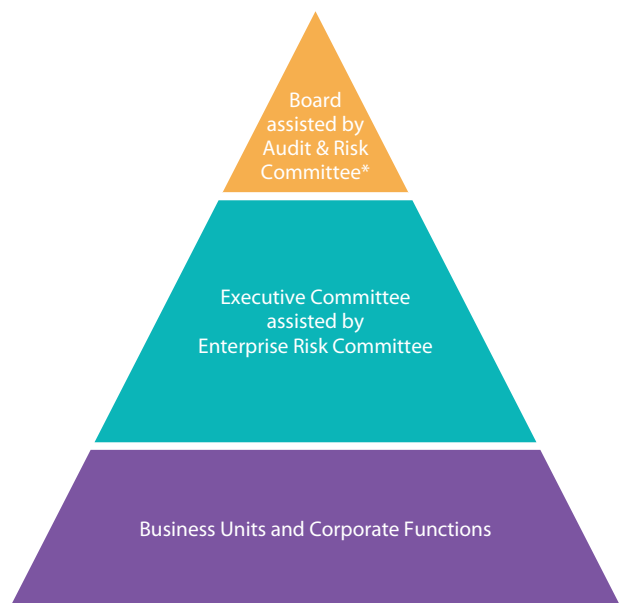# RISK MANAGEMENT

⸬ SYSTEM FEATURES

Business units across the Company embrace the Company's Enterprise Risk Management ("ERM") framework which underpins their day-to-day business activities. The framework provides a simple and effective management process to:

- Identify, assess, and effectively manage operational, functional, and enterprise risks across the Company

- Prioritise resources to manage risks

- Give management a clear view of the significant risks facing the Company

- Support decision making and project execution for better business performance

The Board, with the assistance of the Audit & Risk Committee oversees the Company's ERM framework and top risks, whereas the Executive Committee, with the support of the Enterprise Risk Committee ("ERC"), is overall accountable for the ERM policy and system implementation and continuous improvement.

The Executive Committee provides top-down views on the key risks of the Company through discussions on the quarterly enterprise risk reports and during "Blue Sky" (brainstorming) risk workshops. Two "Blue Sky" workshops were held in April and November 2023 respectively. During the April workshop, the Executives provided input to the ERM External Review (by an external independent consultant engaged in January 2023 to identify opportunities for continuous improvement), and the improvement opportunities proposed to be implemented as a result of it. During the November workshop, the Executives discussed geopolitics and the risks that the changing geopolitical situation could pose to the Company through scenario analysis, with follow-up actions identified.

The Company's risks are rigorously identified, assessed and managed. Each risk is evaluated on the likelihood of its occurrence, as well as the potential consequences, while taking existing controls into consideration. A risk matrix is used to determine a risk rating (E1 – E4), with E1 being a relatively high risk and E4 being a relatively low risk. The risk rating determines the required level of management attention and risk treatment effort, while considering the Company's risk appetite. The highest category of risk, "E1", is subject to Board, Board Committee and Executive Committee oversight.

- Exercise ongoing risk oversight
- Establish appropriate risk management strategies
- Oversee the ERM framework
- Review top risks and emerging risks
- Conduct annual review of ERM system effectiveness

- Implement and continuously improve ERM framework
- Enterprise Risk Committee
  - Chaired by Legal and Governance Director
  - Comprises representatives from all business units and corporate functions
  - Steers framework implementation and improvement
  - Reviews Company's top risks and key emerging risks
  - Reports to Executive Committee and Audit & Risk Committee quarterly, and to Board every six months

- Establish arrangements and implement risk management process consistent with the Company's ERM framework and policy
- Manage risks, and identify and implement risk controls
- Capture identified risks in risk registers for regular review and monitoring

