,” and worked with the Ministry of Transportation and Communications (MOTC), the Ministry of Education, and National Kaohsiung University of Science and Technology to conduct research and development of railway technologies and cultivate professional transport talents. In addition, we are also committed to equipment improvement, localization (including alternative products, commercial sources, verification, research and development, etc.), technological deepening and system development.

### ► Establishing Industry-Academia — Memorandum of Industry-Academia Cooperation

In addition to signing memorandum of cooperation with numerous universities in Taiwan, THSRC has also deepened and enhanced technologies through exchanges, project collaboration, and seminars.



Partner	
National Kaohsiung University of Science and Technology	As of December 2018, THSRC has collaborated with the university in a total of 31 projects related to turnouts, cars, rails, electric power, electric-car lines, etc. In addition, THSRC has worked with the university to run the HSR maintenance internship program, establish the Railway Equipment Laboratory, and conduct Japanese language class and in-service programs.
National Taipei University of Technology	As of December 2018, THSRC has collaborated with the university in a total of five projects related to engineering car positioning and electric power equipment maintenance management. In addition, THSRC has worked with the university to run the HSR maintenance internship program.
Chung Hua University	As of December 2018, THSRC has collaborated with the university in two projects including optimization of electric power demand and analysis of route inspection data.
National Kaohsiung University of Science and Technology and Department of Education, Taipei City Government	THSRC collaborated with both parties to organize the 3rd Railway Vehicle Engineering Learning Camp in July 2018.
National Cheng Kung University	As of December 2018, THSRC collaborated with the university in two projects related to technical assessment of the establishment of station personnel shift scheduling system and inertial track geometry system. In addition, THSRC worked with the university to run the HSR maintenance internship program.

## Partner Relationship Management and Local Supply

Since the official launch of the “Supply Chain Management Policy” in 2017, THSRC has gradually included the requirements required to the environment, society, and corporate governance into management mechanisms, including supplier evaluation, visit and audit, commitment, etc., in hopes of working toward a more sustainable partnership with suppliers and partners. We continue to maintain communication with our partners in the supply chain, and to build a comprehensive supplier management system through review, management, and training mechanisms.

In addition, localized supply is a goal to which we attach great importance in recent years as it not only brings financial benefits to THSRC, but also indirectly helps Taiwan local manufacturers to develop their capabilities in producing high speed rail materials and components of international quality.

### Supply Chain Communication and Requirements

THSRC’s suppliers management require in three aspects, including social, safety and health, and environmental protection. Description is detailed in the table on the following page.

In 2018, THSRC maintained close dealings with 602 property suppliers (mainly comprising equipment, parts, and products sold from train trolleys) and 262 labor service suppliers. All operations are handled in compliance with THSRC’s contract management manual. Before the completion of each contract, we will comprehensively evaluation suppliers’ performance (including work and service quality, quality control and management, safety, schedule, liaison and coordination, cooperative attitude and management capabilities, etc.) in accordance with the contract management principles and precautions specified in the manual. In the event of non-compliance, the involved suppliers will be kept in view and are required to make improvements within the specified time limit, or shall have their supplier qualifications canceled, or are even included in the list of debarred suppliers and have their contracts terminated. For suppliers which fail to win tenders but have passed the qualification review, THSRC has also established detailed information files as a basis for seeking business partners in the future. Implementing the abovementioned management not only can reduce the effects of human factors and demonstrate fairness, but is also able to increase suppliers’ competitiveness and satisfy procurement needs.



### Anti-competitive and Anti-corruption Practices

We attach great importance to anti-competitive practices of manufacturers. In order to enhance the management of ethical practices among suppliers, THSRC has established the “Principles of Handling Unusual Conduct Among Manufacturers,” “Procurement Regulation,” and other related sub-regulations. THSRC also informs suppliers through tender instructions and related tender documentation that possible bid rigging behavior in each case must be reviewed. Besides, THSRC pays attention to bidding behavior which affects the principles of fairness, justice, and transparency in procurement. When necessary, THSRC will require manufacturers to sign an affidavit for tender whose content includes prohibition of bid rigging and recusal due to conflict of interests. Any similar events will be reported to the supervisor, whereas manufacturers are required to provide explanations, so as to give them the opportunity to make clarifications. Manufacturers who are found to commit serious violations in such circumstances may be listed as debarred manufacturers. In order to raise suppliers’ integrity-related awareness, THSRC also specifies anti-corruption policy and procedures in tender instructions to be communicated to suppliers. In 2018, THSRC a total of 1,126 procurement cases, which involved the promotion of anti-corruption policy, through open tender.

### Anti-discriminatory Practice

Anti-discriminatory practice (including discrimination against women, aborigines or members of disadvantaged groups) is an issue that we pay high attention to. Manufacturers who are found to commit serious violations in such circumstances may be listed as debarred manufacturers, and may not participate in THSRC’s tender projects for a specific time period. We also formulate individual contracts for suppliers, which specify that suppliers must pay their employees’ salaries not lower than a certain salary level, as well as provide supporting documents and regularly inspect the implementation of salaries, and stipulate that suppliers maintain good employer-employee relations and handle labor disputes in an appropriate manner. Should there be labor disputes, suppliers shall provide the relevant documents and explanations, and make improvements within the specified time limit.

### Occupational Safety and Health

For all procurement cases, we have established the “Safety and Health Policy” to supervise and manage contractors and suppliers. All units at THSRC shall assess and control safety and health hazards and risks resulted from non-conforming machines, equipment, and materials before requisition, procurement (including leasing), and acceptance, so as to avoid purchasing materials, tools, and equipment that are not eco-friendly or hazardous and dangerous, in order to reduce personnel injury and environmental damage. For tendering of engineering or service contracts, THSRC has listed safety plan as one of the tender documents to be submitted by bidding manufacturers, and requires manufacturers to comply with THSRC’s occupational safety and health requirements, including occupational safety and health regulations such as the “Occupational Safety and Health Management Plan,” “Occupational Safety and Health Management Manual,” and “Occupational Safety & Health Hazard Identification and Risk Assessment Procedure,” while performing such contracts. Furthermore, THSRC sets different targets for suppliers, and adopts periodic or non-periodic inspection and auditing mechanisms for active measurement and supervision to truly implement internal safety and health management mechanisms. We have also established a complete notification system to effectively handle occupational disasters when take place, so as to reduce the negative impact of such disasters. For instance, THSRC has proper management and control mechanisms for deadly disasters involving more than 3 victims, and disasters involving at least 1 victim who also needs to be hospitalized.

In addition to including the appropriate “Occupational Safety and Health Provisions” as one of the attachments to contracts, we also stipulate that employees of contractors must not only complete training related to controlled areas, but also obtain safety certifications related to High Speed Rail Operations Regulations (HSROR certification) before carrying out operations at the workplaces of THSRC. Personnel of suppliers with longer working periods is required to complete retraining and to obtain qualification extension in accordance with the valid period for HSROR qualifications. At the same time, we have also established the “Contract Management Plan” which is applicable to the entire company to facilitate the management of each contract execution unit. THSRC also requires suppliers to provide relevant physical examinations to not only their general employees, but also other dispatched personnel (e.g., student workers, students in the cooperative education program, volunteers, etc.), where this requirement should be implemented accordingly.

## Supplier Chain Communication and Requirements

Aspect	Requirements	Related regulations
 <p>Social</p>	<ol style="list-style-type: none"> <li>1. Personnel of suppliers provide THSRC with contract work in procurement cases cannot be child labor, and may not provide differential treatment or show any form of discrimination due to race, status, language, belief, religion, political affiliation, ethnicity, place of origin, gender, age, marital status, appearance, facial features, disabilities, family status or union membership.</li> <li>2. THSRC requires suppliers to comply with national laws and regulations, including maintaining good employer-employee relations. Should there be labor disputes, suppliers shall provide the relevant documents and explanations, and make improvements within the specified time limit.</li> <li>3. THSRC requires suppliers to pay their employees salaries in compliance with the minimum wage standards stipulated in the relevant laws and regulations in areas where their employees are located, as well as to offer statutory welfare benefits. Suppliers need to provide the relevant supporting documents too.</li> <li>4. THSRC requires suppliers to set working hours and overtime hours for their employees in compliance with the relevant laws and regulations in areas where their employees are located. Suppliers need to provide supporting documents and cooperate with THSRC to conduct regular inspections.</li> <li>5. Suppliers may not engage in bid rigging or other conduct which will affect the fairness of bidding, so as to maintain a normal trading environment.</li> </ol>	<ol style="list-style-type: none"> <li>1. THSRC has established the “Procurement Regulations” and related sub-regulations in accordance with the Employment Service Act and the Labor Standards Act, while specifying related provisions in tender instructions and related tender documents. The “no child labor” requirement is specified as part of work instructions in labor service contracts. Rules and regulations related to basic wages, working hours and overtime hours at THSRC comply with the Labor Standards Act.</li> <li>2. “Security evaluation and management” and “Obligations of Party B” are specified in security contracts and cleaning contracts, respectively.</li> <li>3. Relevant terms and conditions are specified in cleaning contracts. Vendors are required to include service plans in security contracts. Work instructions are specified in some manpower service contracts.</li> <li>4. Bid rigging and other conduct are included in tender instructions and related tender documents. Improper benefits are specified in the main text of contracts.</li> </ol>
 <p>Safety and Health</p>	<ol style="list-style-type: none"> <li>1. THSRC requires personnel of suppliers to not only complete training, but also obtain safety certifications related to High Speed Rail Operations Regulations (HSROR certification) before carrying out operations at THSRC’s controlled areas. Personnel of suppliers with longer working periods is required to complete retraining and obtain qualification extension in accordance with the valid period for HSROR qualifications.</li> <li>2. THSRC stipulates that the “Occupational Safety and Health Act” shall be included as one of the attachments to contracts for contractors which have to enter THSRC’s workplaces. Before officially commencing work, contractors shall propose safety and health management plans, which shall at least include organizational structure and responsibilities for safety and health management, safety and health facility planning for hazard and risk control, pre-service safety meeting or toolbox meeting, autonomous management and audit and tracking improvement systems, as the basis for autonomous safety and health management for contractors.</li> <li>3. THSRC requires all suppliers to manage and report hazardous chemicals in accordance with “THSR’s Chemicals Management Regulations” to implement the requirements of the “Regulations for the Labeling and Hazard Communication of Hazardous Chemicals,” “Implementation Regulations Governing Labor Environmental Monitoring,” “Regulations Governing Assessment and Grading of Hazardous Chemicals,” and “Regulations Governing Designation and Operation Permit Management for Controlled Chemicals” set forth by the Ministry of Labor.</li> <li>4. All units at THSRC shall assess and control safety and health hazards and risks resulted from non-conforming machines, equipment, and materials before requisition, procurement (including leasing) and acceptance. THSRC specifies the safety and health requirements for high-risk machines, equipment, materials or labor services identified through risk assessment as the basis for procurement and acceptance.</li> <li>5. THSRC requires personnel of suppliers to implement contract works in accordance with THSRC’s “Regulations Governing Occupational Safety and Health Management for Transportation Maintenance” and related regulations when conducting operations at THSRC’s workplaces, and has established the relevant penal provisions.</li> <li>6. THSRC requires suppliers to provide relevant physical fitness/health examinations and occupational safety and health training to not only their general employees, but also other dispatched personnel (e.g., student workers, students in the cooperative education program, volunteers, etc.).</li> <li>7. THSRC requires that different targets are set for suppliers, and adopts periodic or non-periodic inspection and auditing mechanisms for active measurement and supervision to truly implement internal safety and health management mechanisms. Besides, THSRC has established a complete notification system to effectively handle occupational disasters when they take place, so as to reduce the negative impact of such disasters.</li> <li>8. THSRC has completed the establishment of an electronic “occupational safety and health management system for contractors” to control and inspect operations at all stages when contractors enter and leave work sites, as well as evaluate and compile overall safety and health requirements for contractors according to work progress, in order to enhance the promotion of autonomous safety management by the relevant units and contractors and serve as the basis for re-selecting contractors.</li> </ol>	<ol style="list-style-type: none"> <li>1. THSRC has established the “Provisions for Approval of Entry into Controlled Areas (HSROR Qualification).”</li> <li>2. THSRC has established occupational safety and health regulations, such as “Occupational Safety and Health Management Plan,” “Occupational Safety and Health Management Manual,” “Occupational Safety &amp; Health Hazard Identification and Risk Assessment Procedure,” and “Regulations Governing Occupational Safety and Health Management for Transportation Maintenance,” as well as attaches the “Occupational Safety and Health Terms and Conditions” and forms to tender documents for use during the actual performance of contracts.</li> <li>3. THSRC has established the “THSR’s Chemicals Management Regulations.”</li> </ol>
 <p>Environmental protection</p>	<ol style="list-style-type: none"> <li>1. With regard to supply contracts for paper products, such as photocopy paper, sanitary, cleaning, and dormitory supplies, THSRC requires suppliers to products with the green mark.</li> <li>2. THSRC requires suppliers to comply with environmental protection laws and regulations during operations, and carry out treatment of waste produced in operations via legal processing procedures. In response to the government’s environmental protection policy, THSRC prioritizes the purchase of products which have less impact on the environment, in order to realize green consumption.</li> <li>3. THSRC requires all vendors to comply with reasonable and feasible environmental management procedures when undertaking all construction works, operations or activities related to THSRC.</li> <li>4. For works at each relevant unit that are commissioned to suppliers or contractors, these suppliers or contractors shall be required to conduct automatic inspection of environmental protection measures to supervise whether their employees have truly carried out works according to the relevant requirements. Such inspection results and improvement measures and results shall be recorded and submitted to the contract management unit for reference.</li> </ol>	<ol style="list-style-type: none"> <li>1. THSRC has established the “Procurement Regulations” and related sub-regulations, while specifying related provisions in tender instructions and related tender documentation.</li> <li>2. THSRC has established the management regulations in the “Environmental Management Manual,” and announced the relevant regulations on our internal website.</li> </ol>

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## Chemicals Management

THSRC requires all suppliers to truly manage and report hazardous chemicals in accordance with the "THSRC's Chemicals Management Regulations" to implement the requirements of the "Regulations for the Labeling and Hazard Communication of Hazardous Chemicals," "Implementation Regulations Governing Labor Environmental Monitoring," "Regulations Governing Assessment and Grading of Hazardous Chemicals," and "Regulations Governing Designating and Handling of Priority Management Chemicals" set forth by the Ministry of Labor.

## Environmental Protection

In the aspect of environmental protection, THSRC requires suppliers to comply with environmental protection laws and regulations during operations, and carry out treatment of waste produced in operations via legal processing procedures. Moreover, THSRC prioritizes the purchase of products which have less impact on the environment, such as products with the green mark, the energy label, the water label or the green building label. For details regarding related contents, refer to the subchapter titled "Low-Carbon Rail Transport, and Environmental Sustainability." 🌐

## Security Policy and Training

THSRC hires external professional security companies to take charge of security services and have established security policy to clearly stipulate the duties of security personnel, including maintaining order at stations and on trains, ensuring passenger safety, and maintaining safe train operations. Concerning service implementation, in addition to carrying out various security and safety checks, and observing suspicious items and events in surrounding areas, THSRC has also developed a customer-focused and service-oriented attitude to maintain service quality. Any unlawful events will be dealt with in cooperation with police officers and handed in accordance with the law. Furthermore, we regularly conduct bimonthly meetings with security companies to ensure that security personnel can implement our security policy while on duty.

To avoid infringing the human rights of passengers or third parties, security personnel not only needs to receive professional training, such as patrol techniques, arrest techniques combined with boxing or self-defense techniques, investigation of abnormal records and incidents, but also has to attend legal training related to personal security and arrest of offenders, as well as customer service etiquette training.

THSRC attaches great importance to the quality of security personnel. When signing a contract with a security company, THSRC requires the company to provide information regarding complete education and training received by its security personnel in compliance with THSRC's requirements and regulations, including legal, safety inspections, human rights, and service attitude while on duty. In 2018, all the security personnel underwent the relevant courses.

### Security Personnel Training Content



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| <ul style="list-style-type: none"> <li>— Customer service etiquette training</li> <li>— Security equipment/system operation and emergency notification training</li> <li>— THSRC-related safety regulations and disaster prevention training</li> </ul> | <ul style="list-style-type: none"> <li>— Traffic control and patrol technique training</li> <li>— Legal training related to personal security and arrest of offenders, in order to avoid infringing the human rights of passengers or third parties</li> <li>— Basic training on the identification of suspicious packages and bomb threats training</li> </ul> |
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## Localized Supply Chain

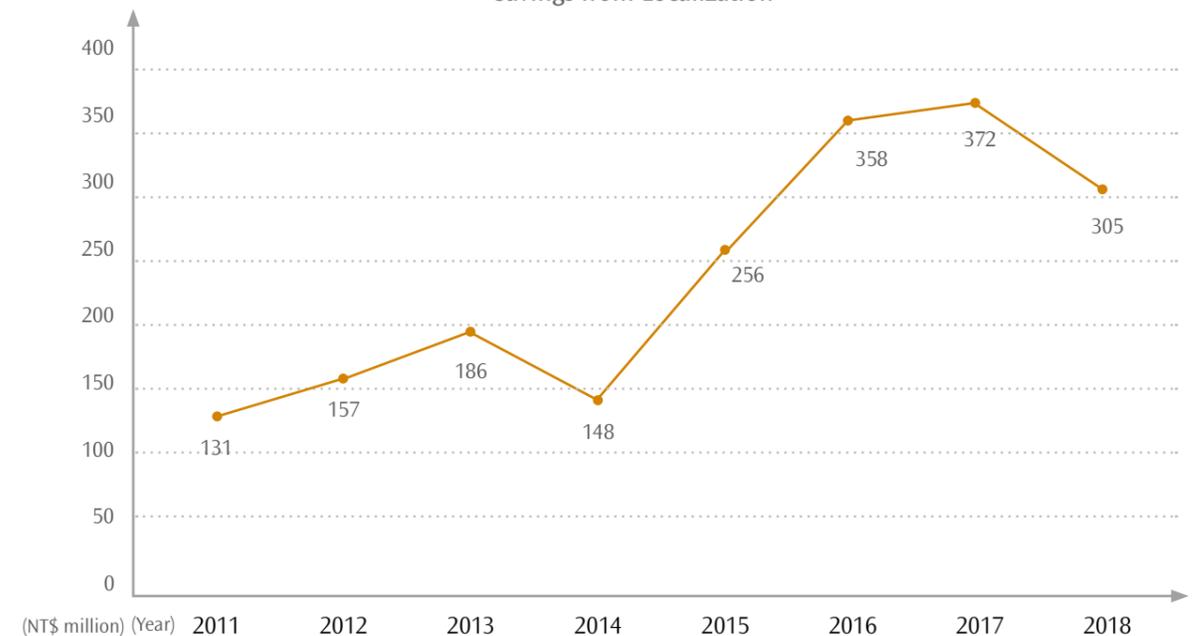
With a view to maintaining high-quality train safety, as well as taking into consideration the need for shortening material preparation and delivery lead time and reducing procurement costs, THSRC implements the development and procurement of local materials in accordance with the "Alternative Sourcing and Verification Process," which is able to develop local suppliers, and also reduce reliance on supply of materials from overseas suppliers.

Through collaboration with top research institutes in Taiwan (e.g., National Chung-Shan Institute of Science and Technology, Industrial Technology Research Institute, Plastic Testing Centre, Metal Industries Research and Development Centre, etc.), we assist qualified local suppliers in HSR material preparation and development, as well as technology transfer during the development process. In addition to accelerating the local development and procurement of HSR maintenance materials, gradually reducing our reliance on overseas procurement and international shipments to reduce component costs and risks, simplify inventory management, increase cost-effectiveness, and reduce response time during emergencies, such operations can also increase the local railway industry standards, thereby fulfilling the corporate responsibilities of supporting local industries and reducing carbon emissions from transportation.

Apart from the results above, THSRC also engages in the development of alternative materials, which helps enhance the corporate image and technical capabilities of collaborating manufacturers, as well as assists manufacturers in applying for the International Railway Industry Standard (IRIS) quality system certification based on the performance of collaboration, thereby expanding local railway industry chain to the international stage and eventually increasing the international exposure and competitiveness of the industry. Such a win-win partnership has successfully attracted the participation of related local industries.

To search for local alternative materials, we actively visit Taiwan manufacturers to ensure that the quality of the materials comply with our specifications. In 2018, we visited local suppliers 267 times, and completed 42 alternative material development cases. From 2011 to 2018, there have been a total of 96 alternative materials-developing manufacturers, with a saving up to NT\$1.913 billion.

Savings from Localization



Other than visiting manufacturers, THSRC also actively participates in railway industry business opportunity fairs and sets up booths in such events, so as to explain our methods of promoting localization of the railway industry and related business opportunities to potential local buyers. Examples of such events are listed as follows:

- Participated in the “2018 Railway System Maintenance Procurement Sources Information Session” organized by the Taiwan Railways Administration at the Fugang Vehicle Depot on May 18, 2018.
- Set up a booth in the railway system maintenance procurement zone in the “Investment Solicitation Convention” on October 16, 2018.

Furthermore, in order to implement the railway industry localization policy, from September 2017 until September 2018, THSRC collaborated with the Industrial Technology Research Institute to develop and localize the “Railway Inspection Scooter” using our national research and development capabilities, in hopes of achieving the production of “electric driven, light weighted, and intelligentized” railway inspection scooters and related equipment, thus enhancing the functions and disaster investigation efficiency of inspection carriers, and facilitating nationalized and local warranty.

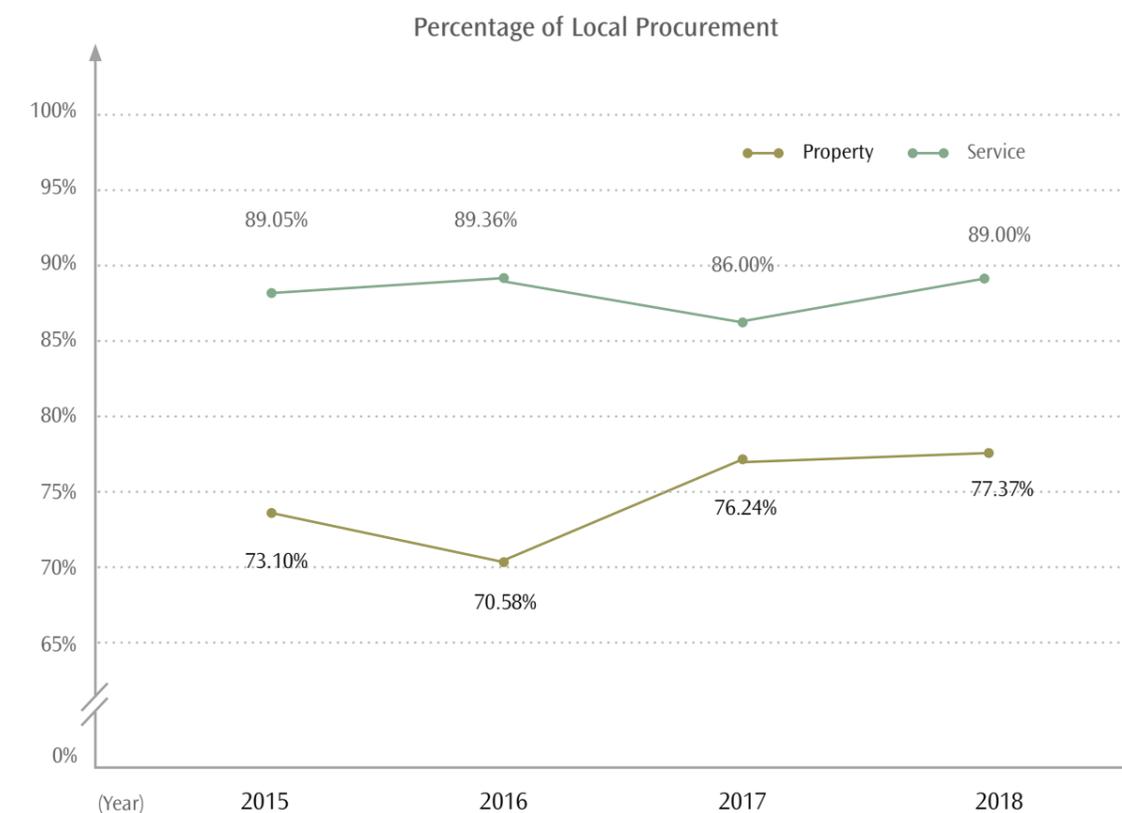


Launching Ceremony



Display Machine

THSRC actively works with local suppliers for service and property procurement. In 2018, the total amount of property procurement conducted by THSRC was approximately NT\$2.4 billion, where the amount of procurement from local suppliers accounted for 77.37% of the total amount. In addition, the proportion of local property procurement in the three most recent years has exceeded 70%. On the other hand, the amount of service procurement in 2018 exceeded NT\$5.8 billion, where 89% came from local service procurement.



### ► Localization of THSR

To support local small and medium businesses and promote products made from local raw materials, THSRC promote local businesses to set up HSR markets or local product stores with lower rents at Taoyuan Station, Miaoli Station, Taichung Station, Changhua Station, and Yunlin Station. In 2018, HSR markets were set up in Tainan Station, Zuoying Station, and Hsinchu Station so that passengers can purchase locally made products. We are committed to creating job opportunities for local small and medium businesses. Every month, approximately 80 service salespersons help to generate a total revenue of NT12 million for local small businesses.





Touch

Sustainable Care

# Touch — Sustainable Care

	Subchapter title	Material topic	Management objective	Management method	Assessment mechanism
Management Approach	Sustainable Governance and Ethical Corporate Management	Corporate governance	Enhance various corporate governance-related measures and legal compliance systems to ensure the sustainable operation of THSRC and reduce the risk of violating of laws and regulations.	<ul style="list-style-type: none"> <li>Establish the “Corporate Governance Promotion Committee,” overseen by the Chairman and chaired by the President, whereas executives from managerial departments serve as members of this committee. This committee regularly reports to the Board of Directors regarding the overall promotion and implementation of corporate governance at THSRC every year. Establish the “Articles of Incorporation,” “Guidelines for Corporate Governance,” “Code of Ethical Conduct,” and “Code of Conduct.”</li> </ul>	<ul style="list-style-type: none"> <li>Establish the “Regulation of Self-Evaluation of the Board of Directors,” and implement internal self-assessment of the Board of Directors at the end of each year in accordance with this regulation. In addition, conduct external assessment at least once every three years.</li> <li>Participate in the Corporate Governance Evaluation organized by Taiwan Stock Exchange Corporation, and also undergo external assessment. Regularly convene meetings for review and implementation based on internal and external assessment results.</li> </ul>
		Legal Compliance		<ul style="list-style-type: none"> <li>Implement self-assessment annually based on internal control systems, and verify the status of legal compliance at THSRC upon review of relevant procedures.</li> <li>Establish legal compliance promotion plan, and keep abreast of changes in regulations accordance with management regulations to effectively improve compliance awareness and control the status of legal compliance at each unit.</li> </ul>	<ul style="list-style-type: none"> <li>Regularly compile and manage penalty cases, and require penalized units to report the status of handling such cases and improvement measures during compliance meetings.</li> </ul>
	Nurturing Talent and Value Cultivation	Talent placement and development	Recruit suitable personnel in a timely manner based on business needs and manpower planning to ensure the knowledge, attitude, and skills of recruited employees meet job requirements.	<ul style="list-style-type: none"> <li>Establish “Employees Recruitment Regulation” and career planning for non-management positions.</li> </ul>	<ul style="list-style-type: none"> <li>Review monthly whether recruitment operations meet planning and unit needs during the management reports and manpower budget review meetings.</li> </ul>
		Protection of labor rights	Create a healthy and friendly workplace by establishing multiple grievance channels, ensuring the physical and mental health of employees, and reducing workplace hazards, with a safe, equal and high-quality work environment.	<ul style="list-style-type: none"> <li>Ensure the basic labor conditions for employees are protected and communication mechanisms are implemented through different forms of meetings, such as departmental meetings, Town Hall meeting, conservation over tea and Be There with the Chairman Forum.</li> <li>Regularly convene labor-management meeting. Report any changes in labor representatives to the competent authority for reference in accordance with the law.</li> <li>THSRC set up Labor Union for discussing on various issues at to maintain a well establish labor-management relationship.</li> <li>Establish and implement the “Grievance Regulation” for employees to effectively implement management policies and maintain harmonious employee relations.</li> <li>Ensure the physical and mental safety and protection during work environment. Enhance the prevention and awareness of sexual harassment incidents among employees in accordance with the Act of Gender Equality in Employment and the “Regulations for Establishing Measures of Prevention, Correction, Complaint and Punishment of Sexual Harassment at Workplace.”</li> </ul>	<ul style="list-style-type: none"> <li>Inspect relevant rules and regulations annually according to implementation status, and require the responsible units to arrange for amendment of the relevant regulations if necessary.</li> </ul>
	Protection of Rights and Considerate Care	Safety management		<ul style="list-style-type: none"> <li>Establish safety and health policies, and occupation disaster notification process, as well as regularly convene occupation safety and health committee meetings.</li> </ul>	<ul style="list-style-type: none"> <li>Set occupational safety and health goals for employees, as well as measure and monitor quantifiable and traceable indicators.</li> </ul>
		Employee care		<ul style="list-style-type: none"> <li>Establish the “Mental Health Protection Regulation” and “Sexual Harassment Prevention and Handling Regulation” (including grievance and reporting process), as well as conduct multi-faceted mental health talks/training courses for employees, regularly impart mental health knowledge through electronic bulletin boards, or promote grievance and reporting mechanisms for employee mental health protection at various settings such as new employee training.</li> </ul>	<ul style="list-style-type: none"> <li>Regularly inspect grievance and reporting mechanisms for employee mental health protection, as well as feedback on mental health talks and training courses, to understand employee needs and develop relevant plans based on these needs.</li> </ul>
	Carrying for Society and Developing Local Area	Corporate image	Implement relevant social projects while enhancing corporate image, in order to achieve THSRC’s corporate vision of “to be the platform for advancement and enjoyment.”	<ul style="list-style-type: none"> <li>Establish the “Public Relations Activity Execution Regulation.”</li> </ul>	<ul style="list-style-type: none"> <li>Responsible personnel tracks the implementation results of project activities fill out the result assessment form, include implementation status, implementation results and current gap analysis or implementation review, as well as submit the form, upon completion, to the Head of Public Affairs Office for review.</li> </ul>

# Sustainable Governance and Ethical Corporate Management

## Corporate Governance Framework

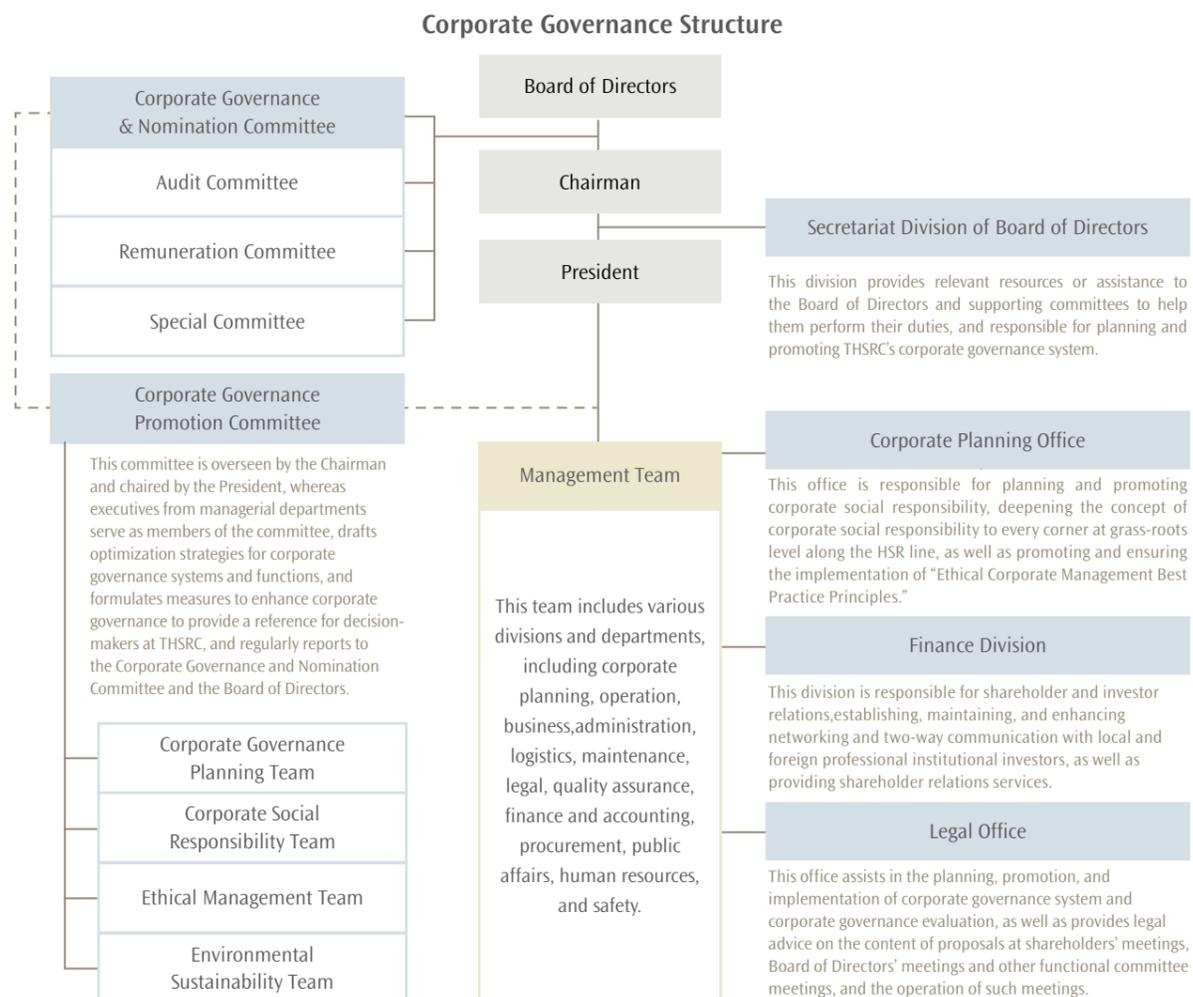
The corporate governance system is the cornerstone of a company's sustainable management. We comply with the relevant laws and regulations in Taiwan, and continue to review and improve our "Guidelines for Corporate Governance"  by referring to domestic and international standards, in order to drive a good corporate governance system, and implement the guidance outline of various governance measures.

In addition to having independent directors in place as specified in the Articles of Incorporation, THSRC has established functional committees, such as the Corporate Governance & Nomination Committee, Audit Committee, Remuneration Committee, and Special Committee under the Board of Directors. Moreover, THSRC also revises or amends the relevant chapters and regulations . Specific results are currently shown in the following: functional committees have a duty of pre-assessment, independent directors exercise their independence and professionalism, and the management fully implements corporate governance and gradually enhances information disclosure.

THSRC participated in the 4<sup>th</sup> TWSE Corporate Governance Evaluation in 2017, one year after being publicly listed and was ranked among the top 5% of publicly listed companies. Additionally, we were awarded with an "Excellent" certification by the Taiwan Corporate Governance Association under their CG6011 (2017) corporate governance evaluations on June 26, 2018. To stabilize company operations and increase investor and stakeholder confidence, we will not only focus on the continuous fulfillment of functions by functional committees and independent directors, but also continue to inspect the basic corporate governance framework and various corporate governance mechanisms in adherence to the principles of enterprise autonomy, thereby setting THSRC as a benchmark for corporate governance.

For more details regarding corporate governance, please refer to THSRC's annual reports , THSRC's corporate website  and the Market Observation Post System (MOPS) .

## Organizational Structure



## Information on Members of Governance Organization

At present, the Board of Directors consists of 13 members (including 3 independent directors) who specialize in areas such as transportation, financial management and legal affairs, and are able to ensure the professionalism and objectivity of Board resolutions.

Members of the 8<sup>th</sup> Board of Directors was elected in the Annual General Meeting on May 24, 2017, and took office on the same day for a term of three years till May 23, 2020.

Title	Name	Date elected
Chairman	Representative: <b>Chiang, Yao-Chung</b> China Aviation Development Foundation	May 24, 2017
Director	Representative: <b>Liu, Ming-Ching</b> Ministry of Transportation and Communications, R.O.C.	September 21, 2017
Director	Representative: <b>Huang, Mao-Hsiung</b> TECO Electric & Machinery Co., Ltd.	May 24, 2017
Director	Representative: <b>Liu, Kuo-Chih</b> Taipei Fubon Commercial Bank Co., Ltd.	May 24, 2017
Director	Representative: <b>Tsai, Huang-Liang</b> China Aviation Development Foundation	May 24, 2017
Director	Representative: <b>Wang, Shyi-Chin</b> China Steel Corporation	January 3, 2019
Former Director	Representative: <b>Wong, Chao-Tung</b> China Steel Corporation	March 31, 2018 (Retired on January 3, 2019)
Former Director	Representative: <b>Liu, Jih-Gang</b> China Steel Corporation	May 24, 2017 (Retired on March 31, 2018)
Director	Representative: <b>Chiang, Chin-Shan</b> TSRC Corporation	May 24, 2017
Director	Representative: <b>Kwan, Tao-I</b> Taiwan Sugar Corporation	May 24, 2017
Director	Representative: <b>Kao, Shien-Quey</b> Management Committee of National Development Fund, Executive Yuan	May 24, 2017
Director	Representative: <b>Ko, Lee-Ching</b> Evergreen Steel Corporation	May 24, 2017
Independent Director	<b>Ding, Kung-Wha</b>	May 24, 2017
Independent Director	<b>Chiu, Kenneth Huang-Chuan</b>	May 24, 2017
Independent Director	<b>Poo, David Da-Wei</b>	May 24, 2017

Note: 1. 77% of the Board members (10 members) were males, whereas 23% (3 members) were females. On the other hand, 31% of the Board members (4 members) were aged at least 50 years old and under 60 years old, whereas 69% (9 members) were aged at least 60 years old.

2. For more details regarding members of the Board of Directors, refer to our annual reports .

## Responsibilities of Governance Organizations

The Board of Directors is mainly responsible for formulating major financial, business, and operational decisions, and supervising the performance of duties by the management. The duties of the Board of Directors include reviewing various important rules and regulations, business plans, budget accounts and important businesses of which contents are complex, hence these duties are not listed down one by one here. Major resolutions by the Board of Directors are announced and disclosed on MOPS in accordance with the rules and regulations. Each functional committee has a duty of pre-assessment, whereas independent directors exercise their independence and professionalism, which helps to enhance the quality and professionalism of Board of Directors' discussions.

According to THSRC's Corporate Governance Guidelines, the Board of Directors meets at least once every two months. In 2018, the Board of Directors convened 15 meetings, for details regarding directors' attendance, please refer to page 56 of our annual report.

## Functional Committees

	Economic	Environmental	Social	Certain discussion topics in 2018	
<b>Economic</b>	Financial and management issues				
<b>Environmental</b>	Energy saving, and carbon reduction, renewable energy generation, waste disposal, ecological conservation, etc.				
<b>Social</b>	donations, charity activities, ethics and anti-corruption, community communication, labor rights issues, employee education and welfare, customer safety and health, etc.				
	<b>Economic</b>	<b>Environmental</b>	<b>Social</b>	<b>Certain discussion topics in 2018</b>	
<b>Corporate Governance &amp; Nomination Committee</b>	<ol style="list-style-type: none"> <li>Verify the qualifications of independent directors and the composition of the Board of Directors and committees</li> <li>Responsible for the nomination of directors, as well as the planning and assessment of potential director candidates</li> <li>Review the performance of duties by all directors and supervisors, and the liability insurance for directors and managers</li> <li>Responsible for the research and analysis, implementation, planning recommendations and effectiveness review of corporate governance system, as well as corporate governance regulations</li> </ol>			<ul style="list-style-type: none"> <li>Report on the implementation of corporate governance</li> <li>Report on the review of THSRC's information disclosure system</li> <li>Report on research and analysis, implementation, and planning recommendations of THSRC's corporate governance system</li> </ul>	
<b>Audit Committee</b>	<ol style="list-style-type: none"> <li>Formulate or amend procedures for handling internal control systems and significant financial practices in accordance with the Securities and Exchange Act</li> <li>Review matters involving directors' own interests</li> <li>Review major asset and derivative trading, loaning of funds, and provision of endorsements or guarantees</li> <li>Review public offering, issuance or private placement of equity securities</li> <li>Review annual, semi-annual, first quarter and third quarter financial statements</li> <li>Assess company risk management policies, metrics and compliance</li> </ol>				<ul style="list-style-type: none"> <li>Perform self-assessment of internal control system results</li> <li>Amend THSRC's "Code of Ethical Conduct"</li> <li>Formulate THSRC's "Regulations for Management of the Prevention of Insider Trading"</li> <li>Formulate THSRC's "Regulation of Related Party Transaction"</li> <li>Suggestions on the procurement strategy of THSRC's "leasing of station space to energy suppliers for the establishment of solar power system"</li> <li>Proposal for "Taiwan High Speed Rail Opening Year of Arts" collaboration project</li> <li>Procurement for THSRC's "Early Earthquake Warning System"</li> </ul>
<b>Remuneration Committee</b>	<ol style="list-style-type: none"> <li>Establish and regularly review policies, systems, standards, and structures of performance evaluation, salary and remuneration for directors and managers</li> <li>Regularly assess and formulate salary and remuneration for directors and managers</li> </ol>				<ul style="list-style-type: none"> <li>Proposal for salary adjustment</li> <li>Suggestions on the distribution of employee and director compensation</li> <li>Performance goal setting and evaluation result reporting for managers</li> <li>Suggestion on the distribution of performance bonus at THSRC</li> <li>Suggestions on THSRC's practices after the implementation of amendments to the Labor Standards Act</li> </ul>
<b>Special Committee</b>	<ol style="list-style-type: none"> <li>Provide counsel and suggestions on major legal or contractual disputes and important institutional changes as approved by the Board of Directors, and assist the Board of Directors in supervising functional managers to implement related decisions</li> <li>Supervise procurement proposals that shall be made to the Board of Directors by functional managers, in accordance with regulations.</li> <li>Other duties as stipulated in the Articles of Incorporation, "Corporate Governance Guidelines," or the resolutions of Board of Directors</li> </ol>				<ul style="list-style-type: none"> <li>Suggestions on procurement strategy for THSRC's localization of OCS maintenance vehicle project.</li> <li>THSRC's promotion of maintenance localization</li> <li>THSRC's report on crowd alleviation and operating capacity improvement measures for peak periods</li> <li>THSRC's promotion of the development of OEM commercial sources</li> </ul>

For details regarding the operations of each functional committee, please refer to the section titled "Operations of Functional Committees" on our corporate website. 

## Corporate Governance Promotion Committee

THSRC adheres to the spirit of "Go Extra Mile" and the belief of "corporate sustainability," as well as regards social responsibility as our core value. Under the guidance of the "Corporate Social Responsibility Best Practice Principles" approved by the Board of Directors in March 2016, we have included aspects such as corporate governance, sustainable environment, social welfare, information disclosure, and communication into our operational strategies and management objectives, in order to actively implement corporate social responsibility. In September 2018, the merger of the original Corporate Governance Project Team and the Corporate Social Responsibility Committee to form the "Corporate Governance Promotion Committee" was approved by the Board of Directors. The corporate governance planning team, corporate social responsibility team, ethical management team, and environmental sustainability team have been established under this committee. This committee is overseen by the Chairman and chaired by the President, whereas executives from managerial departments serve as members of the committee. It drafts optimization strategies for corporate governance systems and functions, formulates measures to enhance corporate governance, and evaluate corporate social responsibility policy to provide a reference for decision-makers at THSRC. Every year, it reports the overall promotion and implementation of corporate governance to the Board of Directors. For details regarding its implementation, refer to the section titled "Corporate Governance Framework" on our corporate website. 

## Management Principles

THSRC's five core values are "Discipline," "Integrity," "Efficiency," "Innovation," and "Sensibility." To practice the spirit of transparent governance, THSRC has established the relevant regulations as follows:

Rules and regulations	Description
<b>Ethical Corporate Management Best Practice Principles</b> 	<ul style="list-style-type: none"> <li>These principles took effect upon approval by the Board of Directors in March 2016, and were reported to the shareholders' meeting.</li> <li>They have been listed to facilitate fair business conduct, and the relevant whistleblowing system will also ensure that staffs comply with these principles and supervise each other.</li> </ul>
<b>Code of Ethical Conduct</b> 	<ul style="list-style-type: none"> <li>This code was first reviewed by the Audit Committee, and approved by the Board of Directors before it was announced and implemented.</li> <li>It is applicable to directors, managers, supervisors at all levels and other employees.</li> <li>This code guides personnel's conduct to comply with ethical standards, and prompts stakeholders to ensure that our personnel is aware of the ethical standards they should comply with when performing their duties. It also specifies confidentiality obligations, prohibition of insider trading, prevention of conflict of interests, as well as prohibition of gifts, bribery or improper interests.</li> <li>In the event that an employee violates this code, he/she shall receive punishment depending on the severity of violation in accordance with the relevant rules and regulations. The same shall also apply to unit supervisors who are aware of such violation but fail to correct the employee or handle the violation in accordance with THSRC's rules and regulations.</li> <li>In the event that a director or a manager among supervisors at all levels is found to have committed serious violation of this code, we will promptly disclose information, including his/her position and name, the violation date, the cause of violation, the rules violated and the handling status, on MOPS.</li> </ul>
<b>Code of Conduct</b>	<ul style="list-style-type: none"> <li>The Human Resource Division is responsible for establishing this code. This code took effect upon approval by the President, and is applicable to all employees at THSRC.</li> <li>It clearly states a colleague who discovers that he/she is involved in the violation of this code or reasonably suspect that other colleagues or units with which he/she has dealings, is involved in the violation of this code, shall be obliged to file a whistleblowing report by presenting the relevant supporting information.</li> </ul>

In order to raise anti-corruption awareness at THSRC and enhance our ability to combat corruption, THSRC deepens the adoption of ethical management among all employees through education and training. As of 2018, a cumulative total of 4,473 existing employees have received anti-corruption policy training, accounting for 100% of all employees. In addition, the number of participants and training hours in ethical management-related training sessions held in 2018 are listed as followed page:

- **Two** members of the Board of Directors received anti-corruption policy communication and training, accounting for **15%** of all members of the Board of Directors.
- A total of **279** new employees received anti-corruption training, accounting for **6.24%** of all employees.
- A total of **4,362** participants received ethical management training, which was conducted for all employees, and ran for a total of **727** hours.
- A total of **4,400** participants received insider trading prevention training, which ran for a total of **733** hours.
- A total of **113** participants attended a corporate ethical management course, which was conducted for senior executives and general employees, and ran for a total of **170** hours.

### Education and Training Related to Ethical Management

Rank	Number of trainees	Percentage of trainees to total number of employees	Class hours
Vice President and above	9	0.2	9
Assistant Vice President	18	0.4	18
Manager and Deputy Manager	221	4.9	221
Section Chief	588	13.1	588
General employees	3637	81.4	3637
Total	4473	100	4473

Adhering to the spirit of ethical management, we comprehensively manage compliance with laws and regulations, as well as indicative rules in THSRC's regulations through the "Promotion Plan for Legal Compliance," in order to ensure that our employees truly comply with the relevant rules and regulations. For details regarding the "Promotion Plan for Legal Compliance," please refer to the paragraph titled "Legal Compliance" on the right.

As regards the grievance mechanism for ethical management, grievances are accepted via THSRC's spokesperson mailbox, while the phone number is 02-87892000 ext.72710 and email address is Spokesman\_MBOX@thsrc.com.tw. Internal employees who feel that their legitimate rights have been violated can send their grievances via email to our internal grievance mailbox: helpme@thsrc.com.tw. We also offer related training, in hopes that all employees can adopt a righteous work attitude. The mechanisms above are also applicable to grievances related to social aspects.

Moreover, in order to implement ethical management policy and actively prevent non-ethical conduct, THSRC has established the "Regulation of Whistle-Blowing System for Unlawful, Unethical Conduct and Dishonesty Behavior," and accepts reports regarding violations of THSRC's "Code of Ethical Conduct" and "Ethical Corporate Management Best Practice Principles" or non-compliance with regulations and other internal rules filed by internal and external stakeholders, including shareholders, investors, directors, managers, and employees. Whistleblowing reports can be filed to THSRC's Corporate Audit Office via the following methods:

Hotline: 02-8725-1188  
 Fax: 02-8725-1189  
 Email address: ethics\_MBOX@thsrc.com.tw  
 Mailing address: 13th Floor, No. 66, Jingmao 2nd Road, Nangang District, Taipei City 11568

We internalize our corporate values in our rules and regulations, and implement ethical management in every section through our internal management mechanism. As of 2018, there were no penalties imposed on the relevant units due to major violations related to corruption and no related grievance cases.

### Legal Compliance

All employees at THSRC shall truly carry out their duties in compliance with the laws and regulations, as well as THSRC's rules and regulations, which has already been stipulated in the Articles of Incorporation, "Corporate Governance Guidelines," "Code of Ethical Conduct," and "Employee Code of Conduct." Every year, we ensure the achievement of legal compliance targets based on the self-assessment results for internal control system and review of related procedures.

Since 2016, we have enhanced our legal compliance system and reduce our compliance risks through the "Promotion Plan for Legal Compliance," which key points include: formulating policies, implementing a sound legal compliance system framework, short-, medium- and long-term goals and division of responsibilities, regulatory inventory and change management mechanisms, and legal compliance reporting framework. In addition, we are committed to raising awareness of legal compliance at all units, keep abreast of changes in laws and regulations in accordance with management regulations, and effectively control our legal compliance status.