*   See the Audit & Risk Committee Report (pages 130 to 132 of this Annual Report) for duties and work performed by the Committee in 2023.
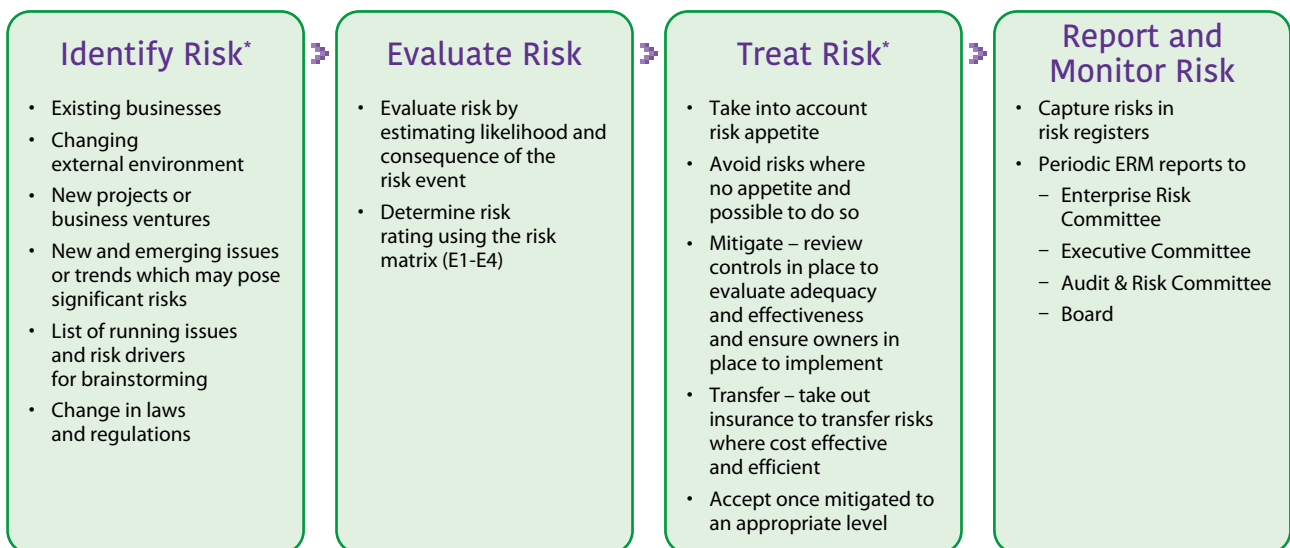
While encountering risk is inevitable in the course of business, the Company's appetite for risk varies and is particularly low in certain areas such as in relation to public and employee safety and the provision of a reliable transport service.

The Company's ERM system provides an important internal control in identifying, assessing and managing the risks affecting the Company. As a learning organisation, the Company constantly looks for improvement opportunities through internal and external reviews and studies, including learning from incidents encountered during its operations. In September 2023, Hong Kong experienced a severe rainstorm and a number of our stations and operations were impacted. Following the rain event and recovery effort, while the recovery was relatively well managed, the Company has reviewed relevant operating procedures, inspection regimes, and flood protection provisions for improvement

opportunities. Additionally, over the second half of 2023, the Company experienced three Light Rail vehicle incidents. Refresher training for Train Captains has been implemented and a human factors review is under way. Further use of technology to improve the effectiveness of control measures is being explored as a continuous improvement measure.

MANAGEMENT PROCESS FOR SIGNIFICANT RISKS

The Company adopts a proactive management process to identify, evaluate, treat, report and monitor significant risks arising from its recurrent and growth businesses and from the constantly changing business environment. Risk management strategies are developed for different areas including, but not limited to, operations, construction, finance, and environment, social and governance ("ESG").

Identify Risk*	Evaluate Risk	Treat Risk*	Report and Monitor Risk

• Existing businesses
• Changing external environment
• New projects or business ventures
• New and emerging issues or trends which may pose significant risks
• List of running issues and risk drivers for brainstorming
• Change in laws and regulations
	• Evaluate risk by estimating likelihood and consequence of the risk event
	• Determine risk rating using the risk matrix (E1-E4)
		• Take into account risk appetite
		• Avoid risks where no appetite and possible to do so
		• Mitigate – review controls in place to evaluate adequacy and effectiveness and ensure owners in place to implement
		• Transfer – take out insurance to transfer risks where cost effective and efficient
		• Accept once mitigated to an appropriate level
			• Capture risks in risk registers
			• Periodic ERM reports to
			  – Enterprise Risk Committee
			  – Executive Committee
			  – Audit & Risk Committee
			  – Board

*   Areas below are not exhaustive

The ERM Team within the Legal and Governance Function maintains a list of running issues and risk drivers pertinent to the changing business and external environments, which is used to assist the ERC in identifying potential risks that may emerge.