In addition, THSRC includes the implementation results of legal compliance system into our internal control system for self-assessment every year, such that each unit assesses compliance risks and implementation effectiveness, in order to maintain a comprehensive legal compliance system. In 2018, the average risk level at each unit was medium to high, and implementation effectiveness at each unit was 4 to 5 (based on a scale of 1 to 5 for self-assessed effectiveness). Meanwhile, the implementation results of legal compliance system were examined by supervisors at each unit in accordance with our internal control review mechanism. Upon review by the Corporate Audit Office, the results were submitted to the Audit Committee and the Board of Directors for further review and approval in February 2019. The status of legal compliance at THSRC in 2018 is explained as follows:

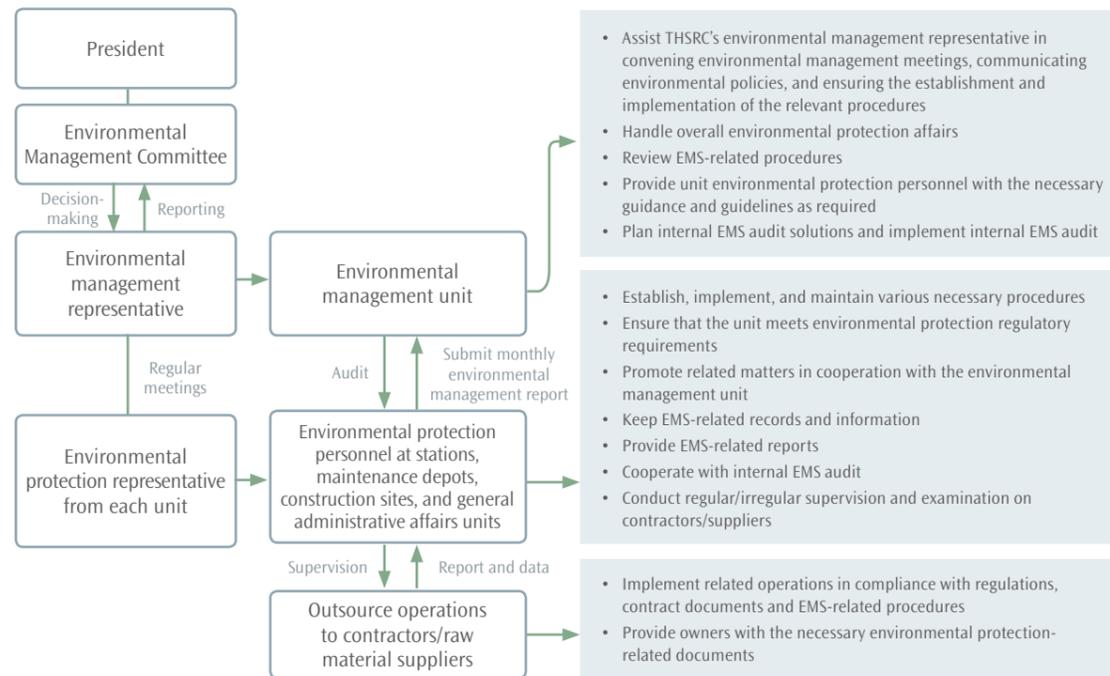
- Important laws and regulatory orders related to the construction and operation of HSR: In 2018, there were no violation of the following important laws and regulatory orders, including the Railway Act, the Statute for Encouragement of Private Participation in Transportation Infrastructure Projects, the Act for Promotion of Private Participation in Infrastructure Projects, and the Fair Trade Act.
- Important laws and regulatory orders related to public companies: In 2018, there were no violation of the following important regulations and regulatory orders, including the Company Act, the Securities and Exchange Act, as well as regulatory orders related to information disclosure and corporate governance of public companies.
- For important laws and regulatory orders related to economic and social aspects, including the Act for Promotion of Private Participation in Infrastructure Projects, as well as regulations related to environment protection, labor, disaster prevention, and consumer protection, THSRC has paid fines for the following penalty/punishment cases, completed improvements on these violations, and enhanced related management measures. However, these cases did not have a significant impact on THSRC's overall operations:
  - In 2018, the National Taxation Bureau of Taipei imposed a fine of NT\$750 on THSRC arising from one case of violation of Paragraph 3 of Article 89 and Article 111 of the Income Tax Act due to our failure to file the non-withholding tax statement before the expiration of the filing deadline. Based on THSRC's improvement solution, our financial unit will adjust processes for temporary business payments and employee payments in the future to examine statements and file them accordingly.
  - On the other hand, the National Taxation Bureau of Taipei imposed a fine of NT\$1,500 on THSRC arising from one case of violation of Article 48 of the Value-added and Non-value-added Business Tax Act due to recording errors in the issuance of uniform invoice when selling lunchboxes from train trolleys. We have paid these fines and made improvements. Moreover, our financial unit has promptly informed the station management unit to clarify the problem and come up with improvement solutions, continuously track and report whether there were errors in the issuance of uniform invoices at various operating bases, and tool the necessary reporting and guiding measures.
  - The Directorate General of Highways, Ministry of Transportation and Communications (MOTC) imposed a fine of NT\$150,000 on THSRC's contractor arising from one case of violation of Paragraph 2 of Article 72 of the Highway Act due to the contractor's failure to maintain traffic according to the permitted construction plan, which led to personnel casualties. In addition to convening a review meeting to investigate and analyze the root cause of the accident, THSRC has also conducted two batches of hydraulic aerial cage training sessions to raise safety awareness. On the other hand, we have also strengthened contractor management measures, such as on-site command, examination items, operator qualifications and inspection frequency for hydraulic aerial cages.
  - Laws and regulatory related to environmental aspect: In 2018, there were no violations of important laws and regulatory orders, including the Environmental Impact Assessment Act, the Soil and Water Conservation Act, the Water Pollution Control Act, the Air Pollution Control Act, the Noise Control Act, and the Waste Disposal Act.

# Low-Carbon Train Operation and Environmental Sustainability

## Transportation and Environment

To improve the efficiency of green transportation services, as well as create a green living circle and a sustainable environment with low-carbon transportation, we promote care for the environment in many aspects through the advantages of HSR, including high traffic volume, fast speed, and low pollution. THSRC has established an environmental management system, including formulating environmental policies, establishing environmental management organizations, assessing related goals and implementation strategies, in order to implement overall environmental protection from construction to operation. In addition, we also accept relevant reviews and measurements from government agencies, such as the Ministry of Transportation and Communications and the Environmental Protection Administration, and formulate measures related to the reduction of environmental impact according to assessment results.

### Operation and Responsibilities of Environmental Management Organizations



Note: 1. The Environmental Management Committee will be established according to actual management needs. At present, this committee is still in the preparation and assessment stage. The President is directly responsible for the responsibilities of this committee before it is established.  
 2. EMS: Environmental Management System

To examine the implementation effectiveness of environmental management, we perform internal environmental quality management audit according to the "Management System Internal Audit Regulation," which scope covers all maintenance depots and stations. A total of seven audits were implemented in 2018, and seven audits are expected to be performed in 2019. In addition, we track compliance with environmental regulations, as well as goal setting and achievement through the "Monthly Environmental Management Report" submitted by each unit every month. On the other hand, external inspections of wastewater and waste treatment implementation are carried out by local environmental protection units. In 2018, our total expenditure on environmental protection was NT\$63,056,000. For details regarding noise prevention, please refer to the section titled "Sustainability Commitment" under the chapter titled "Transportation."

### Environmental Protection Expenditure in 2018

Environmental protection measure	Environmental impact assessment and monitoring Including Miaoli Station, Changhua Station, and Yunlin Station	Environmental protection research Including Jacana conservation, greenhouse gas inventory, and noise research and improvement plan	Environmental pollution prevention Wastewater and waste treatment operation and maintenance at stations and maintenance depots	Total
Expenditure in 2018 (Unit: NT\$ thousands)	2,928	3,469	56,659	63,056

To protect the environment and sustainable ecological development, as well as due to climate change, we have formulated short-, medium-, and long-term environmental management goals and strategies as follows based on three winning principles of "safety and comfort, environmental protection, carbon reduction and energy conservation":

	Short-term till 2018	Medium-term till 2020	Long-term till 2022
Goal	<p><b>Environmental management</b></p> <ul style="list-style-type: none"> <li>Comply with environmental protection and environment impact assessment regulatory requirements.</li> <li>Conduct training for environmental protection personnel.</li> <li>Promote the ISO 14001 Environmental Management System.</li> </ul> <p><b>Ecological conservation</b></p> <ul style="list-style-type: none"> <li>Carry out Jacana conservation work in Guantian, Tainan.</li> </ul> <p><b>Waste management</b></p> <ul style="list-style-type: none"> <li>Strengthen waste reduction, implement waste sorting, and actively recycle resources and waste.</li> </ul>	<p><b>Energy management</b></p> <ul style="list-style-type: none"> <li>Promote energy conservation and carbon reduction measures at stations and maintenance depots, and set the annual electricity saving rate at greater than 0.86% as our energy conservation target using the average electricity consumption per passenger at stations (excluding public areas with TRA) and depots as an indicator.</li> </ul> <p><b>Water resource management</b></p> <ul style="list-style-type: none"> <li>Strengthen water conservation measures at stations and maintenance depots, and set the annual water saving rate at greater than 3.42% as our water conservation target using the average water consumption per passenger as an indicator.</li> </ul> <p><b>Greenhouse gas management</b></p> <ul style="list-style-type: none"> <li>Perform the greenhouse gas inventory audit and verification in THSRC's operations, disclose information on greenhouse gas emissions in THSRC's operations, and formulate emission reduction targets and priorities.</li> </ul> <p><b>Environmental protection</b></p> <ul style="list-style-type: none"> <li>Ensure that all environmental management units at THSRC successfully obtain the ISO 14001 Environmental Management System certification. (Note)</li> </ul> <p><b>Waste management</b></p> <ul style="list-style-type: none"> <li>Continue to strengthen waste reduction, implement waste sorting, and actively recycle resources and waste.</li> </ul>	<p><b>Greenhouse gas management</b></p> <ul style="list-style-type: none"> <li>Set the annual carbon reduction rate at greater than 1.5% as our carbon emission target using the amount of carbon dioxide emission per passenger-kilometer as an indicator.</li> </ul> <p><b>Environmental management</b></p> <ul style="list-style-type: none"> <li>Continue to run the ISO 14001 Environmental Management System and promote the ISO 50001 Energy Management System certification.</li> </ul> <p><b>Waste management</b></p> <ul style="list-style-type: none"> <li>Continue to strengthen waste reduction, implement waste sorting, and actively recycle resources and waste.</li> </ul>
Action plan	<p><b>Environmental management</b></p> <ul style="list-style-type: none"> <li>Continue to implement environmental management, environmental monitoring, and environment protection through the environmental management system (There were no cases of violation of environmental protection and environmental impact assessment regulations in 2018).</li> <li>Conduct environmental protection training for environmental management representatives and related personnel at each unit, and strengthen their familiarity with environmental protection regulations and related execution capabilities.</li> <li>Commission consulting units to gradually incorporate the ISO 14001 Environmental Management system in environmental management units at all maintenance depots and stations and pass the relevant verification (THSRC provided assistance and employee training for the incorporation of the environmental management system at 19 environmental management units in 2018).</li> </ul> <p><b>Ecological conservation</b></p> <ul style="list-style-type: none"> <li>Continue to sponsor the "Wild Bird Society of Tainan," which is the management unit of the Jacana Ecological Education Park (THSRC continued to contribute a total of NT\$1.14 million to sponsor the Jacana Ecological Education Park in 2018).</li> </ul>	<p><b>Energy management</b></p> <ul style="list-style-type: none"> <li>Increase the promotion of energy conservation and carbon reduction measures, such as "Optimized Energy Conservation Management for Lighting, Air-conditioners, Machines and Equipment," "Improvement of LED Lighting," "Reduction of Contracted Electricity Capacity," etc., and improve energy-consuming equipment in line with the "Directions for Funding Demonstration and Promotion of the Energy Conservation Performance Guarantee Program" set by the Ministry of Economic Affairs, in order to improve energy efficiency.</li> </ul> <p><b>Water resource management</b></p> <ul style="list-style-type: none"> <li>Continue to promote water conservation measures, such as "replacement with water-saving equipment," "rainwater storage and utilization," "water usage monitoring and management," "water recycling and reuse," etc., to conserve water, reduce the use of water, as well as recycle and reuse water.</li> </ul> <p><b>Greenhouse gas management</b></p> <ul style="list-style-type: none"> <li>Establish THSRC's "Greenhouse Gas Inventory List" in accordance with the "Greenhouse Gas Reduction and Management Act" set by the Environmental Protection Administration, Executive Yuan, and the "Overall Development Strategy Planning and Information Platform for Energy Conservation and Carbon Reduction in Transportation Facilities," in order to stocktake greenhouse gas emissions from THSRC's operations, which will be verified by third parties.</li> </ul>	<p><b>Greenhouse gas management</b></p> <ul style="list-style-type: none"> <li>Implement energy conservation measures, continue to increase passenger volume in line with the purchase of new trains to be added into operation, and attract more private transportation users (e.g., passenger cars) to take HSR, in order to reduce energy consumption in private transportation, thereby reducing the amount of carbon emission per passenger-kilometer.</li> </ul> <p><b>Environmental management</b></p> <ul style="list-style-type: none"> <li>Enhance environmental management and energy management through the implementation of the ISO 14001 Environmental Management System and the ISO 50001 Energy Management System.</li> </ul>

Note: THSRC is expected to obtain this certificate in 2020.

## Energy Conservation and Carbon Reduction for Energy Management

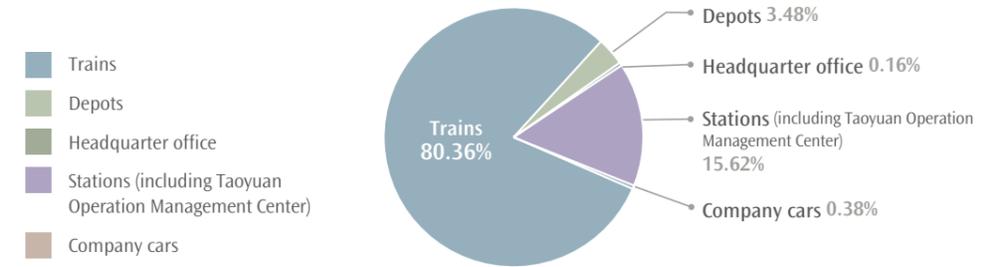
In order to promote energy conservation measures at HSR stations and maintenance depots, we have established the “Energy Conservation Project Team” which convenes the “Energy Conservation Meeting” every three months, in order to track the implementation of these measures and review electricity usage in each quarter. In response to global carbon reduction requirements, as well as to improve energy efficiency, we voluntarily conducted organizational greenhouse gas emission inventory audit and external verification at 12 stations in 2016 and 2017, and successfully obtained the ISO 14064-1 Verification Opinion Statement (please refer to Appendices for the content of the statement) . The relevant verification information is as follows:

Year	Scope 1: Direct greenhouse gas emissions from diesel, gasoline, and refrigerant usage	Scope 2: Indirect greenhouse gas emissions from energy purchased and consumed from purchased electricity	Verification Unit
	Unit: metric tons CO <sub>2</sub> e		
2016	1,253.5175	45,630.9776	TÜV Rheinland Taiwan Ltd.
2017	1,435.9965	50,533.9868	DNV GL Business Assurance Co., Ltd.

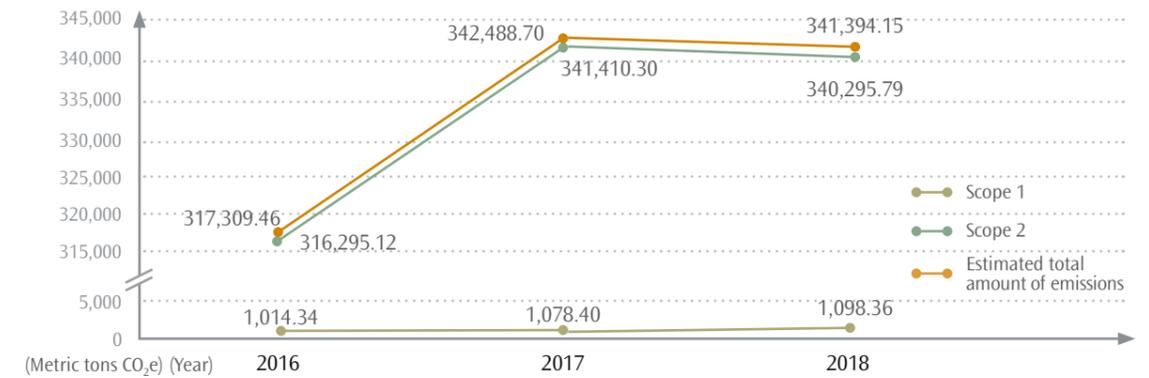
Energy Consumption and Greenhouse Gas Emissions					
Unit:GJ		Purpose	2016	2017	2018
Trains	Electric power	Electricity consumption for train operation, air-conditioners and lighting	1,703,812.30	1,778,687.25	1,789,747.20
	Electric power		69,540.27	70,861.72	71,261.71
	Green power		0	0	0
	Diesel	Engineering maintenance of vehicles and emergency generators	5,417.64	5,399.84	6,298.88
	Electric power		371,455.19	365,599.84	346,824.28
	Green power		751.87	903.6	938.71
	Diesel	Emergency generators	156.19	181.76	138.82
	Electric power		3,611.91	3,401.90	3,475.16
	Green power		0 (Not set)	0 (Not set)	0 (Not set)
	Gasoline		7,542.80	8,550.45	7,960.60
Maintenance depots	Diesel		651.29	526.93	501.75
	Gasoline		7,542.80	8,550.45	7,960.60
Stations (including Taoyuan Operation Management Center and public areas of stations co-built with TRA)	Diesel		6,225.13	6,108.53	6,939.45
	Electric power		2,148,419.68	2,218,550.71	2,211,308.35
Headquarter office	Green power		751.87	903.6	938.71
	Total energy		2,162,939.48	2,234,113.29	2,227,147.11
	Total emissions (metric tons CO <sub>2</sub> e)		317,309.46	342,488.70	341,394.15
Company cars	Gasoline		7,542.80	8,550.45	7,960.60
	Diesel		651.29	526.93	501.75
Total emissions	Gasoline		7,542.80	8,550.45	7,960.60
	Diesel		6,225.13	6,108.53	6,939.45
	Electric power		2,148,419.68	2,218,550.71	2,211,308.35
Total emissions (metric tons CO <sub>2</sub> e)	Green power		751.87	903.6	938.71
	Total energy		2,162,939.48	2,234,113.29	2,227,147.11
Total emissions (metric tons CO <sub>2</sub> e)			317,309.46	342,488.70	341,394.15

Note: 1. THSRC used the Energy Product Unit Heating Value Table as specified in the 2016 Energy Statistics Handbook published by the Bureau of Energy.  
 2. In 2018, data on “electricity consumption in public areas at Banqiao Station and TRA” was included in the recalculation of station electricity usage. Therefore, data in this report is different from those shown in the 2015 and 2016 CSR reports.  
 3. Solar power equipment at three maintenance depots of Wuri, Yanchao, and Zuoying, were installed on the rooftop area of these maintenance depots rented by operators in the electric power industry. Electric power generated by these equipment was sold to Taiwan Power Company. A total of 7,140 MWh of electricity were sold in 2018.

## Percentage of Energy Use in 2018



## Greenhouse Gas Emissions



Note: 1. THSRC used the 2010-2017 National Electric Power Emission Factor published by the Bureau of Energy, and calculated emissions in 2018 using emission factors in 2017.  
 2. Emission factors for gasoline and diesel were corresponding factors from Version 6.0.3 (February 2017) of the Greenhouse Gas Emission Factor Management Table published by the Environmental Protection Administration.  
 3. Scope 1 refers to direct greenhouse gas emissions from sources of emissions owned or controlled by organizations.  
 4. Scope 2 refers to indirect greenhouse gas emissions from the consumption of purchased electricity, heat or steam.

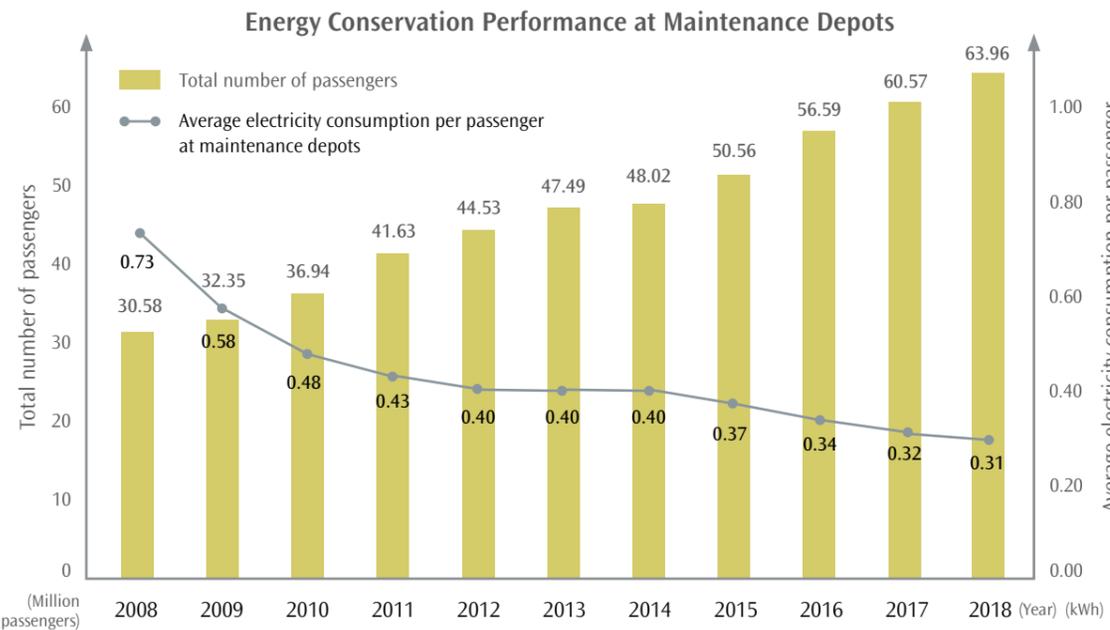
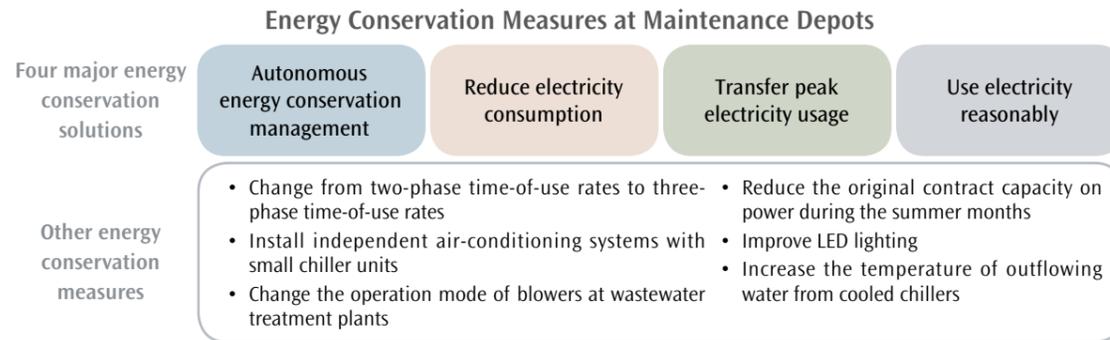
Since 2013, THSRC has cooperated with the government to promote the renewable energy policy by leasing out the rooftop areas of Wuri and Zuoying maintenance depots and the Yanchao Main Workshop to energy suppliers for the installation of solar power equipment. A total of 7,140 MWh of electricity were generated in 2018, a slight decrease of 0.2% from 2017, and was sold to Taiwan Power Company. Solar panels installed on the rooftop and as sun and rain shelters at Miaoli, Changhua, and Yunlin stations generated a total of 237 MWh of electricity in 2018 for use at these stations. Besides, in 2018, THSRC applied for Renewable Electricity Certificate of solar energy for three stations, which were approved by the Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs (please refer to Appendices for this certificate). This certificate, which has been obtained for each 1000 kWh, can be used as a proof of THSRC's solar power generation and serve as a basis for the reduction of greenhouse gas emissions. In the future, THSRC will continue to respond to the national green policy, take specific actions to support the development of green energy by assessing the feasibility of installing additional solar power generation systems in station spaces such as rooftops, parking lots, and detention ponds.

## Solar Power Generation at Three THSRC Maintenance Depots and Three HSR Stations

Maintenance depot/station	Installed capacity (kW)	Annual power generation (MWh)			
		2016	2017	2018	
Wuri Maintenance Depot	1,106.85	1,340.39	1,353.93	1,500.74	Solar power equipment at three maintenance depots were installed on the rooftop area of these maintenance depots rented by operators in the electric power industry. Electric power generated by these equipment were sold to Taiwan Power Company.
Yanchao Main Workshop	3,856.59	5,054.33	5,302.85	5,135.91	
Zuoying Maintenance Depot	395.74	496.07	498.23	503.83	
<b>Total amount at all three maintenance depots</b>	<b>5,359.18</b>	<b>6,890.78</b>	<b>7,155.00</b>	<b>7,140.45</b>	
Miaoli Station	72.00	76.73	72.05	56.58	Solar power generated at these three stations are used at these stations.
Changhua Station	93.00	80.76	78.35	84.02	
Yunlin Station	93.00	56.27	100.59	96.65	
<b>Total amount at all three stations</b>	<b>258.00</b>	<b>213.77</b>	<b>251.00</b>	<b>237.25</b>	

## Energy Conservation at Maintenance Depots

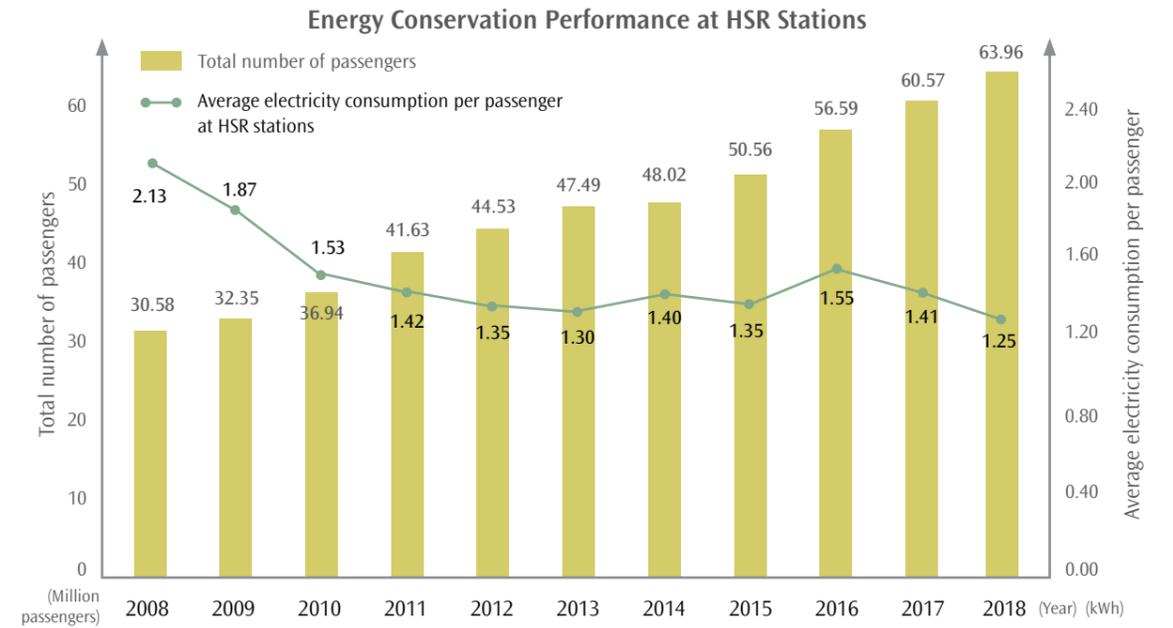
To truly implement energy conservation, the “Energy Conservation Project Team” continues to promote four major energy conservation solutions and implement numerous energy conservation measures at maintenance depots. Despite the continuous passenger growth every year, our average electricity consumption per passenger has gradually dropped from 0.73 kWh in 2008 to 0.31 kWh in 2018, which was a decrease of 4.77% from 2017, thus demonstrating the effectiveness of electricity conservation.



## Sustainable Environment with Green Stations

To implement the spirit of green building, THSRC’s buildings are designed based on the concept of sustainable environment, encompassing “ecology, energy saving, waste reduction, health.” Besides, Miaoli, Changhua, and Yunlin stations have been equipped with solar power facilities, and won the Diamond Level, and Gold Level Green Building Certificates from the Ministry of the Interior and Green Building Certification plaques.

Other stations are designed in line with local environment, with a view to reducing building materials and air-conditioning load, while adopting various energy conservation measures, controlling lighting and air-conditioners at various HSR stations. In 2018, our total electricity consumption decreased by approximately 5.67 GWh, whereas our average electricity consumption per passenger dropped to 1.25 kWh. In the future, THSRC will continue to make improvements on the operation of energy-consuming facilities or replace such facilities at HSR stations with the help of external units. In addition, we participated in the “Voluntary Energy Conservation Announcement Event for the Service Industry” organized by the Bureau of Energy, Ministry of Economic Affairs in 2015, and achieved our target of 5% cumulative reduction of electricity consumption in three consecutive years (2015, 2016, and 2017)<sup>(Note)</sup>, while winning the “Performance Excellence” trophy in 2018.



Various new energy management measures implemented in 2018 are listed as follows:

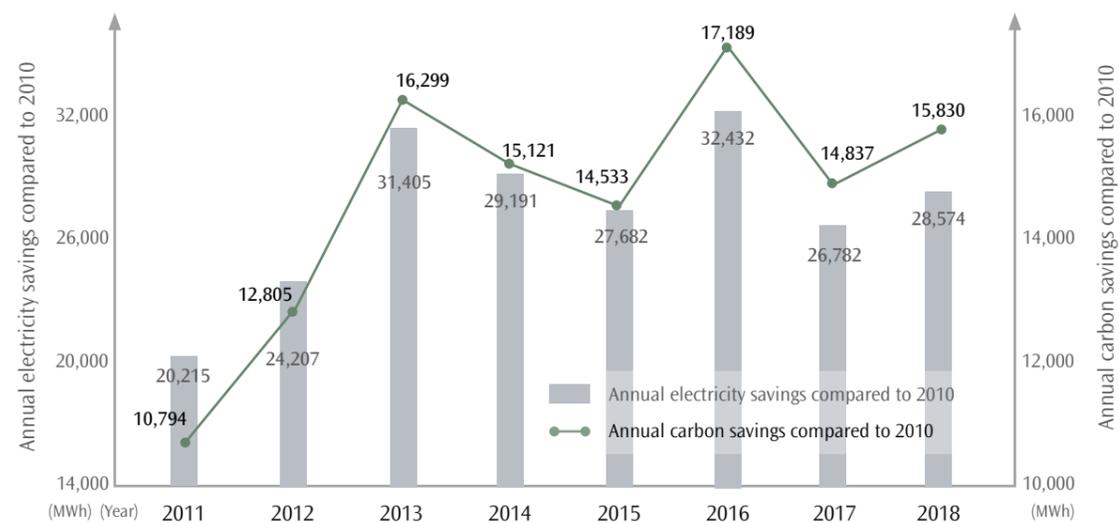
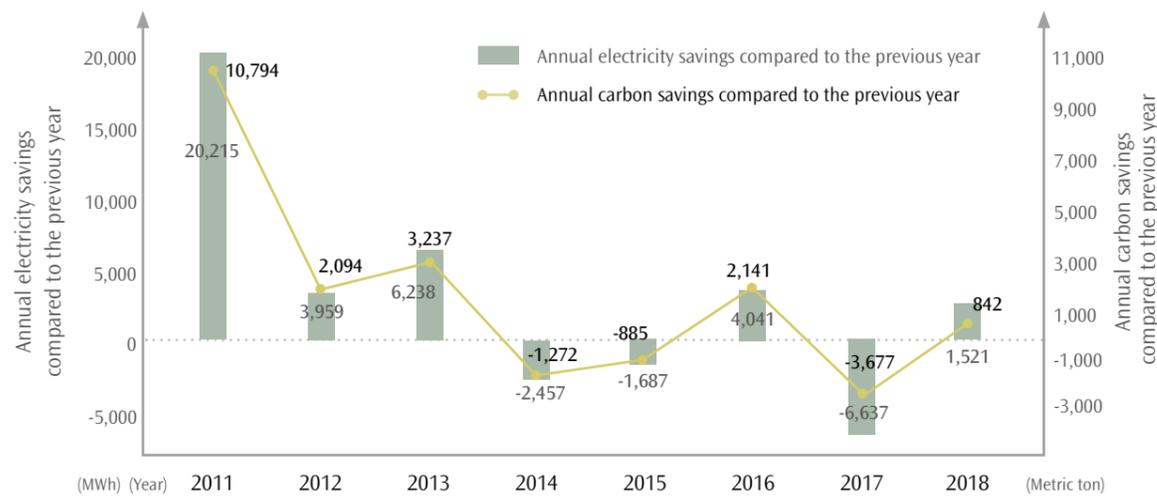
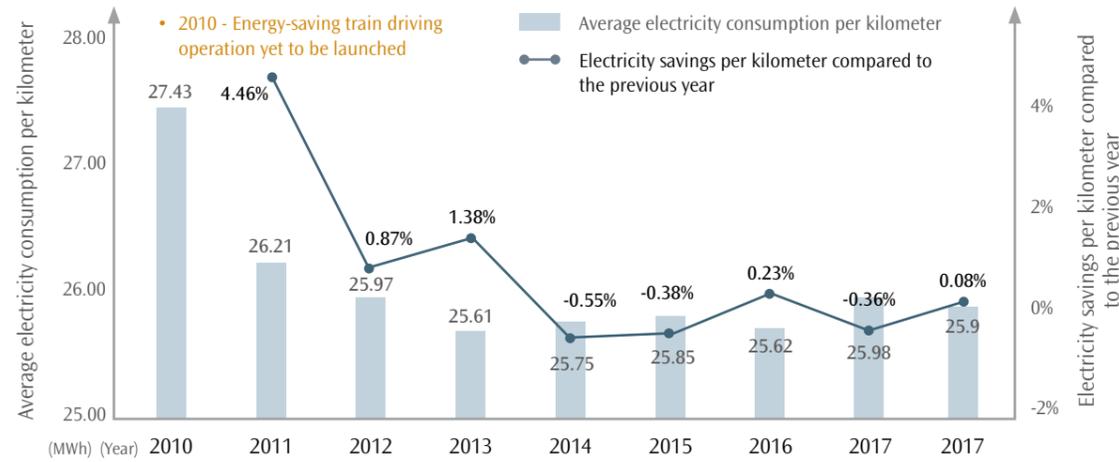
-  — Continued to replace high energy-consuming lighting fixtures with LEDs.
-  — Added nano-refractive films in toilets at Taichung and Yunlin stations to increase illumination and reduced electricity consumption.
-  — Improved the energy conservation and efficiency of lighting at Exit 1 and Exit 4 of Chiayi Station.
-  — Adjusted the start and stop time of escalators according to train schedules, and installed frequency converters on escalators.
-  — Used natural light at the lobby of HSR stations with sufficient natural light, and switched to photo cells to control and turn on lighting.
-  — Implemented “electricity conservation measures” at HSR stations in cooperation with Taiwan Power Company at specific notification times.

## Carbon Reduction on Trains

THSRC completed the “Replacing Light Tubes with LED on Trains” project in January 2016, thereby saving 6.528 GWh of electricity and reducing 3,523.9 metric tons of carbon dioxide emissions from November 2013 to December 2018. Since November 2010, we also launched the “Energy-saving Train Operation” plan through the “Train Energy Conservation Team.” As of the end of 2018, this plan has reduced a total of 220.49 GWh in energy consumption compared to 2010, and prevented 117,410.9 metric tons of carbon dioxide emissions.

Note: The calculation of electricity savings did not include those at three new HSR stations and stations co-built with TRA. The so-called “measure-based reduction” refers to the calculation of reduction of electricity consumption using the amount of electricity conserved through energy conservation measures taken at HSR stations.

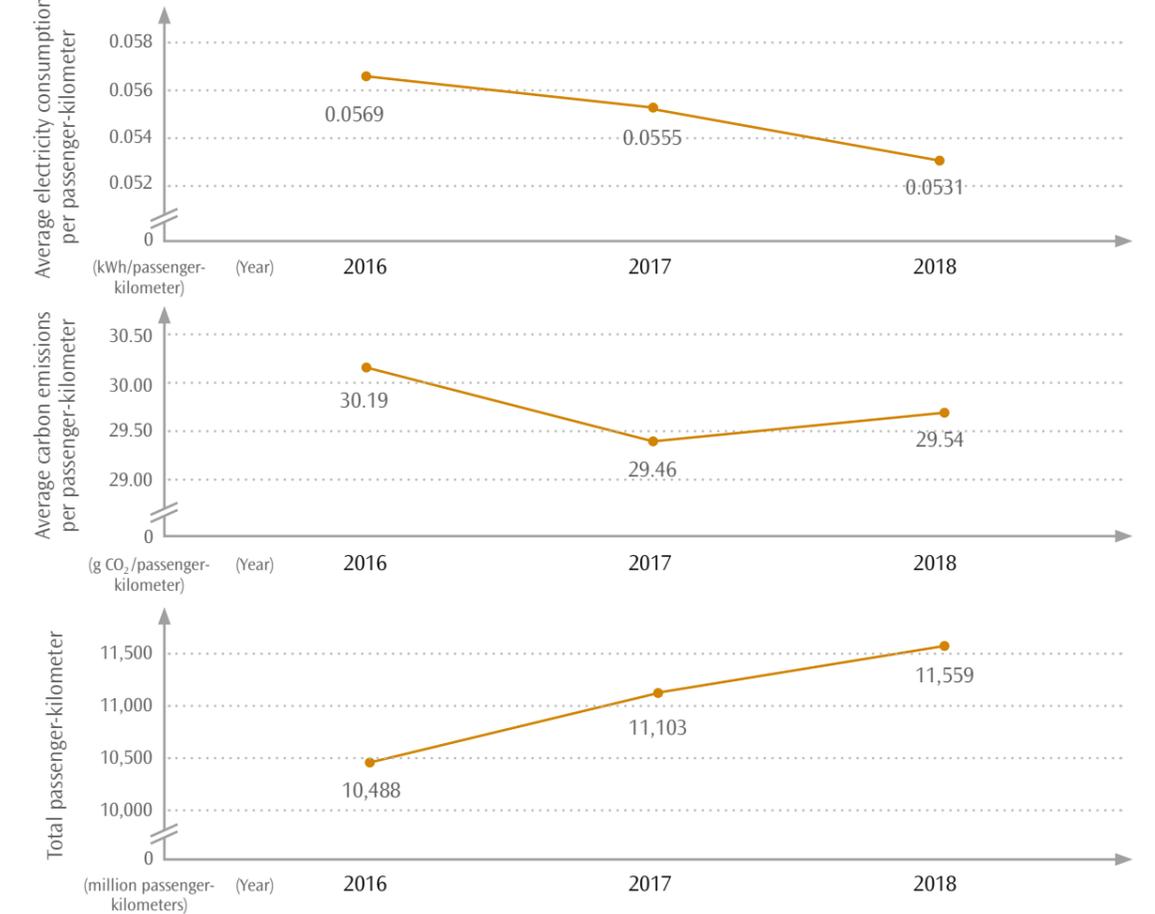
### Energy-saving Train Operation Performance



- Note: 1. THSRC used the 2010-2017 National Electric Power Emission Factor published by the Bureau of Energy, and calculated emissions in 2018 using emission factors in 2017.  
 2. Only electricity consumption in train operation was included. Electricity consumption for lighting and air-conditioners on trains were not included.  
 3. The original average electricity consumption per passenger in 2016 was 25.71 MWh. After re-calculation in 2018, the average electricity consumption per passenger in 2016 was corrected to 25.61 MWh.  
 4. According to electricity savings in the table, the number of "positive" values decreases, while the number of "negative" values increases.

In addition, the average carbon dioxide emissions per passenger-kilometer and the average electricity consumption per passenger-kilometer exhibit a downward trend from year to year, demonstrating the effectiveness of energy conservation measures we have strived to promote in recent years.

### Average Electricity Consumption and Carbon Emissions per Passenger-kilometer



- Note: 1. The electricity consumption in stations, depots, and trains was included.  
 2. In 2018, data on the electricity consumption in public areas at Banqiao Station and TRA Station was included in the recalculation of station electricity usage. Therefore, data in this report is different from those shown in the 2015 and 2016 CSR reports.  
 3. THSRC used the 2010-2017 National Electric Power Emission Factor published by the Bureau of Energy, and calculated emissions in 2018 using emission factors in 2017.  
 4. Emission factors for gasoline and diesel were corresponding factors from Version 6.0.3 (February 2017) of the Greenhouse Gas Emission Factor Management Table published by the Environmental Protection Administration.

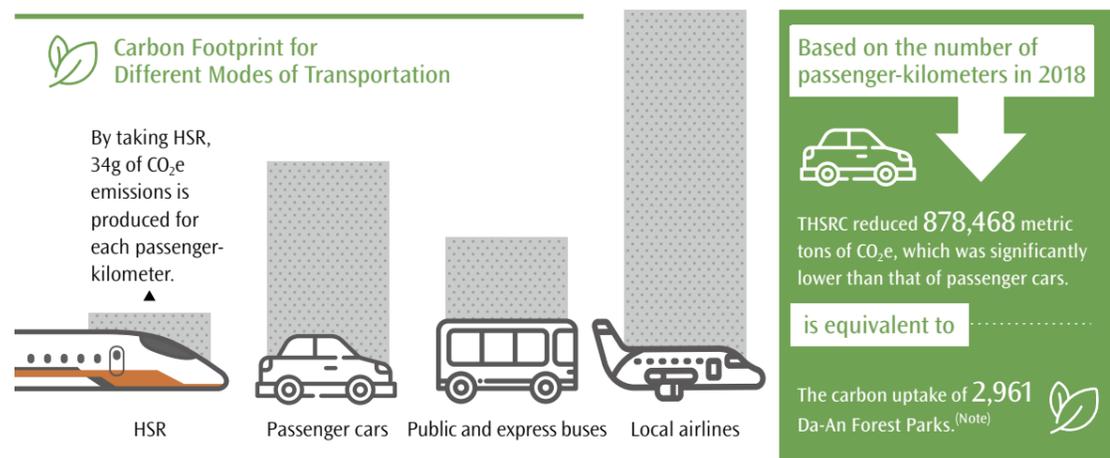
### Low Carbon Footprint with Green Transportation

Taiwan High Speed Rail is the first mode of transportation that obtains the "Transportation Service Carbon Footprint Label" in Taiwan, and has successfully obtained the label and certification of "Carbon Footprint between Stations" issued by a third-party certification unit. In order to raise awareness toward "green consumption" in "carbon reduction journey" among HSR passengers, and stabilize the value of "green brand," THSRC has set up the "High Speed Rail Transportation Service Carbon Footprint" page on our corporate website, and indicates the carbon footprint label on our train magazine, T-Life and HSR tickets.

In 2018, we were awarded the "Carbon Footprint Label Certificate" (Certificate No. R1714910001) for achieving our commitment of reducing carbon emissions by more than 3% in three years (where we have successfully reduced carbon emissions by 6.19%). Moreover, we also participated in the "2018 Low-Carbon Product Awards" in November 2018, where we won the "Excellence Award" with a reward of NT\$200,000, thereby becoming the first operator in the transportation industry to win this award. We were also given the "Appreciation Trophy" by the Environmental Protection Administration as a token of appreciation for THSRC's contributions to the product carbon footprint factor.

By taking HSR, 34g of CO<sub>2</sub>e emissions is produced for each passenger-kilometer. Compared to other modes of transportation, this emission level is one-third that of passenger cars, one-half that of public and express buses, and one-fifth that of local airlines. Based on the number of passenger-kilometers in 2018, THSRC reduced 878,468 metric tons of CO<sub>2</sub>e, which was significantly lower than that of passenger cars, and is equivalent to the carbon uptake of 2,961 Da-An Forest Parks.<sup>(Note)</sup>

THSRC was given the Excellence Award of the “2018 Low-Carbon Product Awards”



In order to reduce the environmental impact potentially caused by the purchase of tickets and the use of magnetic or paper tickets at HSR stations where passengers are enjoying HSR transport services, THSRC has launched a variety of convenient and readily available ticketing services in recent years:

-  — As of 2018, the cumulative number of passengers using convenience store tickets has exceeded 48.22 million people (a total of 6.41 million passengers have used convenience store tickets in 2018, accounting for 15% of passengers with reserved seat tickets).
-  — As of 2018, the cumulative number of magnetic or paper tickets used by passengers has reduced by 31.72 million pieces, thanks to THSRC's efforts to issue periodic tickets and multi-ride tickets.
-  — As of 2018, the cumulative number of passengers using T Express Mobile APP at HSR stations has exceeded 21.26 million people (a total of 8.06 million passengers used mobile tickets in 2018, accounting for 19% of the total number of passengers with reserved seat tickets).
-  — As of 2018, the cumulative number of passengers using co-branded credit cards for non-reserved seat service has exceeded 7.49 million people (a total of 1.77 million passengers used co-branded credit cards in 2018, accounting for 8% of the total number of passengers with non-reserved seat tickets).

Note: Taken from the 2011 Taipei Feitsui Reservoir Administration Greenhouse Gas Inventory Report

## Water Resource and Waste Management

With regard to water resource protection, THSRC's water management policy revolves mainly around water conservation, reduction and recycling. Through the “Energy Conservation Project Team” and the review meetings convened by the committee every quarter, THSRC sets the average water consumption per passenger, with the growth of train ridership, as our water conservation indicator. HSR stations, maintenance depots, and THSRC's headquarter use tap water as the source of water, instead of using groundwater.

Water management measures at HSR stations and maintenance depots
<ul style="list-style-type: none"> <li>— Establish tap water register and water use inspection mechanism</li> <li>— Control water use and assign mechanical and electrical facility maintenance personnel to carry out water facility inspection on a daily basis</li> <li>— Inspect the quality of effluents on a monthly basis and to comply with effluent standards. Report regularly the effluents quality, to ensure that treated water can be recycled for sprinkler irrigation</li> </ul>
Water conservation measures and water use awareness at HSR stations and maintenance depots
<ul style="list-style-type: none"> <li>— Install induction water conservation equipment in toilets</li> <li>— Collect and store rainwater in detention ponds to be reused for planting and watering in depot areas</li> <li>— Increase the use of recycled effluent from wastewater treatment plant for planting and sprinkler irrigation</li> <li>— Implement parallel operation of chiller systems for central air-conditioners to reduce water evaporation and entrainment in water cooling towers</li> <li>— Improve train washing machines at Zuoying and Wuri depots</li> <li>— Reduce the frequency of sprinkler equipment operation and water spray action time</li> <li>— Improve train maintenance processes to reduce water consumption during maintenance</li> <li>— Promote water conservation and enhance water conservation education among employees</li> </ul>

Benefits of water conservation measures <sup>(Note 1)</sup>		
<ul style="list-style-type: none"> <li>— <b>Maintenance depots:</b> In 2018, the average water consumption per passenger at maintenance depots was 0.00250 cubic meters, a decrease of 6.0% from 2017.</li> </ul>	<ul style="list-style-type: none"> <li>— <b>HSR stations:</b> In 2018, the average water consumption per passenger at HSR stations was 0.0085 cubic meters, an increase of 4.16% from 2017. <sup>(Note 2)</sup></li> </ul>	<ul style="list-style-type: none"> <li>— <b>Entire company:</b> In 2018, the average water consumption per passenger was 0.0117 cubic meters, an increase of 1.1% from 2017.</li> </ul>

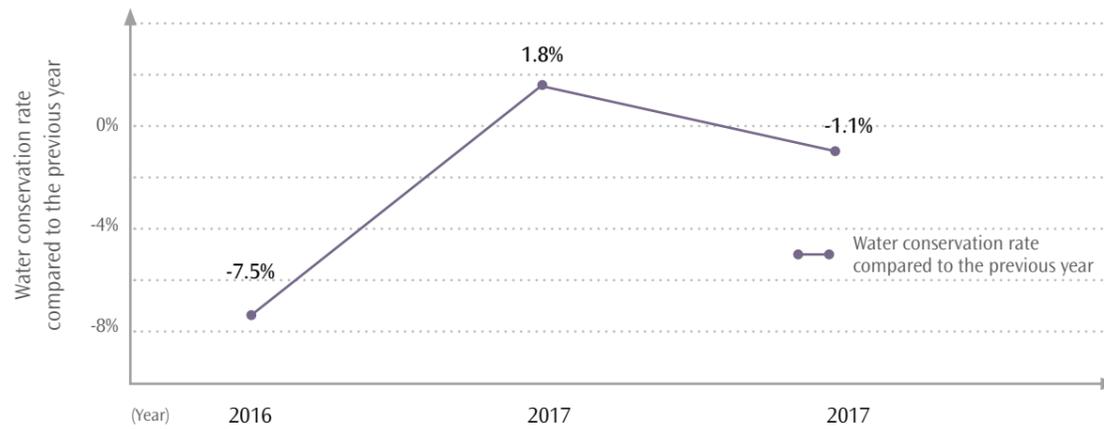
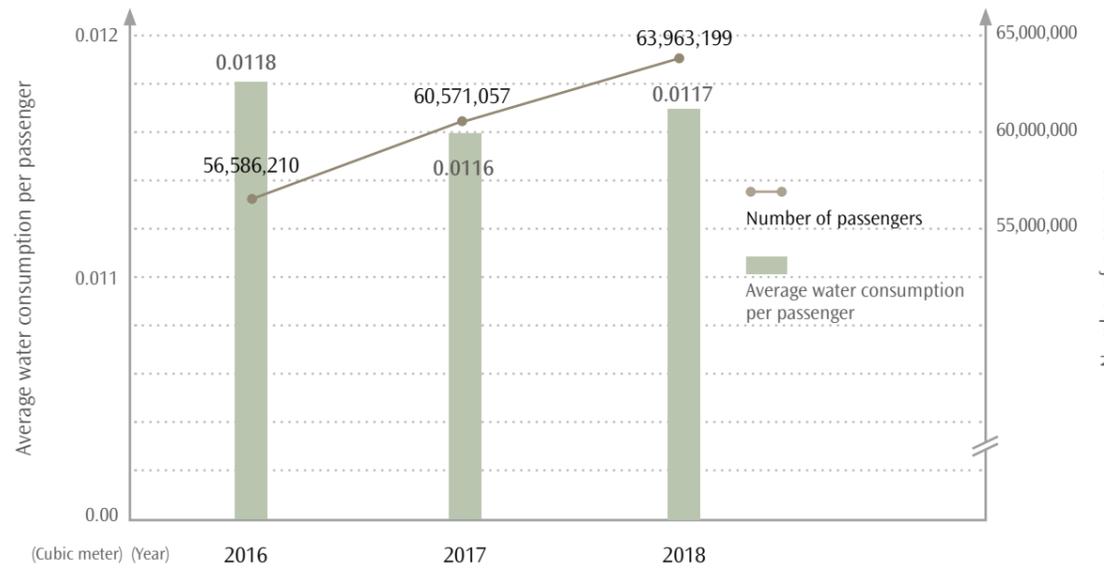
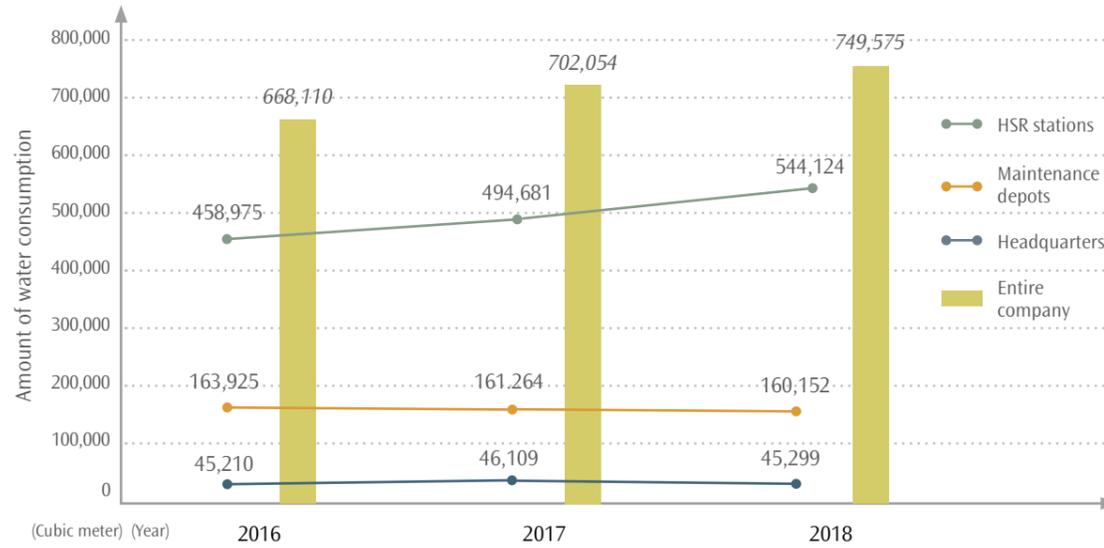
Note: 1. The calculation of water conservation benefits at HSR stations does not include water consumption in commercial areas/parking lots, public areas shared with TRA (at Nangang, Taipei, and Banqiao stations) but includes water consumption in Taoyuan OMC Building.