In addition, the ERC and the Executive Committee review the Company's enterprise risk profile and brainstorm emerging risks quarterly to ensure key risks are captured, assessed and controlled. The Board also reviews these on a six-monthly basis.

Key risk management focus areas for the Company include:

Effective and Balanced Relationship with Key Stakeholders

Key Challenges	• Diverse stakeholder expectations • Upholding public confidence in light of operational incidents • Building relationships with communities and stakeholders affected by new projects
Key Controls	• Implement proactive tailored engagement plans for different stakeholders to maintain effective communication and understanding • Fulfill the Company's operating obligations and maintain good performance

Operations

Key Challenges	• Uphold asset performance while assets are ageing • Manage interfaces from works along the operating railway to mitigate any major impact on train services • Secure sufficient Non-traffic Hours ("NTH") possessions to meet asset replacement and maintenance needs • Replace complex signalling systems in a live operating railway environment • Being resilient in the face of extreme weather events
Key Controls	• Strengthened governance of asset replacement strategy to manage asset replacement demand • Pursue continuous improvement opportunities regarding asset management • Explore use of technology to monitor asset condition and performance • Railway Protection and assurance teams to review potential railway interface hazards • Secure required NTH possessions through the NTH Office established to coordinate supply and demand across business units and invest in necessary resources • Engage independent safety assessor to assist delivery of safety critical projects to safety and quality standards • Comprehensive investigation of incidents followed by implementation of corrective and preventative actions • Enhanced operating procedures, inspection regimes and flood protection provisions, and enhanced design standards

People

Key Challenges	• Talent recruitment and retention especially for specific disciplines, new/growth business
Key Controls	• Succession planning, talent development, forward manpower planning and resourcing strategies • Employee Engagement Survey to gauge more accurately staff sentiment, addressing issues raised via action plans executed by taskforces • Proactive employee engagement through various communication channels, starting with the onboarding process

New Projects Quality, Programme and Cost

Key Challenges	• Delivering new projects on time, within budget, and to the expected standard of quality while meeting stakeholder expectations • Obtaining adequate and timely NTH possessions to deliver new projects on time while need for operational maintenance/asset replacement NTH possessions is met
Key Controls	• Deploy three lines of defence to provide project assurance, including audits and assurance to ensure compliance with processes and procedures • Revamped Capital Works Project Integrated Management System • Monitoring of project quality and progress against Key Performance Indicators • Stringent control of change and management of contingency funds • Introduction of competency and resource management framework in the Capital Works Business Unit to ensure sufficient staff with the right skills and competencies • Increased use of technology to deliver and manage projects, including the use of Building Information Modelling ("BIM") and digital supervision and record keeping • NTH Office established to coordinate supply and demand for track possessions across business units and to develop initiatives and procure resources to improve possession efficiency • Proactive engagement with Government to establish the future way of delivering railway projects

New Business Model/Technological Disruption/Competition

Key Challenges	• Current business model disrupted by new technology • Manage competition from other transport providers
Key Controls	• Invest in technology and digital solutions to strengthen business model • Monitor competition from other transport providers and implement initiatives to maintain market share

Delivery of Growth Strategy	
Key Challenges	• Keen competition for business opportunities outside Hong Kong • Business performance below bid models and assumptions • Heightened geopolitical risk
Key Controls	• Ongoing engagement with Government to establish business models for new lines in Hong Kong • Maximise branding effect of the Company and stakeholder engagement • Diversify the Company's businesses in locations outside Hong Kong and conduct regular scans for new business opportunities • Formulate and implement business improvement plans for underperforming businesses • Regular geopolitical risk pulse check surveys

Security threat (cyber/physical)	
Key Challenges	• Threat of cyber-attack on Operations and IT systems • Terrorist attack threat
Key Controls	• Enhanced corporate security governance framework and security measures • Enhanced vulnerability management to identify and remediate vulnerabilities proactively • Enhanced Identity and Access Management System to protect against unauthorised access of critical IT systems • Enhanced IT network resilience to protect against cyber-attacks • Enhanced threat intelligence engagement to improve anomaly detection and protection against endpoints, networks, and application systems • Convergence of the Security Operation Centres of IT and Operations Technology ("OT") to improve the effectiveness on detecting cyber-attacks • Conduct of regular Red Teaming exercises to enhance incident response and vulnerability discovery capabilities • Continuous monitoring of the exposure of the Company's digital assets to the public internet