2. Water consumption at HSR stations has increased due mainly to the following reasons: increase in passenger volume, government/civil activities (e.g., installation of watering equipment for Taichung World Floral Exposition and transportation for concerts), hot weather, increase in planting and watering, etc.



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### Changes in Water Consumption and Benefits of Water Conservation



Note: In the water conservation rate column, "positive" value represents decrease in water consumption, and "negative" value represent increase in water consumption. The calculation of water consumption at HSR stations does not include water consumption in commercial areas/parking lots, public areas shared with TRA (at Nangang, Taipei, and Banqiao stations) but includes water consumption in Taoyuan OMC Building. The figures stated in page 47 and page 49 of 2017 CSR Report of THSRC are the same.

### Wastewater and Waste Treatment

THSRC has set up wastewater treatment plants at maintenance depots and HSR stations, where professionals with wastewater treatment certification are tasked to ensure that wastewater treatment meets the effluent standards. In addition to environmental management audit, in accordance with "Water Pollution Prevention Plan" and "Industrial Waste Cleanup Plan," THSRC regularly submit online reports on the quality and volume of effluents from wastewater treatment plants and the volume of industrial waste treated, where such reports were also regularly submitted in 2018.

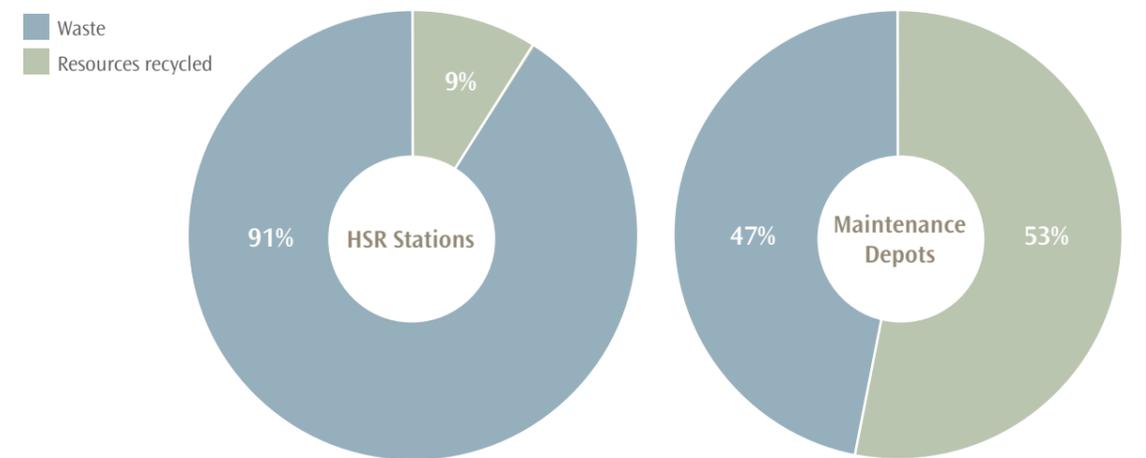
In terms of waste treatment, waste recycling, cleaning, and disposal at maintenance depots and HSR stations are commissioned to qualified and certified resource recycling operators and waste collection operators, with incinerators as the final disposal site. We commission such works by means of bidding and contract signing, and manage contractors through contracts so that they truly carry out such works in accordance with waste-related regulations. In 2018, no violations were reported, and no leakage accidents involving oil, fuel, chemicals, and waste took place.

Since our operations mainly produce general industrial waste, we promote waste recycling for items, including paper, plastic, scrap iron, scrap wood, scrap copper, scrap aluminum, waste lighting sources, waste lead storage batteries, and waste glass containers, at maintenance depots and HSR stations. In 2018, the total amount of waste treated were 8,191 metric tons, whereas the resource and waste recycling rate was 15.7%, and the amount of resource and waste recycled was 1,283 metric tons.

#### Waste Management at HSR Stations and Maintenance Depots

Unit: Metric tons	Stations		Maintenance depots		Stations and maintenance depots			
	Waste	Resources recycled	Waste	Resources recycled	Waste	Resources and waste recycled	Total waste	Resource and waste recycling rate
2016	6849.39	482.68	443.72	451.94	7293.11	934.61	8227.72	11%
2017	5376.84	529.28	517.83	548.14	5894.67	1077.42	6972.09	15%
2018	6337.78	641.04	570.00	641.97	6907.78	1283.01	8190.79	15.7%

#### Amount of Waste and Resource Recycled in HSR Stations and Maintenance Depots in 2018

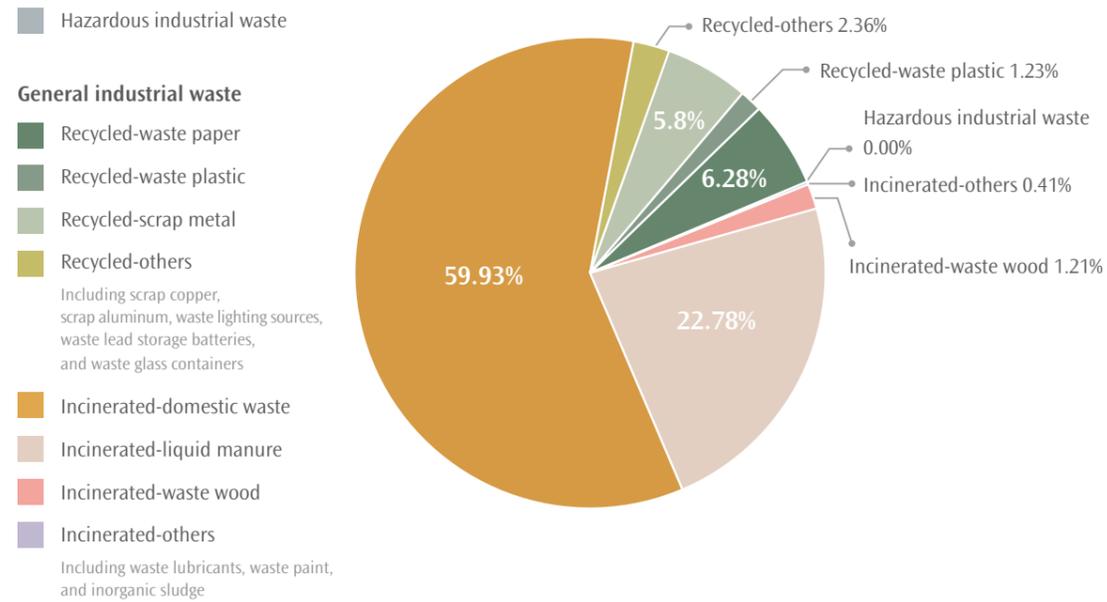


In 2018, the total cost of wastewater and waste treatment was approximately NT\$56.203 million, where the main treatment items included maintenance and upgrade of equipment at wastewater treatment plants, coagulants, precipitants and disinfectants, water quality inspection, commissioning of sludge collection and disposal, and outsourcing of waste collection and disposal.

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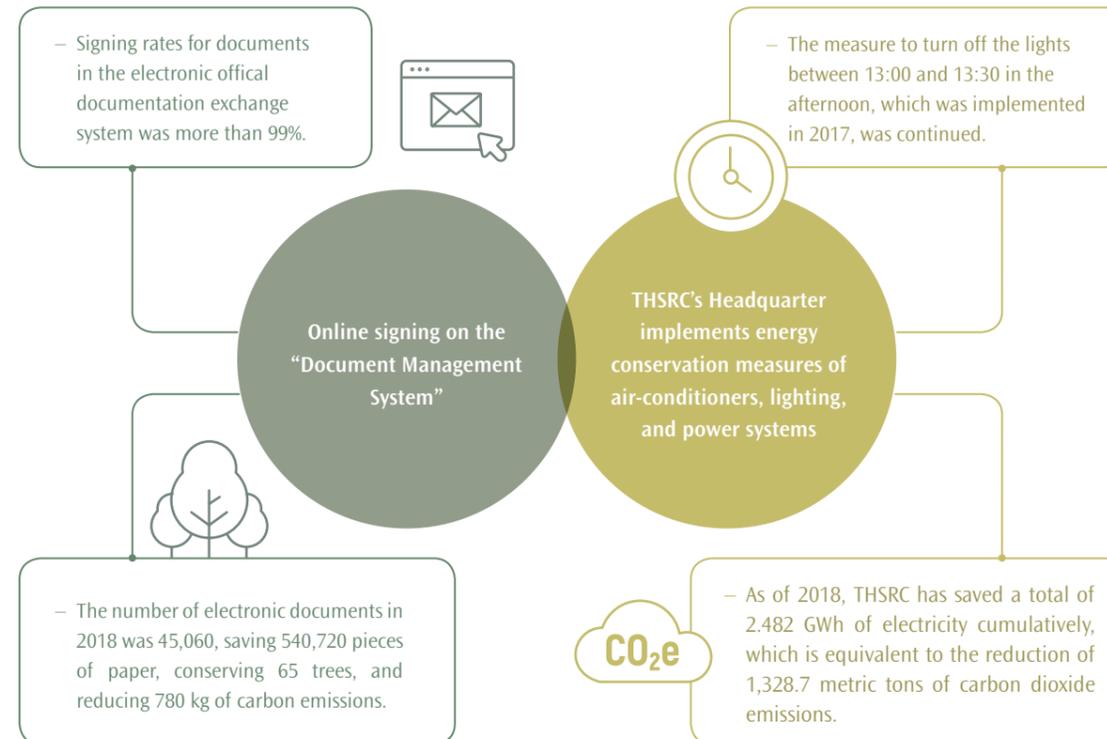
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### Type of Hazardous and Non-hazardous Waste in 2018



### Operation Management

THSRC fully supports environmental sustainability by not only actively implementing low carbon measures on trains, but also executing them in our operations through the promotion of various energy conservation and environmental protection measures at various office buildings.



Note: Information used for calculation originates from the Environmental Quality Protection Foundation, where using 8,333 pieces of A4 paper (weighing 4 to 6 g per piece) is equivalent to cutting down one tree with a height of 12 m and a diameter of 15 to 20 cm, while one tree absorbs approximately 12 kg of carbon dioxide a year.

### Benefits of Energy Conservation at THSRC's Headquarter

	Electricity consumption at Taipei Headquarter (MWh)	Electricity savings (compared to 2009) (MWh)	Electricity conservation rate (compared to 2009)
2009	1,335.98	---	---
2016	1,003.31	332.66	24.9%
2017	944.97	391.01	29.3%
2018	965.32	370.65	27.7%

Note: Compared to 2009, a total of 2,482 GWh of electricity were conserved cumulatively as of 2018, which is equivalent to a reduction of approximately 1,328.7 metric tons of carbon dioxide emissions.

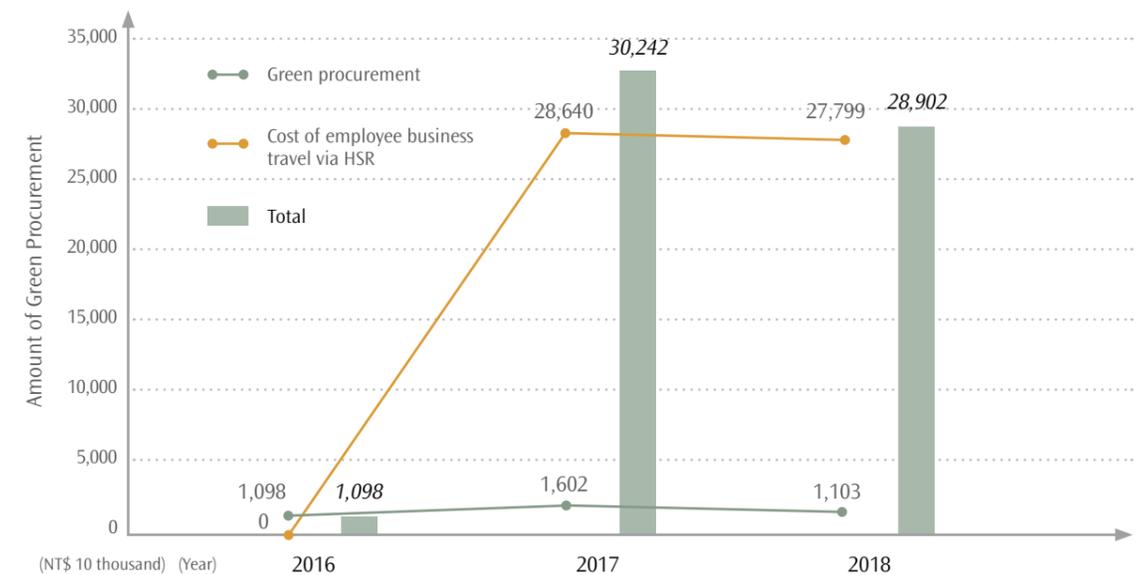
### Caring for the Environment with Green Procurement

Apart from responding to the government's environmental protection requirements, we also implement green consumption by prioritizing the purchase of products with less environmental impact, while continuously carrying out related procurement operations in line with government policies. In order to guide vendors to pay attention to environmental issues, we require vendors to comply with the relevant laws and regulations when acquiring new vendors. Vendors which commit violations of the relevant laws and regulations will be included in the watch list, whereas vendors which are found to have committed serious violations will have their collaboration with us terminated. These efforts have enabled us to exert our positive corporate influence on vendors.

The "Green Procurement Filing for Private Enterprises and Groups" announced by the Environmental Protection Administration lists the purchase or use of products with the eco mark and the green mark, products with the carbon footprint label, as well as products and services with the carbon reduction label as one of the green procurement items. Since THSRC owns the carbon footprint label, we have also included employees' HSR travel expenses into calculation since 2017, and actively implement carbon reduction in every section of our operations.

### Amount of Green Procurement in Previous Years

	Amount of green procurement (NT\$ 10 thousand)	Cost of employee business travel via HSR (NT\$ 10 thousand)	Total (NT\$ 10 thousand)
2016	1,098	---	1,098
2017	1,602	28,640	30,242
2018	1,103	27,799	28,902



## Nurturing Talent and Value Cultivation

Being the only high speed rail transportation company in the local railway industry, employees are one of our core assets, and cultivating professional talents is a vital goal for us. There were no major changes to our human resource structure in 2018 compared to 2017.

Human Resource Structure in 2018

Category		♂ Male	♀ Female
Total (both male and female)		4,473	
Total labor force	Total	2,879	1,594
	Percentage	64%	36%
Fixed term contract	Contract employees	18	38
	Secondee employees	0	0
	Outsourced employees	3	7
	Total number of employees on fixed term contracts	21	45
Non-fixed term contracts	Total number of employees on non-fixed term contracts	2,858	1,549
Rank	Vice President and above	0.16%	0.04%
	Assistant Vice President	0.36%	0.05%
	Manager and Deputy Manager	4.00%	0.94%
	Section Chief	10.17%	2.97%
	General employees	49.68%	31.63%
Education background	General and vocational high school and below	4.5%	1.3%
	University/Junior college	50.3%	30.8%
	Masters	9.3%	3.5%
	PhD	0.3%	0.0%
Other multiple indicators	Indigenous employees	0.8%	1.1%
	Disabled employees	0.7%	0.4%
Management level	Under 30 years old	0.0%	0.0%
	30 to 50 years old	8.9%	3.1%
	Over 50 years old	5.8%	0.9%
Age	Under 30 years old	12.9%	13.2%
	30 to 50 years old	35.4%	18.0%
	Over 50 years old	1.4%	0.4%

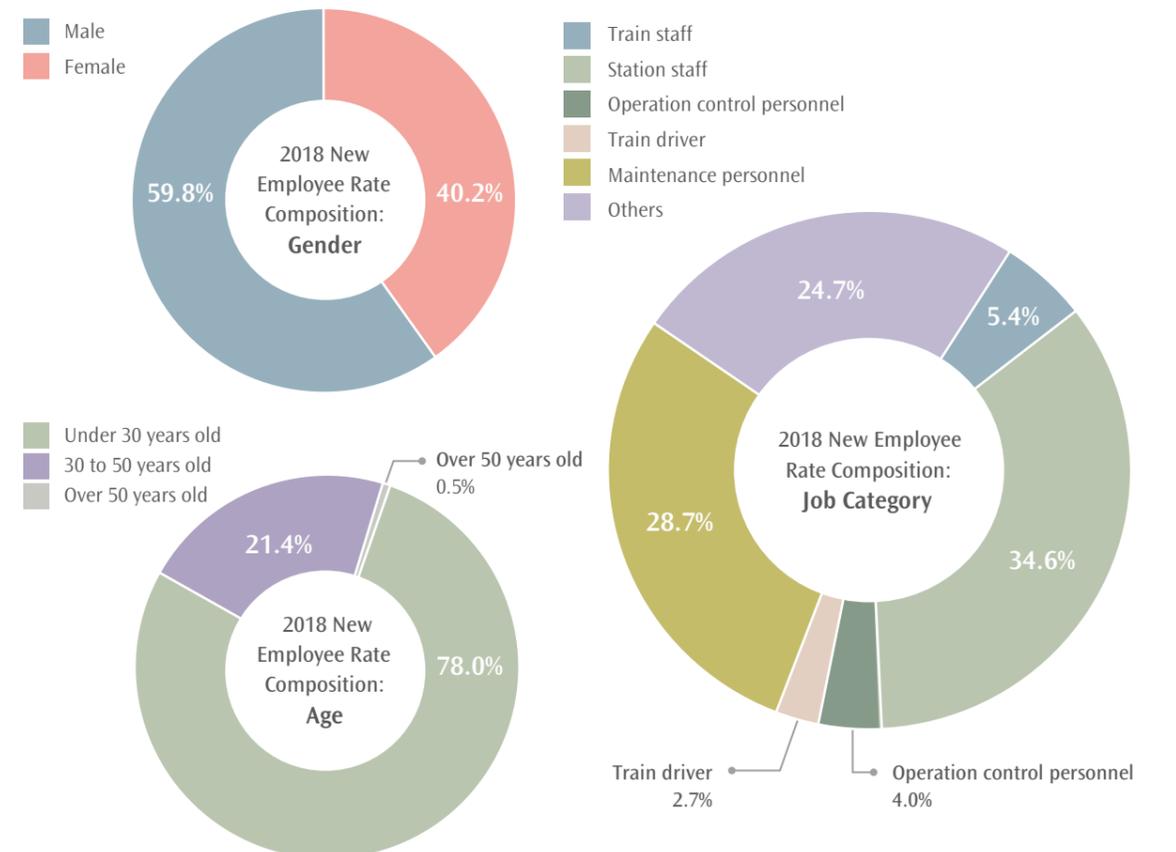
Note: 1. Fixed term contract employees are mostly first-line interns (including station, service, and maintenance).  
 2. The management is defined as managers of section chief level and above.  
 3. The formula used in 2016 was as follows: Percentage of a certain group of people = Number of people in the particular group/Total number of employees for a certain gender. In 2017, this formula was adjusted to the following: Percentage of a certain group of people = Number of people in the particular group/Total labor force.  
 4. Due to rounding of data, the sum of data may not be exactly 100%.

## Inclusion and Equal Employment

We do not implement talent recruitment based on race, skin color, religion, gender or nationality. We also comply with local laws and regulations related to employee compensation, employment period, work conditions and employment rights, including the Labor Standards Act, the Employment Service Act, and the Act of Gender Equality in Employment.

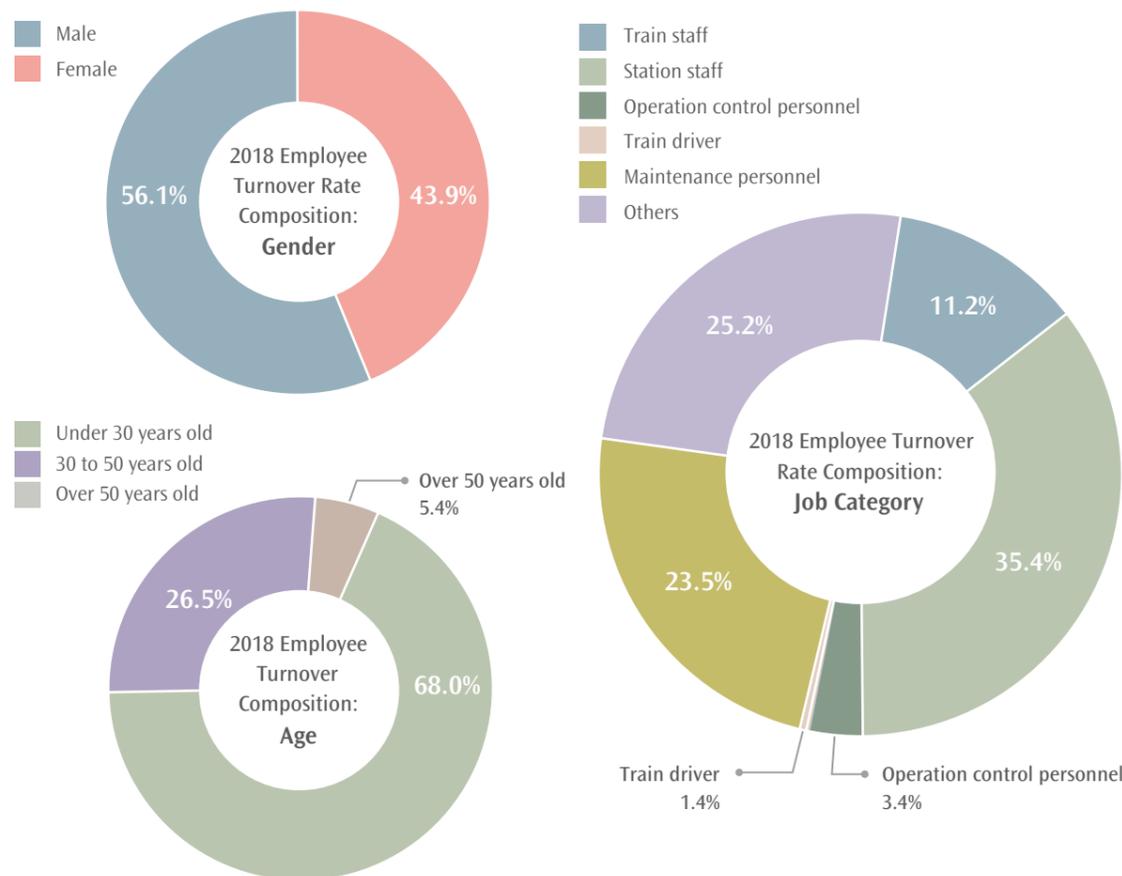
Statistics of New Employees in 2018

Category		♂ Male	♀ Female
Category	Train staff	0	20
	Station staff	37	92
	Operation control personnel	11	4
	Train driver	10	0
	Maintenance personnel	105	2
	Others	60	32
Age	Under 30 years old	164	127
	30 to 50 years old	57	23
	Over 50 years old	2	0
Total		223	150
Percentage		5.0%	3.4%

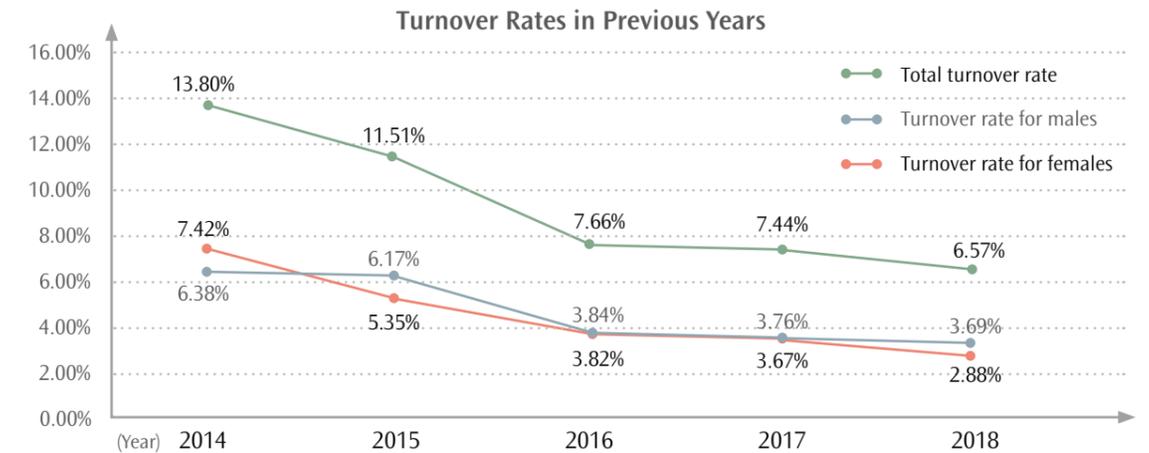


### Employee Turnover Statistics in 2018

Category	Male	Female
Train staff	3	30
Station staff	35	69
Operation control personnel	8	2
Train driver	4	0
Maintenance personnel	67	2
Others	48	26
Under 30 years old	100	100
30 to 50 years old	49	29
Over 50 years old	16	0
<b>Total</b>	<b>165</b>	<b>129</b>
<b>Percentage</b>	<b>3.7%</b>	<b>2.9%</b>



In 2018, the turnover rate for all employees was 6.6%, a significant decrease compared to an average turnover rate of 9.4% in the five most recent years.



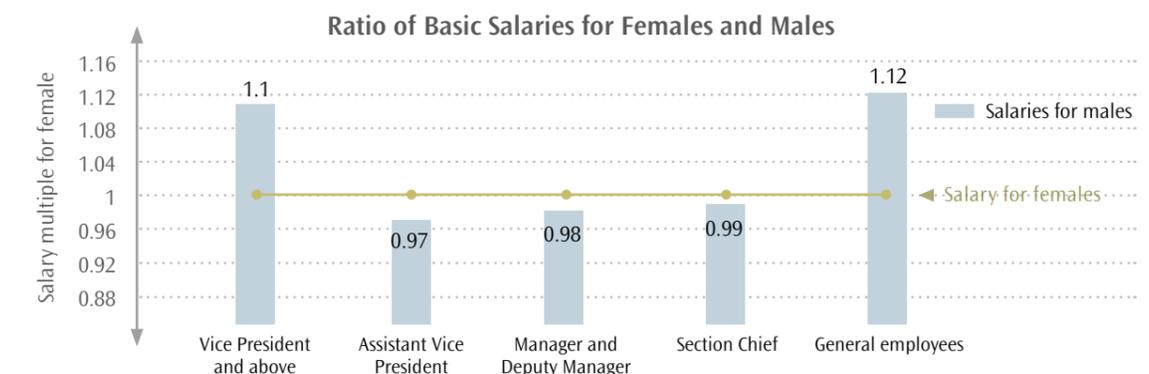
Note: Turnover rate = Number of resigned personnel in a particular year/Total number of employees at the end of the particular year.

With regard to regulations for the employment of persons with disabilities, we have set up a specific section for the recruitment of persons with disabilities on our recruitment website, and hire disabled employees according to job characteristics. In 2018, we have been employing 46 disabled employees, where seven of them were severely disabled. As for the employment of indigenous people, two indigenous people were employed at THSRC in 2018, bringing the total number of indigenous employees at THSRC to 48 people. In the future, THSRC will also continue to conduct recruitment through various channels to ensure diversity among employees.

In order to improve the quality of life among employees, the starting salary of junior staffs at THSRC is higher than the basic salary in Taiwan. We publicly disclose the average salary of full-time non-management employees in accordance with the requirements of Taiwan Stock Exchange (TWSE). Employee compensation is determined and approved according to work experience, education background, and specialization, and does not differ due to gender or ethnicity. We have also planned a transparent salary and remuneration policy to reward our employees based on operational performance. The ratio of salary of female to male general employees differs from one to one because technical professionals are mostly males and salaries for positions related to labor services are generally higher than other position; whereas the ratio of salary of females to males in management positions approaches one to one, thus demonstrating equality in THSRC's salary and remuneration policy. Besides, in order to protect the rights of secondee and outsourced employee, their salaries are determined and approved by THSRC, and manpower agencies are required to provide them with labor contracts and salary-related documents, with a view to ensuring that the salaries of these personnel comply with the relevant regulations.

### Comparison with Basic Salaries in Taiwan

Item	Female	Male
Local basic salary	22,000	
Starting salary for junior staff	32,000	32,000
Ratio of starting salary for junior staff to local basic salary	1.45	1.45



### Information on Salaries of Full-time Non-management Employees

Item	Unit	2017	2018	Annual difference
Number of full-time non-management employees	Number of people	4,281	4,355	1.73%
Total salary of full-time non-management employees	NT\$ thousands	3,629,023	3,865,345	6.51%
Average salary of full-time non-management employees	NT\$ thousands	848	888	4.70%

### Comprehensive Employee Training

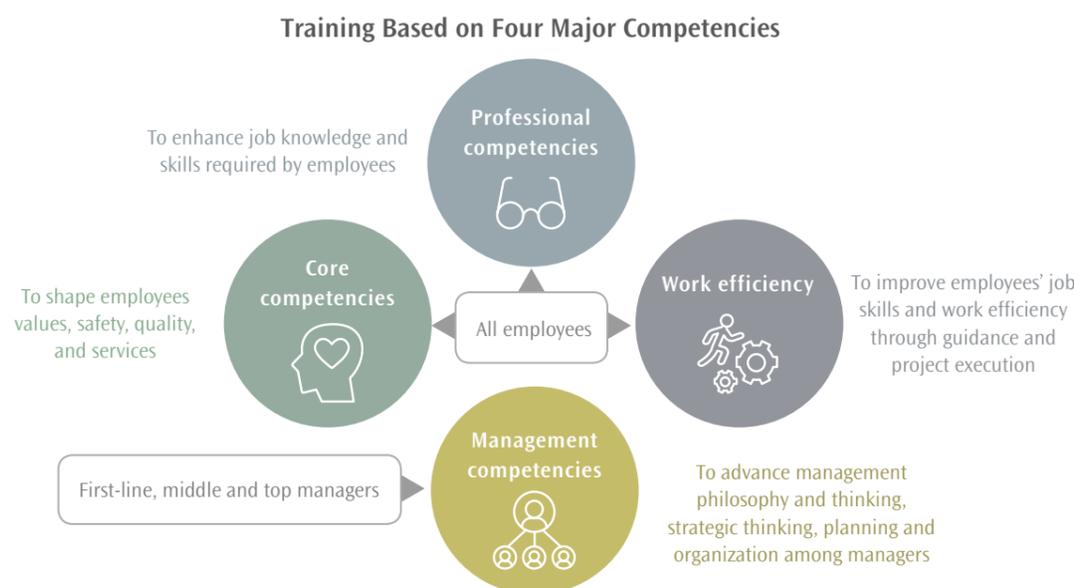
In order to provide quality and professional services, employees must have professional knowledge and service skills required for the positions they hold after joining THSRC.

#### Training New Employees

We conduct four days of training for all new employees, and arrange visits to HSR stations and depots, in order to increase their preliminary understanding of the mechanical structure and system operations of HSR trains. New employee training also emphasizes THSRC's value proposition, employee code of conduct and ethical conduct, so as to enhance compliance with anti-corruption policies among all employees. This category of training takes place for approximately two hours. For details regarding other ethical management-related training, refer to the section titled "Management Principles."

#### Training Based on Four Major Competencies

THSRC's training system focuses on two major aspects of "safety" and "service," and also incorporates four major competencies of core competencies, professional competencies, management competencies, and work efficiency, into dedicated training courses taught mainly by our internal lecturers, with a view to providing comprehensive competency training courses in our training system. We have established the "Training Management and Digital Learning System" and a mobile learning app. In 2018, we continued to encourage employees to search for information on training courses, teaching records of internal lecturers, individual learning records and training-related reports, and even interact with internal lecturers through this system, which have clearly improved learning effectiveness. In 2018, the number of employees participating in digital learning every month increased by 35.2% compared to that in 2017.



We enable first-line professional technical and service personnel to receive training required for their positions according to different job requirements, as well as require them to pass a series of rigorous qualification certifications (including classroom lectures, hands-on activities, practical exercises, tests, and assessments), and undergo retraining and event simulation exercises. In particular, HSR train drivers not only have to undergo at least 1,300 hours of professional driving courses for more than eight months, but also attend THSRC's internal training test to obtain driving certification after completing training, and pass the High Speed Rail Driving License test through MOTC before they can start performing their duties as a train driver.

### Education and Training Results

THSRC's training model is mainly divided into internal and external training courses, online digital courses and practical exercises, with a view to meeting our employees' great passion for learning and achieving our high standards and requirements for professional skills.

#### Training Hours in 2018

Category (Unit: Hours)	♂	♀	Total
	Male	Female	
All employees at THSRC			
Number of training hours per capita <sup>(Note 1)</sup>	115.3	103.6	111.1
Average number of training hours per training session <sup>(Note 2)</sup>	7.2	7.1	7.2
Average number of class hours for different levels <sup>(Note 3)</sup>			
Vice President and above	9.2	7.8	8.9
Assistant Vice President	8.2	12.2	8.6
Manager and Deputy Manager	15.5	14.7	15.3
Section Chief	99.4	101.2	99.8
General employees	129.9	105.4	120.4
Average number of class hours for different categories <sup>(Note 4)</sup>			
Train staff	193.7	184.9	186.4
Station staff	177.7	142.4	154.8
Operation control personnel	163.7	172.6	165.6
Train driver	315.8	463.0	332.3
Maintenance personnel	170.0	140.8	170.0
Others	72.8	48.3	63.2

Note: 1. The training hours of males and females differ from each other mainly because of the ratio of males and females and different professional training attended due to job differences.

2. "Average number of training hours per training session" aims to present the number of training hours per training session for each person every year.

3. Average number of class hours for different levels is calculated by dividing the total number of training hours for a particular level by the number of employees at the particular level at the end of the year.

4. Average number of class hours for different categories is calculated by dividing the number of training hours for a particular category by the number of employees for the particular category at the end of the year.

In 2018, the training categories with the highest number of person-hours were operational service, maintenance and railway safety courses in professional HSR training, which were training courses for various types of professionals in the aspect of professional competencies. Moreover, in order to ensure efficient management of supervisors at section chief level and above who have been newly appointed and taken office in the two most recent years, THSRC has planned a three-day "Management Practice and Case Study Camp for Supervisors," in order to assist employees in achieving management effectiveness and driving overall performance. For general employees, we provide online courses, such as train helper, ethical conduct training, confidential information protection operations, as well as information safety and management.

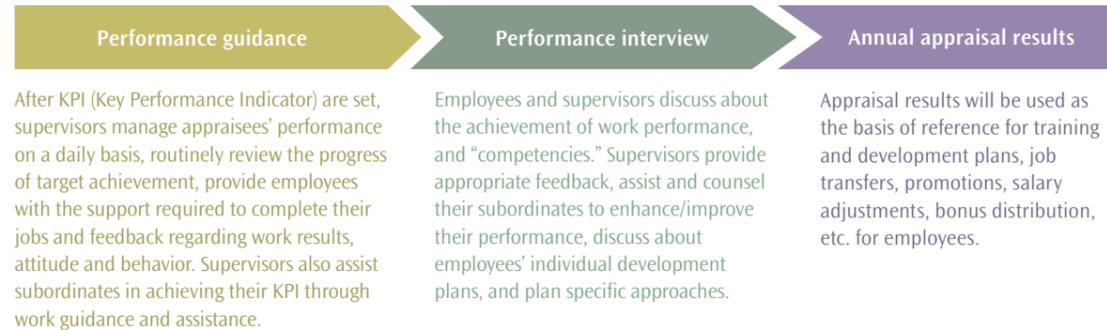
#### Developing Internal Lecturers

In response to the need for conducting nearly 3,000 safety, services and technical professional courses annually, THSRC continues to develop internal lecturers, who are selected or recommended by senior personnel or supervisors from professional technical, service, and management units. These internal lecturers can teach internal courses at THSRC after passing our internal lecturer training courses and practical exercise certification. In 2018, THSRC developed a total of 64 qualified internal lecturers. As of 2018, approximately 750 main lecturers have been developed cumulatively, where the average teaching hours of each lecturer during the year was 65 hours.

## Talent Management and Motivation

All employees and supervisors at THSRC undergo performance appraisal once every year, and are ranked according to performance appraisal results. Performance ranking are divided into five levels, namely “Excellent,” “Exceeded Expectation,” “Met Expectation Plus,” “Met Expectation,” and “Un-acceptable, Need improvement.”

### THSRC’s Performance Appraisal Process



In 2018, a total of 4,372 employees, out of 4,365 employees, underwent performance appraisal, accounting for 99.84% of the total number of employees who should undergo performance appraisal. The seven employees who did not complete performance appraisal were allowed to skip performance appraisal upon confirmation by both the employees and their supervisors as they resigned, or were on long-term sick leave, or applied for childbirth leave during the performance appraisal period.

### Promotion and Development of High-performing Talents

THSRC has long been implementing the talent development program known as “Career Path,” which designs different retention and career development paths for high-performing talents at first-line units and personnel in different positions, and integrates annual manpower inventory audit, in order to meet manpower requirements at new HSR stations. High-performing personnel at first-line units has to attend management associate training courses, and complete delegated tasks within a period of time before undergoing site supervision for promotion. After ability assessment, THSRC will promote them to management positions when such positions are vacant.

In order to ensure fair and rigorous promotion review procedures, THSRC launched self-conducted review meetings at divisions when handling promotions in 2018, in hopes of ensuring fair competition among employees and enabling THSRC to search for outstanding talents while meeting organizational developments and job allocations, in order to increase the core competitiveness of THSRC and our employees, thereby improving business performance.



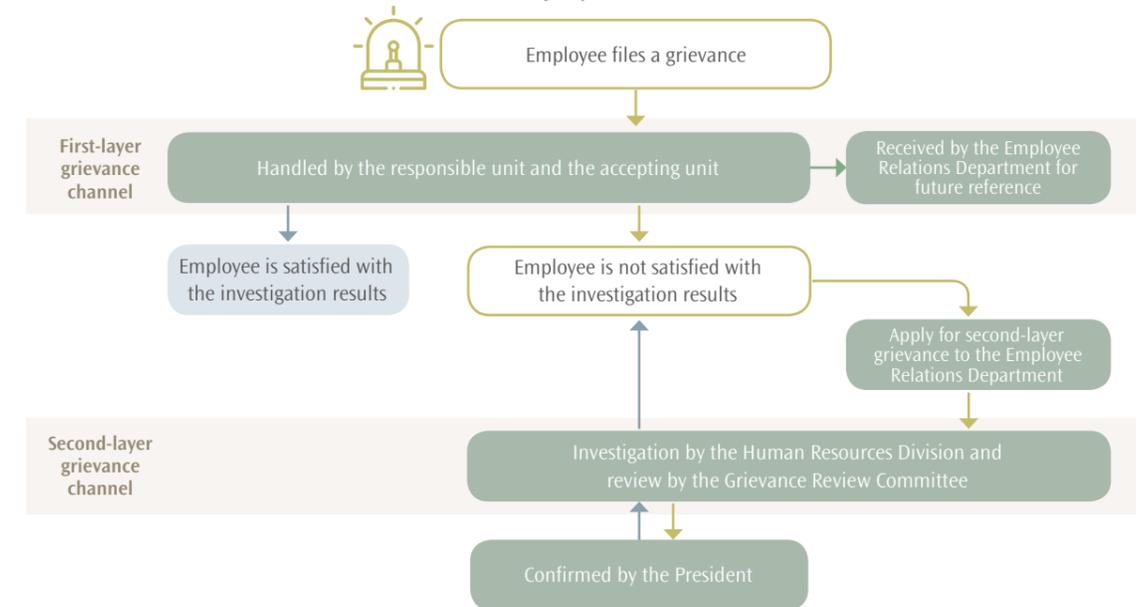
## Protection of Rights and Considerate Care

### Labor Relations

We attach great importance to talent development and motivation, and care for the protection of employee rights. The relevant protection and grievance systems are listed as follows: With regard to labor relations, THSRC has launched discussions with the THSRC Labor Union on various issues every month beginning the third quarter of 2016, in order to maintain labor-management harmony. Labor-management conferences are regularly convened every quarter at 19 HSR stations, with an issue resolution average rate of 84%. Unresolved issues are included in the following meeting for subsequent tracking.

We also strictly abide by laws and regulations, and have established multiple grievance channels to provide a safe, equal, and high-quality work environment. The processes for filing and handling grievances are shown in the following diagram. THSRC did not encounter any major labor disputes in 2018. In the future, we will continue to actively handle our colleagues' grievances and opinions in a positive manner.

### Process Flow for Employee Grievance Channels



Convening of labor-management meeting	Our first labor-management meeting was held on December 24, 2003, and our labor-management conference at business premises was held on July 1, 2016, after which labor-management meetings are held every quarter. In 2018, a total of 76 labor-management meetings were held at 19 business premises.
Establishment of the grievance appeals system	THSRC has established and implemented the “Grievance Regulation” for employees, in order to effectively implement policies and maintain employee relations.
Sexual harassment prevention and grievance system	We have established and implemented our “Sexual Harassment Prevention and Handling Regulation” in accordance with the Act of Gender Equality in Employment and “Regulations for Establishing Measures of Prevention, Correction, Complaint and Punishment of Sexual Harassment at Workplace” to ensure physical and mental safety of all employees in the workplace, strengthen prevention of sexual harassment incidents, and disseminate related information. We promote relevant information through the training program for new employees and the E-learning platform and also display our grievance hotline and fax number on our corporate website, business premises, and workplaces to effectively prevent external and internal incidences of sexual harassment.
Act of Gender Equality in Employment	THSRC has established breastfeeding rooms for passengers and staff to encourage and support breastfeeding policies.
Labor Health Protection Regulations	THSRC has established infirmaries at headquarter, OMC building and all maintenance bases, and set up with better standards than those required by the relevant laws and regulations at HSR stations, to provide passengers and employees with emergency medical assistance.
Mental Health Protection Regulation	THSRC has established the “Mental Health Protection Regulation,” which serve as the mechanism for employees' mental health protection jointly maintained by unit supervisors, accident investigation units and human source personnel in case of accidents.

In addition, with the support of the Chairman and the President, THSRC organized the Systematic employee opinion survey in May 2018 to learn about the current situation through a more comprehensive survey. Before the start of the survey, a total of six survey briefing sessions were held between April 25, 2018 and May 4, 2018 to explain the content of the survey, in hopes of examining the operational status of THSRC from employees' perspective and obtaining their actual responses. In this survey, 4,373 questionnaires were distributed, and 3,163 questionnaires were successfully collected (with the response rate at 72.3%), in which 2,852 of them were valid questionnaires (with the percentage of valid questionnaires at 65.2%). After the completion of employee opinion survey, we arranged meetings to be attended by department-level managers to draft action plans, and internal expert training courses, so that managers can propose department-level improvement plans (a total of 35 plans) based on the survey results, as well as initiate the implementation and tracking of these plans in 2019, in hopes of improving employee satisfaction indicators in the upcoming survey.

In order for the Chairman to listen to employees' voices in a more intimate manner, THSRC has organized the "Be There with the Chairman Forum" at Zuoying Maintenance Depot, Nangang Headquarter and Taoyuan OMC Building in November 2018. Participants of the forum came from all levels of THSRC. A total of 90 employees participated with 92.1% of attendance rate being recorded among those who registered. Each session was hosted by the Chairman, and was participated by the President and four senior executives. During these forums, the Chairman explained to the attendees about the concept of "ethical management, enhancing corporate governance, and fulfilling corporate social responsibility" he proposed to the senior executives on his first day in the office, and shared the results of the Systematic employee opinion survey and the duration of subsequent action plans. The Chairman also answered questions raised by our colleagues, which led to further interactions between our colleagues with senior executives.



1. Be There with the Chairman Forum held at Zuoying Depot on November 16.
2. Be There with the Chairman Forum held at Nangang Headquarters on November 23.

## Occupational Safety and Health

THSRC regards safety as the highest guiding principle for decision-making and actions, and formulates safety and health policies as our policy commitment to ensure the safety and health of passengers, workers and the public. We will continue our commitment to promote occupational safety and health goals, and improve related performance.

### Management Mechanism and Performance

THSRC regularly convenes the "Occupational Safety and Health Committee" (consisting of one chairman, one executive secretary, and 17 committee members, where seven of them are labor representatives, accounting for one-third of all committee members), which is responsible for reviewing and making decisions on major occupational safety and health issues at THSRC. When attending the Occupational Safety and Health Committee meetings every quarter, labor representatives appointed by the THSRC Labor Union will first submit safety and health-related proposals to be approved by the committee. The relevant unit will then implement the proposals according to the resolutions of the committee, and use various resources at THSRC to track and close these proposals, so that the proposals can be completed effectively.

Since the establishment, THSRC has built and maintained an occupational safety and health management system during the construction process. In 2017, THSRC completed double certification involving Taiwan Occupational Safety and Health Management System (TOSHMS) CNS 15506 and the OHSAS 18001 Health and Safety Management System (please refer to Appendices for the certificates), which covers all HSR stations, maintenance depots, facilities along the HSR line and office spaces. As the largest occupational safety and health management certifications in Taiwan, these certifications have established an important milestone for our occupational safety and health management. In July 2018, THSRC applied for the "Operation Directions for the Performance Recognition of the Occupational Safety and Health Management Systems of Business Entities," and approved under the Ministry of Labor in December the same year, thereby achieving a win-win goal of creating labor safety and sustainable management.

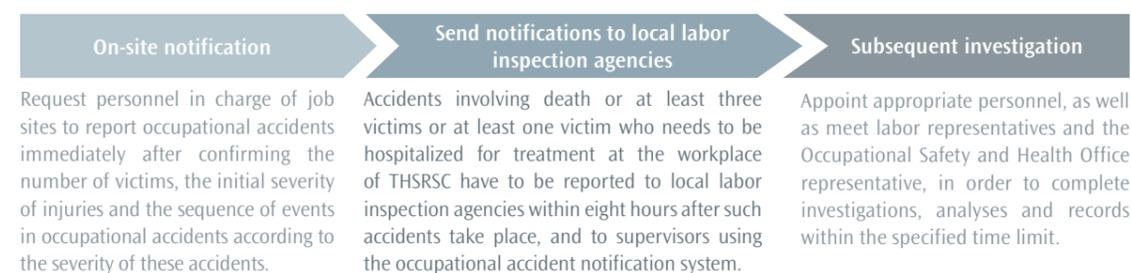
THSRC implements safety and health management targets based on quantitative and traceable indicators. Besides, THSRC sets different targets for employees, contractors and suppliers, and actively carries out measurements and supervision to inspect and audit mechanisms periodically or non-periodically, so as to implement internal safety and health management mechanisms. We have also established a complete notification system in order to effectively cope with and reduce negative impact during occupational disasters. In 2018, the achievement of targets related to safety and health management as well as the occupational safety index is listed as follows:

## Safety and Health Management Goals <sup>(Note 1)</sup> in 2018

Item	Goal <sup>(Note 2)</sup>	Actual data				
		Male	Female	Total		
Employees	Occupational accidents at the workplace	Number of persons involved in occupational accidents	≤ 4	7	10	17
		Number of days lost due to disabling injury	≤ 40	139	38	177
	Traffic-related accidents outside the workplace	Number of persons involved in traffic-related accidents	≤ 13	11	7	18
		Number of days lost due to disabling injury	≤ 166	158	430	588
Contractors and suppliers	Number of people in fatal accidents		0	0	0	0
	Number of people in accidents involving at least three victims		0	0	0	0
	Number of people in accidents involving at least one victim who needs to be hospitalized for treatment		0	0	0	0

Note: 1. The settlement date for safety and health management targets was February 28, 2019.  
 2. All the occupation accidents were truly reported without any hidden management mechanisms. The types of occupational accidents which accounted for high percentages of all occupational accidents at the workplace were falls (32%), improper actions (17%), and bumps (16%). Of all types of occupational accidents at the workplace, accidents involving motorcycle rides accounted for 82.7% of all traffic-related occupational accidents, where such accidents were mainly resulted from slipping (33%), colliding with other vehicles (32%) and being hit (22%).

### Occupational Accident Notification Process



Regarding the "Occupational Accident Notification Process," our senior executives demonstrate determination to implement "safety first," and also reward reports of false alarms and occupational accidents, in hopes of eliminating hidden and true root causes and improving potential hazards and risks. We have also taken the initiative to organize a total of 61 activities related to the "Occupational Safety and Health Week Program and Results Reporting" in cooperation with the Occupational Safety and Health Administration, such as safety and health promotion, occupational safety meetings, health inspection and management, technical counseling, safety competitions, health promotion and labor safety competitions, education and training (scooter checks and safe driving training), and disaster prevention drills. Safety awareness is internalized into the hearts of employees through the support of our leaders and the participation of all employees. In 2018, our disabling injury severity rate (SR) and frequency-severity indicator (FSI) were better than the industry average of the same parameters in the rail transportation industry from 2016 to 2018 according to statistics provided by the Occupational Safety and Health Administration, Ministry of Labor.

### Occupational Safety Index

Item	2018			2016 to 2018 average Rail transportation industry
	Male	Female	Total	
Disabling injury frequency rate (FR)	1.23	3.21	1.93	0.95
Disabling injury severity rate (SR)	24	12	20	187
Frequency-severity rate (FSR)	0.17	0.19	0.19	0.32
Number of deaths	0	0	0	---
Absence rate (AR)	1%	3%	1%	---

Note: 1. Disabling injury frequency rate (FR) = (Number of disabling injuries x 1,000,000) ÷ Total man-hours worked.  
 2. Absence rate (AR) = (Number of days absent ÷ Total number of working days) × 100%, where the number of days absent includes sick leave and work-related injury leave.  
 3. Disabling injury severity rate (SR) = (Total number of days lost × 1,000,000) ÷ Total man-hours worked.  
 4. Frequency-severity rate (FSI) =  $\sqrt{[\text{Disabling injury frequency rate (FR)} \times \text{Disabling injury severity rate (SR)}] \div 100}$   
 5. Number of deaths refers to the number of employees who died due to work-related injuries.

## Employee Health-Safety Management Measures and Health Promotion

Employees are the most important asset of a company; THSRC has established the Occupational Safety and Health Office which is responsible for coordinating various physical and health examinations, carrying out health management and analysis, as well as planning and formulating various health promotion activities. In addition, this office conducts workplace inspections, regularly implements operational environment monitoring, collects and records occupational accident statistics, and carries out investigations into potential risk factors related to work environment and organizations, external environments and personal living habits, in order to assess workplace risk factors, thereby promoting employee health.

To promote employee health and implement health management, we have set up health stations at HSR stations and medical rooms at maintenance depots, while equipping these rooms with health measuring tools, private spaces and a professional nursing consultation environment. Besides, the operations section of each HSR station and each resident office area are also equipped with rest rooms and certified breastfeeding rooms.

In addition, new employees are required to attend four days of new employee training and professional training according to their positions after reporting for duty. We establish the relevant regulations in accordance with the law, and require employees to perform their duties in accordance with these regulations. The Occupational Safety and Health Office conducts inspections based on supervision and audit plans. Every year, we organize health promotion activities and on-site health visits by medical personnel, and also conduct health examinations which are superior to those stipulated in the relevant regulations, where general employees aged 45 years old and above undergo health examination once a year, and those aged under 45 years old undergo health examination once every two years, while train personnel undergoes health examination once a year.