The long-term financial sustainability of the Company is continuously monitored by the Board and the Executive Committee. Following the world's gradual transition towards a more manageable endemic era of COVID-19 and the boundary reopening between Hong Kong and Mainland in early 2023, our recurrent businesses have benefited from the revitalisation of the travel, tourism and retail industries. Based on the 2024 Budget and Longer-term Forecast, the Group's 10-year net debt-to-equity gearing ratios are considered reasonable. Overall, the financial position of the Group remains sound. The Group has also been implementing transformation initiatives with a view to further improving the Group's profitability in the longer-term, while the new railway and other projects with established viable business cases will also contribute to the Group's long-term financial sustainability.

The Company is currently in discussion with Government on certain new railway projects, and the funding requirements and challenges of these new projects will be carefully considered with regard to the long term financial sustainability of the Company.

ESG risks are identified through the ERM framework, and are mapped against relevant issues to determine material aspects during the materiality assessment process. As exemplified by the severe rainstorm event in September 2023 which affected a number of our stations, extreme weather events reflect a more imminent threat as they become more prevalent in Hong Kong; other climate change related physical and transitional risks, such as sea level rise and heightened regulatory regimes and disclosure requirements, are continuously monitored and managed.

Process of System Effectiveness Review

On behalf of the Executive Committee, the ERC evaluates the effectiveness of the ERM system at least annually. The Legal and Governance Director, who chairs the ERC, presented the ERM system effectiveness review results for the year ending 31 December 2023 to the Executive Committee, which confirmed its agreement with the review results on 1 February 2024 and to the Audit & Risk Committee on 26 February 2024, who likewise confirmed their agreement with the review results.

The Audit & Risk Committee, with delegated authority from the Board, has evaluated the effectiveness and adequacy of the Company's ERM system and considers it to be overall "effective and adequate", based on a number of review areas.

Factors considered during the review

- Review areas suggested in the Corporate Governance Code for the Board's annual review of the risk management system
- Annual internal certification of risk management effectiveness by Department Heads and Heads of subsidiaries/associates
- Risk management of subsidiaries/associates
- Benchmarking/roundtable/peer group engagements and interactions
- Risk management training and promotion events held in 2023

Conclusion

The ERM system was considered overall effective and adequate for the year ended 31 December 2023.

CONTINUOUS PROCESS IMPROVEMENT

Key initiatives undertaken in relation to the ERM system in 2023 include the following:

- The ERM Team continued to produce ERM Newsletters for dissemination to all staff focusing on topical issues in risk management, aiming to raise risk awareness and share good risk management practices.

- The annual Risk Awareness Week (or "RAW") campaign for promoting risk awareness and risk management discussions across the organisation was kicked off on 12 October 2023 by a keynote seminar on the theme "Building Risk Resilience". The seminar was well received and was attended by about 270 department heads and senior managers. Four half-day interactive workshops on barrier-based risk management using the Bow-Tie risk analysis method were also arranged for senior supervisors/managerial staff from different business units/functions. As part of the 2023 Corporate Safety Month and Safety Hackathon, there was also a series of Bow-Tie training sessions taught by internationally renowned safety experts. These workshops and training sessions helped uplift the risk management capability and capacity across the Company.

- In 2023, the ERC commissioned an external review of the Company's ERM system, which aimed to identify opportunities for continuous improvement. The review was conducted by an independent consultant to identify and prioritise review focus areas. The review was completed with best practice recommendations scheduled for further development and implementation in 2024, including enhancing risk register content, streamlining the enterprise level risk profile, and introducing dynamic data and dashboards to improve transparency and management of risks.

- Over the course of 2023, the Company has continued to implement its strengthened second line of defence ("2LoD") activities through the independent Assurance Management Department within the Legal and Governance Function. The Department is complemented by technical, engineering, safety and commercial Centres of Excellence. 2LoD assurance activities now span across all business units of the Company, including Capital Works, Hong Kong Transport Services, Hong Kong Property, Mainland China and Macau, and International Business units.

- We keep ourselves abreast of the latest developments in risk management through reviews with users, reviewing a variety of global risk reports, and cross-industry benchmarking and experience sharing, including through participation in UK and Hong Kong ERM Roundtable meetings.