### Health Promotion Activities in 2018

<b>On-site health visits</b>	<ul style="list-style-type: none"> <li>In 2018, a total of 145 on-site visits by specially invited occupational medicine specialists were conducted to provide on-site services, serving a total of 300 persons. On the other hand, the Occupational Safety and Health Office served a total of 194 persons, while the Maintenance Management Division served a total of 106 persons.</li> <li>Individual cases requiring improvements or assistance from unit supervisors were submitted separately to the relevant units for approval and advice were provided by resident physicians. Advice accepted by unit supervisors were tracked and cases closed were kept for future reference.</li> </ul>
<b>Disease and epidemic prevention promotion</b>	THSRC set up the occupational safety and health column and the THSR High Speed Vision Newsletter to regularly publish new health knowledge, and conducted a variety of disease and epidemic prevention activities. A total of 22 articles related to this topic were published in 2018.
<b>E-Health Ten Thousand Steps Weight Loss Competition</b>	From March 15 to June 7, 2018, THSRC organized the "E-Health Ten Thousand Steps Weight Loss Competition." This event was participated by a total of 282 persons, where 261 participated colleagues lost a total weight of 1,014.1 kg in 12 weeks, with an average weight loss of 3.8 kg and a fat loss percentage of 2.12%.
<b>Physical fitness test</b>	A professional medical team provided consultation on test results and on-the-spot personal exercise recommendations to a total of 114 participants.
<b>Health seminars</b>	THSRC conducted 10 sessions of health seminars, which topics included sleep apnea, weight loss with health nutrition, etc. A total of 406 persons participated.

We actively promote occupational health-related measures with excellent results; hence, we have been awarded the "Badge of Accredited Healthy Workplace" by the Health Promotion Administration, Ministry of Health and Welfare, demonstrating our efforts to realize employee care and enabling us to gain high recognition for our corporate image.

## Employee Care Measures

In August 2017, THSRC established the "Care and Consolation Team" consisting of 18 members from various units, whose main responsible is to provide patients with care during hospitalization due to major accidents. The task of the team is to provide simple consultation on trauma and psychological treatment, emotional relief, consolation, medical assistance, medical insurance and bereavement compensation, and legal matters for injured or dead passengers. THSRC also organized a variety of psychological care courses to improve members' abilities to identify and determine stress and emotions. These techniques are used not only in care for injured victims, but also to develop employees' ability to assist people around them in overcoming a sense of loss or difficult times, thereby becoming a "Mutual Caring" for others and themselves.

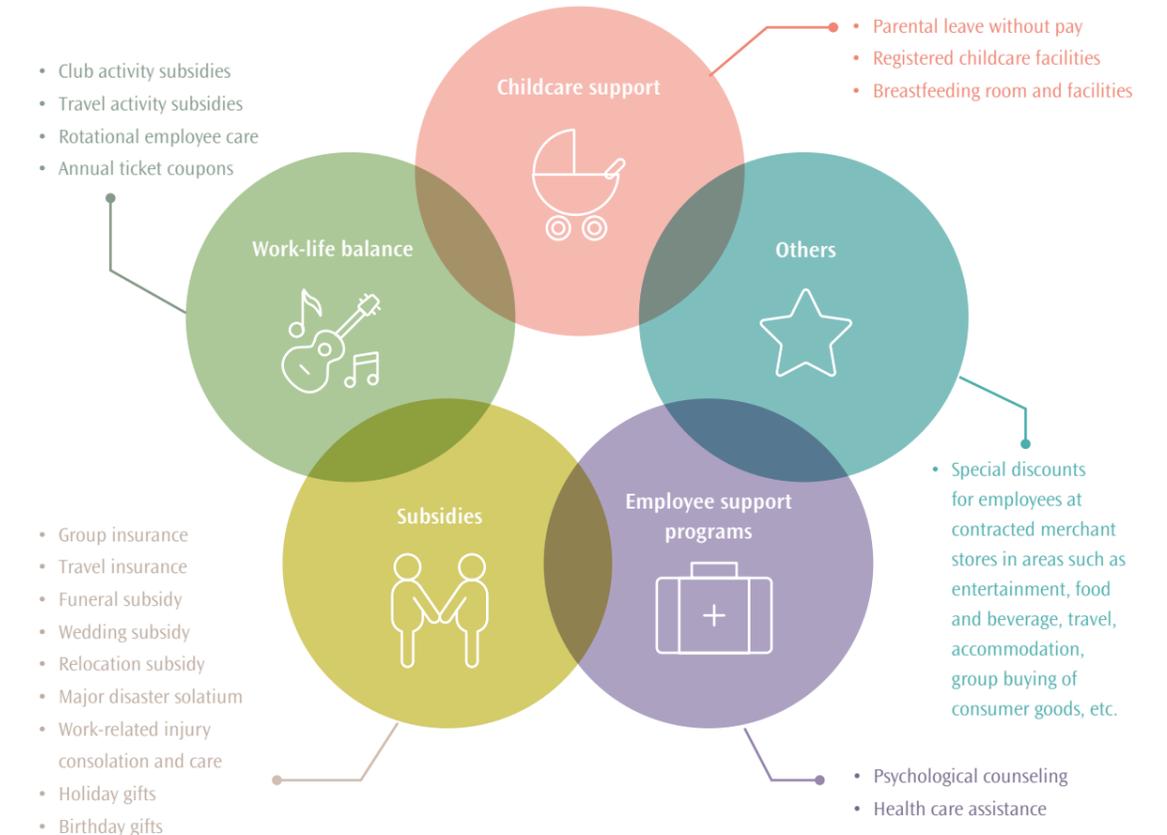
In May 2018, the Care and Consolation Team also launched member recruitment and peace-of-mind service training activities along the HSR line in north, central and south Taiwan. Furthermore, in order to prevent psychological health hazards caused by illegal activities at the workplace to employees, THSRC also invited qualified psychological consultants to hold a total of six psychological health talks for employees, which were supervised and participated by a total of 330 employees, to effectively improve the physical and mental health and safety of employees, as well as to strengthen the ability of supervisors and employees at all levels to prevent and respond to psychological hazards at the workplace.

### Experience Sharing at THSRC during a Psychological Care Course



THSRC has formulated the relevant welfare regulations, established a complete employee welfare system, and set up an employee welfare committee to handle various welfare measures and operations. We also regularly ensure the market competitiveness of our welfare plans by referencing market surveys provided by external consulting companies.

### THSRC's Employee Welfare Benefits



## Carrying for Society and Developing Local Area

### Development Platforms

#### THSR ART Together Program

To deepen links between HSR stations and local arts, we planned the “THSR ART Together Program” since 2015, to creating humanistic memories at HSR stations through art performances. We invited schools, art groups or individuals with performing experience to perform at each session for 30 minutes at HSR stations. By supporting local arts and cultural activities, we strive to convey the spirit of “Touch,” which is one of the main components of 4Ts, and demonstrate corporate social responsibility, with a view to continuously building THSRC “to be the platform for advancement and enjoyment.” In 2018, the “THSR ART Together Program” features a diverse range of performances, including dancing, traditional Chinese orchestra, modern orchestra, calligraphy, caroling, and singing.

#### Results of the “THSR ART Together Program” in 2018

Venues	Number of sessions applied	Number of performers
Taoyuan Station, Hsinchu Station, Miaoli Station, Taichung Station, Changhua Station, Yunlin Station, Chiayi Station, Tainan Station, and Zuoying Station (a total of nine stations)	100	3,166

#### “THSR ART Together Program” in 2018



#### Taiwan High Speed Rail Opening Year of Arts

With THSRC entering its second decade of operations in 2018, we continue to think about how to take a more proactive role in connecting the public closer to the beauty of Taiwan. Hence, in April of the same year, we launched “Taiwan High Speed Rail Opening Year of Arts” together with National Culture and Arts Foundation (NCAF) based on the theme titled “Encounter with Arts” to deepen the connection between HSR stations and local areas through three types of stages and levels of “Infiltration, Dissemination, and Internalization” and long-term, cross-regional planning, and further drive the spread of local cultural connotation, allowing arts to be constantly present and bringing a touch of art with depth to passengers and THSRC employees.

The first stage, “Infiltration” was launched in May 2018, and lasted till September. In the area of static visual arts, artist Michael Lin used to incorporate flower patterns of ancient houses into large visual art window stickers at Taichung Station, the THSR “T-Life” magazine, aprons of service personnel, window blinds and artistic train tickets sold via ticket vending machines at HSR stations. For dynamic performing arts, we invited young and contemporary new-generation performing art groups to perform at Taichung Station from time to time. From May to July, a total of seven professional performing art groups were invited to deliver performances at 42 sessions. On July 23, we even collaborated with the American Institute in Taiwan (AIT) to invite the National Youth Orchestra of the United States of America (NYO-USA) to deliver special performances at Taichung Station and Nangang Station.

“Taiwan High Speed Rail Opening Year of Arts” has achieved fruitful results as the engagement rate of related posts on our Facebook Page was 15.64%, which was higher than the average engagement rate on regular Facebook pages. In the first half of 2019, we will continue to launch the subsequent stages of this program, namely “Dissemination” and “Internalization” stages.

#### Static visual arts at Taiwan High Speed Rail Opening Year of Arts



Window art clings



Artistic tickets



Trolley and apron

#### Dynamic performing arts at Taiwan High Speed Rail Opening Year of Arts



#### THSR Museum

Officially launched on January 5, 2017, the “THSR Museum” is Taiwan’s first and only museum based on the corporate image of THSRC, and serves as an important platform for external image and communication. We attract local and foreign visitors to visit the museum through its rich exhibition themes, cultural talks and interactive technology devices. As of the end of 2018, a total of 1,445 groups comprising more than 45,000 visitors have visited the museum.

In 2018, the THSR Museum hosted 11 talks in spring and autumn, which were attended by a total of 711 people. The main theme of these talks was “Connecting to Sustainability - The Vision and Future of Taiwan Railway,” focusing on the “110th Anniversary of the West Coast Line” in Taiwan’s first railway space revolution. Professional lecturers were also invited to share the content of “Technology,” “Transportation,” “Taiwan,” and “Touch” in talks based on THSRC’s 4T corporate image structures. These talks attracted large numbers of attendees from the public, and with museum tour and quiz contests, attendees gave positive feedback and review at the end of these talks, with the satisfaction survey result averaging 4.7 points (out of 5 points). In addition, the museum also received railway and related professional and diplomatic delegations from Texas Central Railway, Kuala Lumpur-Singapore High Speed Rail, Vietnam, Thailand, South Korea, Japan, and Mainland China, thereby positively promoting the achievements of THSRC after commencement of operations to the world.

THSRC not only organizes arts events at HSR stations from time to time to enhance the connection between HSR stations and local areas, but also offers areas for the placement of arts merchandises in line with local government policy promotion and planning. A total of 69 government brochures applications were accepted in 2018.

## Humanistic Care

THSRC has so far become an important part of people's life. To promote interaction between urban and rural areas and drive the development of local industries, we connect 11 counties and cities, 76 townships, to strive not only realizing the characteristics of the transportation industry, but also implementing corporate social responsibility and extending love and warmth by providing support to disadvantaged groups. In 2018, THSRC has provided a cumulative total of NT\$11,508,302 in sponsorships to social welfare and care.

### High-Speed Educational Endowment Program

Since 2010, we have continuously run the "High-Speed Educational Endowment Program" in collaboration with World Vision Taiwan, Eden Social Welfare Foundation, Child Welfare League Foundation, etc., inviting the public to make donations through various fundraising platforms, including donation envelopes on train seatbacks, donation boxes on all HSR stations or online giving by scanning a QR code, with a view to assisting developmentally delayed or economic disadvantaged children in learning happily and growing up at ease. In 2018, we worked together with the After School Association of Taiwan to raise approximately NT\$8 million worth of funds. In the past nine years, this program has raised a total of around NT\$120 million in donations, benefiting nearly 22,000 disadvantaged and developmentally delayed children.

► High-Speed Educational Endowment Program:  
Creating a secret happy learning base for children in need



了解「孩子的秘密基地」，請掃描左方QR CODE  
洽詢專線：(02) 3322-2297 週一至週五09:00-18:00  
公益勸募字號：



(中)華(民)國(快)車(學)習(協)會

### Participation in Major International Events

We actively participate in major international events, such as the "2018 Asia Pacific Social Enterprise Summit," the "2018 Taiwan Lantern Festival," the "2018 World Cup Championship Night on Ketagalan Boulevard," the "2018 Swinging Skirts LPGA Taiwan Championship," etc. In addition to assisting in publicity, THSRC also offered train discounts and sponsorship to the organizers and their personnel, as well as contestants.

### THSRC Winter Outreach Blood Drive

Since 2012, in order to help major hospitals in Taiwan to store sufficient amounts of blood, THSRC has encouraged our colleagues to donate blood at 11 HSR stations and the headquarter in Nangang, especially during the end of the year when major hospitals face severe blood shortage and has also invited tourists and the public to participate in this activity. In addition, THSRC demonstrates efforts in charities and fulfilling corporate social responsibility by releasing internal instant message to colleagues. This activity is regularly held at the end of each year. In 2018, a total of 1,117 people participated in this activity and donated 1,620 bags of blood, while a total of 7,214 bags of blood were collected in the past seven years.

► THSRC employees actively donated blood to spread love during winter in 2018



### Happy Learning and Exploration

In August 2018, we planned the "Happy Learning and Exploration" event supported by the 2018 High-Speed Educational Endowment Program, in collaboration with Taoyuan Metro Corporation and Taoyuan International Airport Corporation Ltd. This event included a one-day visit to the "THSR Museum," the "Taoyuan Metro Qingpu Maintenance Depot," "Taoyuan International Airport Terminal 2," etc. THSRC Chairman Chiang Yao-Chung and After School Association of Taiwan Chairman Wu Nien-Jen served as HSR train driver and train master, respectively, and became the children's guides in the "THSR Museum," so that the children could enjoy an exciting and memorable "HSR exploration trip."

► A drawing from one of the children after participating in the "Happy Learning and Exploration"



- Sustainable Governance and Ethical Corporate Management
- Low-Carbon Train Operation and Environmental Sustainability
- Nurturing Talent and Value Cultivation
- Protection of Rights and Considerate Care
- Carrying for Society and Developing Local Area

### THSRC Smiling Train Program

A small number of rural groups or disadvantaged groups do not have the opportunity to arrange for outdoor trips often. Therefore, since 2009, we have been running the “THSRC Smiling Train Program” in collaboration with education and charity organizations in various local areas, in order to assist disadvantaged groups or individuals to take HSR rides for free or at discounted fares, so that they can feel the care and love provided by THSRC. As of 2018, we have assisted a total of 808 disadvantaged groups and 139,528 people to take HSR rides, thus sponsoring NT\$9,433,990 worth of HSR train tickets.

▶ THSRC Smiling Train Program



### Local Commitment to Jacana Conservation

THSRC participates in efforts to conserve pheasant-tailed Jacanas in Guantian, Tainan, in order to fulfill our commitment to environmental protection, and also assist in the construction of habitats for Jacanas. After the establishment of the Jacana Ecological Education Park, THSRC continues to provide sponsorship to the management unit of this park. Since 2000, THSRC has sponsored a total of over NT\$63 million into this park in order to create Taiwan’s first artificial habit restoration project jointly conducted by the government, development units and civil groups. The artificial habitat for Jacanas covered a land area of approximately 15 hectares. In order to ensure the best protection of the Jacana group and their habitat, we not only actively collaborate with experts and scholars, but also seek the participation of volunteer. According to statistics provided by Wild Bird Society of Tainan, the number of Jacanas (including females, males and fledglings) has greatly risen from 9 in 2000 to 197 in 2018. With the expansion of habitat for the Jacana group, the number of Jacanas in the Greater Tainan region was the highest in 2016 at 1,272 Jacanas, and a total of 1,292 Jacanas were recorded in 2018, thereby demonstrating the effects of preservation of Jacanas and their habitat.

In 2007, the Jacana Restored Habitat was officially renamed as the “Jacana Ecological Education Park,” which is open to the public. Since its establishment till 2018, this park has welcomed nearly 220,000 visitors. We assisted in making park instruction facilities, and designed the display area and the interaction area, in order to strengthen the education function of this park and specifically exhibit the effects of restoration works. This park not only provides the public with the opportunity to learn about the ecology of Jacanas, but has also attracted international attention, thus becoming a rare successful experience of “coexistence between development and conservation.”

### Disaster Relief Program

In order for fulfill corporate social responsibility and demonstrate humanitarian care and spirit, we have planned the “Disaster Relief Program” in the event of major natural disasters in Taiwan, and work hand in hand with the government to assist in disaster relief. Disaster relief groups or individuals who apply to this program (one hour before the ride) can take a free HSR train ride to reach the disaster location on time and quickly to help the disaster victims rebuild their homes. In 2018, we implemented this program twice. During the “Hualien Earthquake Disaster Relief Program” (from February 7, 2018 to February 28, 2018), THSRC also donated a total of NT\$5 million to the “Ministry of Health and Welfare Disaster Relief Account” for reconstruction of the disaster area. Besides, during the “823 Tropical Low Pressure Flood Relief Program” (from August 23, 2018 to September 16, 2018), THSRC contributed nearly 1,200 free HSR train tickets to actively support disaster relief efforts.

▶ “Disaster Relief Program” in 2018



### Green Energy, Environmental Protection and Sustainable Public Welfare

On April 13, 2018, THSRC organized the “Travelling with Saplings Program” at Hsinchu HSR Station, where thousands of Taiwan’s native saplings, including Oil Camellia, Orange Jasmine, Taiwan Wampee, Lanyu Podocarp, Ceylon Ardisia, Fengkang Persimmon and Taiwan Persimmon, also known as Taiwan Ebony, which were cultivated by Taiwan Forestry Research Institute, were given to passengers. Besides, kindergarten school children were also invited to collect the saplings, symbolizing that it takes a decade to grow a tree, but a hundred years to nurture a person continuously and endlessly. This “Travelling with Saplings Program” has been organized in five consecutive years since 2014, where a cumulative total of nearly 9,000 Taiwan native saplings have been given out at HSR stations. THSRC hopes that through this event, passengers traveling between north and south Taiwan can help to spread greenery to different places and enhance the importance of environmental greening.

▶ “Travelling with Saplings” event in 2018



### HSR Camps for Talent Development

In order for the basic knowledge and positive image of HSR to take root in students at all levels of education, as well as to promote and deepen railway knowledge among them, THSRC has organized summer and winter activities known as “HSR Camp” for students from universities and junior colleges, general and vocational high schools, secondary schools, as well as fifth and sixth grade students. Guided tours and related courses are arranged to lead students to understand the past history, present operations and future prospect of THSRC. In 2018, 12 batches of camp activities were held and participated by 360 people, with a total of 3,445 applicants. These camps have successfully developed potential outstanding railway talents, and enhanced THSRC’s excellent corporate image.

▶ Young students participated in 2018 HSR Camp activities



▶ THSRC colleagues and their families enjoyed a fulfilling and enriching day during “THSRC Family Day” in 2018



### THSRC Family Day

Since 2011, we have been organizing “THSRC Family Day,” inviting employees to enjoy a one-day trip together with their families. This event includes visits to maintenance depots, preparation center, operation control center, driver and service personnel training, which not only enables employees’ family members to learn about their contributions to THSRC, but also allows employees to establish a deep understanding of the work content of their colleagues at other units. In 2018, we organized eight sessions of “Family Day,” which were participated by a total of 630 people (including employees and their dependents).

## Appendices

Table 1. 2018 THSRC Industry Associations Participation

Industry association participated	Description
Chung-Hwa Railway Industry Development Association	Development and promotion of the railway industry, with the President serving as the vice chairman of the association
Chinese Institute of Transportation	Development and promotion of the railway industry
Rail Engineering Society of Taiwan	Development and promotion of the railway industry, with the Chairman serving as the 9th chairman of the society
Business Council for Sustainable Development of Taiwan	Development and promotion of corporate sustainable development
Center for Corporate Sustainability	Development and promotion of corporate sustainable development, with the Chairman serving as the advisory director of the center
Supply Management Institute ,Taiwan	Development and promotion of the transportation industry
Taiwan Association of Disaster Prevention Industry	Promotion and exchange in disaster prevention
Intelligent Transportation Society of Taiwan	Development and promotion of the transportation industry, with the President serving as the executive director of the society
Chinese Institute of Engineers	Academic and technical cultural exchange in engineering
Asia Silicon Valley Development Plan's Major League IoT	Development and promotion of the transportation industry
Taiwan Stock Affairs Association	Stock Exchanges and the Promotion of Information
Taiwan Corporate Governance Association	Development and exchange in corporate governance
The Institute of Internal Auditors-Chinese Taiwan	Development and promotion of internal audit
Computer Audit Association	Exchange and promotion of computer audit
Association of Industrial Relations, R.O.C.	Development and exchange in labor relations
Chinese Human Resource Management Association	Development and promotion of human resources
Accounting Research and Development Foundation	Exchange and promotion of accounting business
China Productivity Center, Knowledge Exchange Meeting	Exchange and promotion of cross-industry knowledge
Chinese Society for Quality	Promote quality assurance
Taiwan Visitors Association	Promote marketing business

Note: Information on meetings of THSRC Chairman and President at various industry associations in 2018 is listed as follows:

- (1) Chung-Hwa Railway Industry Development Association: Attended 1 Board of Directors' meeting.
- (2) Rail Engineering Society of Taiwan: Convened 4 Board of Supervisors' meeting.
- (3) Center for Corporate Sustainability: Attended 3 Board of Directors' meetings.
- (4) Intelligent Transportation Society of Taiwan: Attended 3 Board of Directors' meetings.

Table 2. Human Resource Structure

Category	2016		2017			
	Male	Female	Male	Female		
	Total employees		4,410			
Labor force	Labor force		2,750			
	Percentage		63%			
Fixed- term contract	Contract employees		27			
	Secondee employees		2			
	Outsourced employees		2			
	Total number of employees on fixed- term contracts		31			
Total number of employees on non-fixed term contracts		2,719		1,545		
Total		2,750		1,599		
Rank	Vice President and above		0.3%		0.1%	
	Assistant Vice President		0.7%		0.1%	
	Manager and Deputy Manager		6.4%		2.2%	
	Section Chief		6.7%		2.1%	
	General employees		85.9%		95.4%	
Education	General and vocational high school and below		6.6%		0.7%	
	University/Junior college		79.3%		90.9%	
	Masters		13.6%		8.4%	
	PhD		0.5%		0.1%	
Other indicators	Indigenous employees		0.90%		0.10%	
	Disabled employees		0.80%		0.40%	
Management level	Under 30 years old		0.0%		0.0%	
	30 to 50 years old		8.1%		3.3%	
	Over 50 years old		6.1%		1.2%	
Age	Under 30 years old		23.0%		48.8%	
	30 to 50 years old		59.3%		45.3%	
	Over 50 years old		3.5%		1.3%	

Table 3. Statistics of New Employees

Category	2016		2017	
	Male	Female	Male	Female
Train staff	7	62	2	16
Station staff	86	249	19	37
Operation control personnel	0	0	1	0
Train driver	16	1	3	1
Maintenance personnel	231	0	129	0
Others	70	67	38	30
Under 30 years old	277	337	137	60
30 to 50 years old	126	39	53	22
Over 50 years old	7	3	2	2
Total	410	379	192	84
Percentage	9.41%	8.69%	4.4%	1.9%

Table 4. Statistics of Turnover Rate

Category	2016		2017	
	Male	Female	Male	Female
Train staff	5	39	2	27
Station staff	36	95	39	105
Operation control personnel	4	0	3	3
Train driver	4	0	4	0
Maintenance personnel	53	0	75	0
Others	65	32	39	31
Under 30 years old	64	131	99	134
30 to 50 years old	55	31	40	30
Over 50 years old	48	4	23	2
Total	167	166	162	166
Percentage	3.84%	3.82%	3.67%	3.76%

Table 5. Training Hours

Unit: Hours	2016			2017		
	Male	Female	Total	Male	Female	Total
<b>All employees at THSRC</b>						
Average number of training hours per capita	98.7	99.7	99.1	144.5	106.8	130.7
Average number of training hours per training session	7.3	7.4	7.3	7.4	7.3	7.4
<b>Average number of class hours for different levels</b> (total number of training hours for a particular level/ number of employees at the particular level at the end of the year)						
Vice President and above	9.0	57.5	17.8	10.6	9.0	10.2
Assistant Vice President	19.2	215.0	37.8	7.3	14.0	7.6
Manager and Deputy Manager	146.1	44.2	128.8	17.8	16.9	17.6
Section Chief	33.7	100.4	44.0	49.7	116.3	57.4
General employees	101.5	99.9	96.0	149.3	108.7	134.1
<b>Average number of class hours for different categories</b> (number of training hours for a particular category/ number of employees for the particular category at the end of the year)						
Train staff	125.0	91.3	96.9	450.4	139.0	177.9
Station staff	91.6	119.4	109.2	204.2	146.8	166.7
Operation control personnel	191.5	248.8	203.5	109.1	862.8	247.4
Train driver	384.4	577.1	401.1	210.5	812.3	276.6
Maintenance personnel	77.6	128.9	77.6	175.3	64.0	175.2
Others	52.5	34.5	45.6	83.7	16.1	56.6

Table 6. Environmental Performance Overview

	2016	2017	2018	GRI indicator
Total energy (GJ)	2,162,939.48	2,234,113.29	2,227,147.11	GRI 302-1
Average energy consumption per passenger (kWh)	0.34	0.32	0.31	GRI 302-3
Energy savings at Taipei Headquarters (compared to 2009) (MWh)	332.66	391.01	370.65	GRI 302-4
Water conservation rate (compared to the previous year)	-7.5%	1.8%	-1.1%	GRI 303-1
General industrial waste (metric tons)	8,227.72	6,972.09	8,190.79	GRI 306-2
General industrial waste recycled (metric tons)	934.61	1,077.42	1,283.01	
General industrial waste incineration (metric tons)	7,293.11	5,894.67	6,907.78	
Hazardous industrial waste (metric tons)	0.00	0.00	0.00	
Greenhouse gas emission (metric tons CO <sub>2</sub> e): Scope 1	1,014.34	1,078.40	1,098.36	GRI 305-1
Greenhouse gas emission (metric tons CO <sub>2</sub> e): Scope 2	316,295.12	341,410.30	340,295.79	GRI 305-2



Taiwan Occupational Safety and Health Management System (TOSHMS) CNS 15506 Certificate and OHSAS 18001 Health and Safety Management System Certificate



Renewable Energy Certificate

### 溫室氣體查驗證書

證書登記號碼 : **CF 50390023 0001**  
 查驗報告號碼 : **14066761 002**  
 證書持有者 : **台灣高速鐵路股份有限公司**  
 11568 台北市南港區經貿二路 66 號 13 樓

**台灣高鐵**  
TAIWAN HIGH SPEED RAIL

查驗範圍 : 本次查驗包含:  
 - 查驗範圍涵蓋請見附件

已依照 ISO 14064-3:2006 之要求, 就 ISO 14064-1:2006 之條文內容進行查驗。查驗的過程包含:  
 - 文件審查, 訪談, 現場查驗與重新計算

基於取得的資訊進行評估, 台灣德商萊茵之查驗結論:  
 - 雙方同意本次溫室氣體查驗為“合理保證等級”  
 - 查驗的實質性要求為 5%, 全球暖化潛勢(GWP)依據 IPCC 2007 軌行, 數據與資訊為歷史性資料。  
 - 基準年為: 2016  
 - 查驗年為: 2016  
 - 碳排放總量為 46884.495 噸/二氧化碳當量(tCO<sub>2</sub>e)  
 - 直接排放為 1253.5175 噸/二氧化碳當量(tCO<sub>2</sub>e) (2.67%)  
 - 能源間接排放為 45630.9776 噸/二氧化碳當量(tCO<sub>2</sub>e) (97.33%)  
 - 其他間接排放為 0.0000 噸/二氧化碳當量(tCO<sub>2</sub>e) (0.00%)  
 - 生質燃燒排放為 0.0000 噸/二氧化碳當量(tCO<sub>2</sub>e)

有效性 : 本證書僅對查驗年度進行查驗, 非對管理系統進行驗證

證書生效期為 2017/10/06  
 台灣德商萊茵技術監理顧問股份有限公司  
 台灣 105 台北市八德路四段 758 號 11 樓

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This Verification Statement is based on the information made available to TÜV Rheinland Taiwan and the engagement conditions detailed above. Therefore, TÜV Rheinland Taiwan cannot guarantee the accuracy or correctness of this information. TÜV Rheinland Taiwan cannot be held liable by any party relying or acting upon this Verification Statement.

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### 查驗證書附件

證書登記號碼 : **CF 50390023 0001**  
 查驗報告號碼 : **14066761 002**

碳排放量 :

車站	範疇 1		範疇 2		範疇 3	小計		
	固定	移動	逸散	製程				
南港	1.5690	0.2432	1216.9771	0.0000	5678.1211	0.0000	6896.920	
台北	0.8446	1.1189	0.0060	0.0000	7724.6610	0.0000	7726.631	
板橋	1.2238	0.7379	0.0000	0.0000	6192.9740	0.0000	6194.936	
桃園	0.8499	1.7645	0.0000	0.0000	3460.6263	0.0000	3463.241	
新竹	0.5021	2.8628	0.0000	0.0000	3094.7383	0.0000	3098.103	
苗栗	0.1569	1.5406	0.0000	0.0000	1274.2831	0.0000	1275.981	
台中	2.0292	9.0090	0.0000	0.0000	5303.6583	0.0000	5314.697	
彰化	0.4707	0.8898	0.0000	0.0000	1392.0744	0.0000	1393.435	
雲林	0.3138	2.4708	0.0000	0.0000	1572.8965	0.0000	1575.683	
嘉義	0.3086	2.4267	0.0000	0.0000	2962.3429	0.0000	2965.081	
台南	0.3138	1.7034	0.0000	0.0000	2278.5107	0.0000	2280.528	
左營	0.4838	2.6976	0.0000	0.0000	4696.0790	0.0000	4699.260	
總計	<b>9.0662</b>	<b>27.4682</b>	<b>1216.9831</b>	<b>0.0000</b>	<b>45630.9776</b>	<b>0.0000</b>	<b>46884.495</b>	
					<b>2.67</b>	<b>97.33</b>	<b>0.00</b>	<b>100.00</b>

有效性 : 本證書僅對查驗年度進行查驗, 非對管理系統進行驗證

證書生效期為 2017/10/06  
 台灣德商萊茵技術監理顧問股份有限公司  
 台灣 105 台北市八德路四段 758 號 11 樓

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### 查驗證書附件

證書登記號碼 : **CF 50390023 0001**  
 查驗報告號碼 : **14066761 002**

查驗範圍涵蓋 :

- 南港車站(NAG): 11568 台北市南港區南港路一段 313 號
- 台北車站(TPE): 10041 台北市中正區北平西路 3 號
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- 嘉義車站(CHY): 61241 嘉義縣太保市高鐵路 168 號
- 台南車站(TNN): 71151 台南市歸仁區歸仁大道 100 號
- 左營車站(ZUY): 81361 高雄市左營區高鐵路 105 號

有效性 : 本證書僅對查驗年度進行查驗, 非對管理系統進行驗證

證書生效期為 2017/10/06  
 台灣德商萊茵技術監理顧問股份有限公司  
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DNV·GL

## VERIFICATION STATEMENT OF GREENHOUSE GAS ASSERTIONS

聲明書編號: 00111-2018-AG-TWN-C 發表日期: 28 December, 2018 頁次 1 / 3  
 驗證地點: 00111-2018-AG-TWN-C 發表日期: 28 December, 2018 頁次 1 / 3

茲就下列組織之溫室氣體管理報告(106年度)的驗證過程, 聲明查驗結果如下:

### 台灣高速鐵路股份有限公司

**查驗範圍**  
 立思威國際檢驗股份有限公司(DNV GL)承接台灣高速鐵路股份有限公司(下稱"被組織")之委託, 對該組織於106年度溫室氣體管理報告(下稱"該報告")中之溫室氣體主張進行查驗, 查驗範圍限定為該報告所涵蓋之十二個車站(不含軌道運輸及維修基地)之盤查邊界, 並列表於聲明書附錄中。

**查驗準則與溫室氣體方案**  
 本查驗係依照 ISO 14064-1:2006 標準, 以及一般公認涉及溫室氣體核算、計算、監測與報告等過程一致性之目的所引述之各項準則進行。  
 本查驗之執行過程與 ISO 14066:2011、ISO 14065:2013 與 ISO 14064-3:2006 等標準之要求一致。

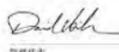
**查驗聲明**  
 依據前述所識別之各項查驗準則進行查驗, DNV GL 合理確信於 107 年 12 月 19 日提出之該報告(V.2 版)中, 所陳述之各項溫室氣體主張並無實質性差異。

Hisarlan Tim Kuo  
 正副查驗員



發出日期:  
 西元 107 年 12 月 26 日

代表查驗辦公室:  
 立思威國際檢驗股份有限公司  
 新加坡波德申文化路二號 293 號 29 樓



查驗代表

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.  
 This Verification Opinion is based on the information made available to us and the engagement conditions detailed above. Hence, DNV GL cannot guarantee the accuracy or correctness of the information. DNV GL cannot be held liable by any party relying on acting upon this Verification Opinion.  
 立思威國際檢驗股份有限公司, 新加坡波德申文化路二號 293 號 29 樓, TEL: +86-2-82537900, website: www.dnvgl.com.tw

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聲明書編號: 00111-2018-AG-TWN-C 發表日期: 28 December, 2018 頁次 2 / 3  
 驗證地點: 00111-2018-AG-TWN-C 發表日期: 28 December, 2018 頁次 2 / 3

### 聲明書補充內容

**查驗方法**  
 DNV GL 對該報告執行必要之查驗程序與隨之進行之各階段訪談, 基於所獲知之必要查證, DNV GL 相信此項查驗工作可對所表示之溫室氣體主張提供合理之依據, 該報告符合 ISO 14064-1:2006(等同 CNS 14064-1:2006)之各項要求事項。

**溫室氣體排放量之量化過程**  
 該報告的盤查期間涵蓋自 106 年 1 月 1 日至 106 年 12 月 31 日, DNV GL 合理確信該報告中各項量化過程的結果為真實、透明且可供監督。

**查驗過程的組織邊界**  
財務控制權 營運控制權 股權持分

**查驗溫室氣體類型**  
CO<sub>2</sub> CH<sub>4</sub> N<sub>2</sub>O HFCs PFCs SF<sub>6</sub>

台灣高鐵路股份有限公司於 106 年度溫室氣體管理報告所提出各場址之溫室氣體主張列表於附錄中。其中間接排放量係依據經濟部能源局於 107 年 7 月 4 日宣布之 106 年電力係數(0.554 公斤 CO<sub>2</sub>-e/度)計算, 該係數係採用且正確引用 IPCC AR4(2007)所界定之全球暖化潛勢(the Global Warming Potential, GWP)。

**查驗結果**  
不含保留意見之查驗 含保留意見之查驗 無法查驗

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聲明書編號: 00111-2018-AG-TWN-C 發表日期: 28 December, 2018 頁次 3 / 3  
 驗證地點: 00111-2018-AG-TWN-C 發表日期: 28 December, 2018 頁次 3 / 3

### 附錄

台灣高鐵路股份有限公司於 106 年度溫室氣體管理報告所提出十二個車站之溫室氣體主張:

車站	總量核算數量 (CO <sub>2</sub> -e 噸)	範圍外間接數量 (CO <sub>2</sub> -e 噸)	排放量合計 (CO <sub>2</sub> -e 噸)
高雄車站	40,2741	9,521,3071	9,561,5812
台北車站	44,3481	7,851,0927	7,895,4408
板橋車站	2,4946	5,209,0674	6,211,5621
桃園車站	244,2133	3,593,9558	3,838,1791
新竹車站	5,0871	3,347,8125	3,353,8998
苗栗車站	1,3068	1,262,4576	1,263,7644
台中車站	4,6140	5,366,1859	5,370,7799
彰化車站	1,3150	1,370,7885	1,372,1035
雲林車站	2,4765	1,617,4553	1,619,9318
嘉義車站	49,7474	3,266,6390	3,316,3864
台南車站	4,6484	2,338,8866	2,343,3350
左營車站	1,034,4713	4,788,5483	5,823,0196
加總	1,435,9965	50,533,9908	51,969,9873

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.  
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# Opinion Statement

## INDEPENDENT ASSURANCE OPINION STATEMENT

### 2018 Taiwan High Speed Rail Corporation Corporate Social Responsibility Report

The British Standards Institution is independent to Taiwan High Speed Rail Corporation (hereafter referred to as THSR in this statement) and has no financial interest in the operation of THSR other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of THSR only for the purposes of assuring its statements relating to its corporate social responsibility (CSR), more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by THSR. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to THSR only.

### Scope

The scope of engagement agreed upon with THSR includes the followings:

1. The assurance scope is consistent with the description of 2018 Taiwan High Speed Rail Corporation Corporate Social Responsibility Report.
2. The evaluation of the nature and extent of the THSR's adherence to AA1000 AccountAbility Principles (2018) and the reliability of specified sustainability performance information in this report as conducted in accordance with type 2 of AA1000 Assurance Standard (2008) with 2018 Addendum sustainability assurance engagement.

This statement was prepared in English and translated into Chinese for reference only.

### Opinion Statement

We conclude that the THSR 2018 Corporate Social Responsibility Report provides a fair view of the THSR CSR programmes and performances during 2018. The CSR report subject to assurance is materially correct without voluntary omissions based upon testing within the limitations of the scope of the assurance, the information and data provided by the THSR and the sample taken. We believe that the 2018 economic, social and environmental performance information are correctly represented. The CSR performance information disclosed in the report demonstrate THSR's efforts recognized by its stakeholders.

Our work was carried out by a team of (CSR) report assurers in accordance with the AA1000AS (2008) with 2018 Addendum. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that THSR's description of their approach to AA1000AS (2008) with 2018 Addendum and their self-declaration in accordance with GRI Standards: Core option were fairly stated.

### Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a review of issues raised by external parties that could be relevant to THSR's policies to provide a check on the appropriateness of statements made in the report
- discussion with managers on THSR's approach to stakeholder engagement. Moreover, we had sampled two external stakeholders to conduct interview
- interview with 20 staffs involved in sustainability management, report preparation and provision of report information were carried out
- review of key organizational developments
- review of the extent and maturity of the relevant accounting systems for financial and non-financial reports
- review of the findings of internal audits
- the verification of performance data and claims made in the report through meeting with managers responsible for gathering data
- review of the processes for gathering and ensuring the accuracy of data, followed data trails to initial aggregated source and checked sample data to greater depth during site visits
- the consolidated financial data are based on audited financial data, we checked that this data was consistently reproduced
- review of supporting evidence for claims made in the reports
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000AP (2018)

### Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness and Impact of AA1000AP (2018) and sustainability performance information as well as GRI Standards is set out below:

#### Inclusivity

In this report, it reflects that THSR has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for economic, social and environmental information in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the THSR's inclusivity issues and has demonstrated social responsible conduct supported by top management and implemented in all levels among organization.

#### Materiality

The THSR has established relative procedure in organization level, as the issues which were identified by all departments have been prioritized according to the extent of impact and applicable criterion for sustainable development of organization. Therefore, material issues were completely analyzed and the relative information of sustainable development was disclosed to enable its stakeholders to make informed judgments about the organization's management and performance. In our professional opinion the report covers the THSR's material issues.

#### Responsiveness

THSR has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for the THSR is developed and continually provides the opportunity to further enhance THSR's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the THSR's responsiveness issues.

#### Impact

THSR has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. THSR has established processes to monitor, measure, evaluate and manage impacts that lead to more effective decision-making and results-based management within an organization. In our professional opinion the report covers the THSR's impact issues.

#### Performance information

Based on our work described in this statement, specified sustainability performance information such as GRI Standards disclosures disclosed in this report, THSR and BSI have agreed upon to include in the scope. In our view, the data and information contained within 2018 THSR CSR Report are reliable based on procedures undertaken by means of vouching, re-tracking, re-computing and confirmation.

#### GRI Sustainability Reporting Standards (GRI Standards)

THSR provided us with their self-declaration of in accordance with GRI Standards: Core option (For each material topic covered by a topic-specific GRI Standard, comply with all reporting requirements for at least one topic-specific disclosure). Based on our review, we confirm that social responsibility and sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported or omitted. In our professional opinion the self-declaration covers the THSR's social responsibility and sustainability topics. However, the future report will be improved by the following areas:

- Continuously focus on the implementation of CSR procedures and programs as to correspond the updated relative standards.

#### Assurance level

The High level assurance provided is in accordance with AA1000AS (2008) with 2018 Addendum in our review, as defined by the scope and methodology described in this statement.

#### Responsibility

This CSR report is the responsibility of the THSR's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

#### Competency and Independence

The assurance team was composed of Lead auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064 and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:



Peter Pu  
Managing Director BSI Taiwan

2019-06-10

Taiwan Headquarters: 5th Floor, No. 39, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.

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# GRI Index

GRI Standards	Disclosure	Corresponding chapter or subchapter	Page No.	Other explanation
<b>General Disclosures (Core Option)</b>				
<b>1. Organizational profile</b>				
102-1	Name of the organization	• About this Report	2	
102-2	Activities, brands, products, and services	• Operating Bases and Services • Ticket Types and Promotions • High-quality Products with Smart Selling	12 29 30	
102-3	Location of headquarters	• Operating Bases and Services	12	
102-4	Location of operations			
102-5	Ownership and legal form	• Shareholding Structure	17	
102-6	Markets served	• Operating Bases and Services	12	
102-7	Scale of the organization	• Operating Bases and Services • Nurturing Talent and Value Cultivation	12 53	
102-8	Information on employees and other workers	• Nurturing Talent and Value Cultivation	53	
102-9	Supply chain	• Operating Bases and Services • Supply Chain Communication and Requirements	12 37	
102-10	Significant changes to the organization and its supply chain	• Operating Bases and Services	12	
102-11	Precautionary Principle or approach	• Safety Services and Responsible Transportation	19	
		• Climate Change Adaptation • Train Safety and Disaster Prevention and Response	22 23	
102-12	External initiatives	• THSRC Sustainability Strategy Blueprint	13	
102-13	Membership of associations	• Technical Exchanges • Appendix Table 1	35 63	
<b>2. Strategy</b>				
102-14	Statement from senior decision-maker	• Letter from the Chairman • Letter from the President	3 4	
<b>3. Ethics and integrity</b>				
102-16	Values, principles, standards, and norms of behavior	• Management Principles	44	
<b>4. Governance</b>				
102-18	Governance structure	• Corporate Governance Framework • Functional Committees	43 44	
<b>5. Stakeholder engagement</b>				
102-40	List of stakeholder groups	• Identification of Stakeholders	6	
102-41	Collective bargaining agreements	• Labor Relations	56	
102-42	Identifying and selecting stakeholders	• Identification of Stakeholders	6	
102-43	Approach to stakeholder engagement	• Identification and Responses to Material Topics • Quality Advancement Direction and Review	6 21	
102-44	Key topics and concerns raised	• Customer Affirmation	32	

GRI Standards	Disclosure	Corresponding chapter or subchapter	Page No.	Other explanation	
<b>6. Reporting practice</b>					
GRI 102: General Disclosures 2016	102-45	Entities included in the consolidated financial statements	• About this Report	2	
	102-46	Defining report content and topic Boundaries	• Identification and Responses to Material Topics	6	
	102-47	List of material topics			
	102-48	Restatements of information			
	102-49	Changes in reporting	• About this Report	2	
	102-50	Reporting period			
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	102-52	Reporting cycle			
	102-53	Contact point for questions regarding the report			
	102-54	Claims of reporting in accordance with the GRI Standards			
	102-55	GRI Index			• GRI Index
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	GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	• Identification and Responses to Material Topics	6
		103-2	The management approach and its components	• Disclosed under topics of concern	
103-3		Evaluation of the management approach			
<b>Material Topic</b>					
<b>Safety management</b>					
GRI 103: Management Approach 2016	103-2	The management approach and its components	• Transportation - Professional Transportation	18	
	103-3	Evaluation of the management approach	• Technology - Innovative Technology • Touch - Sustainable Care	27 41	
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	• Safety and Quality Management System	20	
GRI 403: Occupational Health and Safety 2016	403-1	Workers representation in formal joint management-worker health and safety committees	• Management Mechanism and Performance	57	
<b>Disaster prevention and major incident countermeasures</b>					
GRI 103: Management Approach 2016	103-2	The management approach and its components	• Transportation - Professional Transportation	18	
	103-3	Evaluation of the management approach			

GRI Standards	Disclosure	Corresponding chapter or subchapter	Page No.	Other explanation
Operational strategies				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>About Taiwan High Speed Rail Corporation</li> <li>Taiwan - Enhancing Local Connection</li> </ul>	11	
	103-3 Evaluation of the management approach		33	
Corporate governance				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Touch - Sustainable Care</li> </ul>	41	
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GRI 205: Anti-corruption 2016	205-2 Communication and training about anti-corruption policies and procedures	<ul style="list-style-type: none"> <li>Management Principles</li> <li>Training New Employees</li> <li>Anti-competitive and Anti-corruption Practices</li> </ul>	44 55 37	
	205-3 Confirmed incidents of corruption and actions taken	<ul style="list-style-type: none"> <li>Management Principles</li> </ul>	44	
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	<ul style="list-style-type: none"> <li>Information on Members of Governance Organization</li> </ul>	43	
Operational Performance				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>About Taiwan High Speed Rail Corporation</li> </ul>	11	
	103-3 Evaluation of the management approach			
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	<ul style="list-style-type: none"> <li>Operational Performance and Sustainable Practices</li> </ul>	16	
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Traffic dispersion and transit services				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Transportation - Professional Transportation</li> <li>Taiwan - Enhancing Local Connection</li> </ul>	18 33	
	103-3 Evaluation of the management approach			
Product price				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Transportation - Professional Transportation</li> </ul>	18	
	103-3 Evaluation of the management approach			
GRI 203: Indirect Economic Impacts 2016	203-2 Significant indirect economic impacts	<ul style="list-style-type: none"> <li>Ticket Types and Promotions</li> </ul>	29	
Legal compliance				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Touch - Sustainable Care</li> </ul>	41	
	103-3 Evaluation of the management approach			
GRI 307: Environmental Compliance	307-1 Non-compliance with environmental laws and regulations	<ul style="list-style-type: none"> <li>Legal Compliance</li> </ul>	45	
		<ul style="list-style-type: none"> <li>Neighboring Care</li> <li>Wastewater and Waste Treatment</li> </ul>	26 51	
GRI 416: Customer Health and Safety 2016	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	<ul style="list-style-type: none"> <li>High-quality Products with Smart Selling</li> </ul>	30	

GRI Standards	Disclosure	Corresponding chapter or subchapter	Page No.	Other explanation
GRI 417: Marketing and Labeling 2016	417-2 Incidents of non-compliance concerning product and service information and labeling	<ul style="list-style-type: none"> <li>Legal Compliance</li> <li>Passenger Services</li> </ul>	45	
	417-3 Incidents of non-compliance concerning marketing communications		29	
GRI 419: Socio-economic Compliance 2016	419-1 Non-compliance with laws and regulations in the social and economic area	<ul style="list-style-type: none"> <li>Legal Compliance</li> </ul>	45	
Passenger rights				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Transportation - Professional Transportation</li> <li>Technology - Innovative Technology</li> </ul>	18	
	103-3 Evaluation of the management approach		27	
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints regarding breaches of customer privacy and losses of customer data	<ul style="list-style-type: none"> <li>Information Security Management</li> </ul>	30	
Corporate image				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>About Taiwan High Speed Rail Corporation</li> <li>Taiwan - Enhancing Local Connection</li> </ul>	11	
	103-3 Evaluation of the management approach		33	
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	<ul style="list-style-type: none"> <li>Spirit of High Speed Rail and Mission of Sustainability</li> </ul>	13	
	203-2 Significant indirect economic impacts	<ul style="list-style-type: none"> <li>Connecting with Local Area</li> </ul>	34	
Protection of labor rights				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Touch - Sustainable Care</li> </ul>	41	
	103-3 Evaluation of the management approach			
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	<ul style="list-style-type: none"> <li>Labor Relations</li> </ul>	56	Adjustments made by THSRC according to major changes in operations comply with regulatory requirements
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	<ul style="list-style-type: none"> <li>Labor Relations</li> <li>Supply Chain Communication and Requirements</li> </ul>	56 37	
Product/service quality				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Transportation - Professional Transportation</li> </ul>	18	
	103-3 Evaluation of the management approach			
Transparency of information disclosure				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Technology - Innovative Technology</li> </ul>	27	
	103-3 Evaluation of the management approach			
Climate change adaptation strategies				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>Transportation - Professional Transportation</li> </ul>	18	
	103-3 Evaluation of the management approach			

GRI Standards	Disclosure	Corresponding chapter or subchapter	Page No.	Other explanation
<b>Talent placement and development</b>				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>• Touch - Sustainable Care</li> </ul>	41	
	103-3 Evaluation of the management approach			
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	<ul style="list-style-type: none"> <li>• Operating Bases and Services</li> <li>• Inclusion and Equal Employment</li> </ul>	12	
			53	
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	<ul style="list-style-type: none"> <li>• Inclusion and Equal Employment</li> </ul>	53	
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	<ul style="list-style-type: none"> <li>• Education and Training Results</li> </ul>	55	
	404-3 Percentage of employees receiving regular performance and career development reviews	<ul style="list-style-type: none"> <li>• Talent Management and Motivation</li> </ul>	56	
<b>Employee care</b>				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>• Touch - Sustainable Care</li> </ul>	41	
	103-3 Evaluation of the management approach			
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	<ul style="list-style-type: none"> <li>• Operational Performance and Sustainable Practices</li> </ul>	16	
GRI 401: Employment 2016	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	<ul style="list-style-type: none"> <li>• Employee Care Measures</li> </ul>	58	
<b>Supplier management</b>				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>• Taiwan - Enhancing Local Connection</li> </ul>	33	
	103-3 Evaluation of the management approach			
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	<ul style="list-style-type: none"> <li>• Operating Bases and Services</li> <li>• Localized Supply Chain</li> </ul>	12 39	
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	<ul style="list-style-type: none"> <li>• Supply Chain Communication and Requirements</li> </ul>	37	
<b>Reduction of noise and vibrations</b>				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>• Transportation - Professional Transportation</li> </ul>	18	
	103-3 Evaluation of the management approach			
GRI 413: Local Communities 2016	413-2 Operations with significant actual and potential negative impacts on local communities	<ul style="list-style-type: none"> <li>• Neighboring Care</li> </ul>	26	
<b>Innovative services</b>				
GRI 103: Management Approach 2016	103-2 The management approach and its components	<ul style="list-style-type: none"> <li>• Technology - Innovative Technology</li> </ul>	27	
	103-3 Evaluation of the management approach			

Comparison of the “Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies”

Item	Corresponding chapter or subchapter
Information on Salaries of Full-time Non-management Employees	<ul style="list-style-type: none"> <li>• Nurturing Talent and Value Cultivation</li> </ul>

Comparison of the “Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies”

Item	Corresponding chapter or subchapter
Chapter 1 General Principles	<ul style="list-style-type: none"> <li>• Sustainability Strategies and Goals</li> </ul>
Chapter 2 Exercising Corporate Governance	<ul style="list-style-type: none"> <li>• Sustainable Governance and Ethical Corporate Management</li> </ul>
Chapter 3 Fostering a Sustainable Environment	<ul style="list-style-type: none"> <li>• Low-Carbon Train Operation and Environmental Sustainability</li> </ul>
Chapter 4 Preserving Public Welfare	<ul style="list-style-type: none"> <li>• Partner Relationship Management and Local Supply</li> <li>• Nurturing Talent and Value Cultivation</li> <li>• Carrying for Society and Developing Local Area</li> </ul>
Chapter 5 Enhancing Disclosure of Corporate Social Responsibility Information	<ul style="list-style-type: none"> <li>• About this Report</li> </ul>
Chapter 6 Supplementary Provisions	<ul style="list-style-type: none"> <li>• Identification and Responses to Material Topics</li> </ul>



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