

## Climate Change – Risks and Opportunities



### Climate Change Strategy

In 2015, the United Nations Development Programme announced the Sustainable Development Goals at the Paris Climate Conference which became effective in 2016. The agreement addressed the common standards and set ambitious goals for downsizing the global carbon emission amount to mitigate the environmental impacts caused by climate change. The Chinese government also announced its carbon pledge, aiming to achieve carbon neutrality before 2060.

VTech has the major manufacturing sites located in China. As an environmentally conscious and sustainable company, we are committed to contributing to GHG reduction and aligning our sustainable growth with the national and international climate change agenda. To this end, we have addressed the climate change challenges and developed our Climate Change Strategy to minimise the potential environmental impacts arising from our daily operation. As part of our Climate Change Strategy, we are dedicated to reducing our GHG emissions by minimising the energy consumption from our daily operation through our various energy and resources saving programmes. We have also been working closely with our suppliers and customers to reduce the carbon emissions through enhancing our environmentally friendly product designs, green logistic practices and carbon reduction programme.

VTech acknowledges that the extreme weather caused by climate change could affect our business in various ways. Our Climate Change Strategy is established to prepare for downside risk, maximise upside opportunities, and ensure our business strategies are not only following the longer term trajectory of climate change, but also sufficiently flexible to respond to the inevitable changes in the business environment. VTech also encourages our procurement team to explore eco-friendly materials and equipment. By choosing the right materials and equipment, we can ensure the product quality while further reducing the GHG emission generated through the manufacturing process. VTech continuously reviews our approach on climate change to enhance our resilience in response to the associated risks and opportunities.

The Environmental Protection Department of Guangdong Province has strengthened the VOCs emission standards for various manufacturing industries, regulating the local VOCs emissions and encouraging manufacturers to apply more environmental friendly materials throughout the manufacturing process, aiming to improve regional air quality.

We have not only developed the waterborne paint to replace solvent-based paint, but also adopted overmolding and inkjet printing technologies in the printing process to reduce the VOCs emission generated during our manufacturing process. In addition, VOCs purification system with high VOCs elimination rate was installed in one of our production facilities.

### VTech Carbon Management Approach

#### Supply Chain

- Work closely with our suppliers and require them to follow our CSR requirements
- Share our energy efficiency programmes with our suppliers and help them to reduce the environmental impacts from operations

#### Operations

- Disclose the total GHG emissions including Scope 1, 2 and 3 emissions
- Strive to reduce our GHG emission per production output
- Report our GHG information and progress in our Sustainability Report
- Review and update our climate change policies and projects annually

#### Customers

- Share GHG information with customers
- Optimise the energy efficiency in the use of our products
- Measure and reduce the carbon footprint of our key products in each generation

#### Communities

- Support local climate change policy of our sites of operation
- Update our Climate Change Strategy and carbon reduction programmes with reference to the international and local climate mitigation targets, plans, and adaptation initiatives

## Climate-related Risks and Opportunities

The Task Force on Climate-related Financial Disclosure (TCFD) was established in 2015 to provide a voluntary reporting framework for companies to consistently report climate risk to investors. Recognising the importance of assessing the climate-related risk and opportunities for a company in combating climate change and supporting the transition to a low-carbon economy, since FY2020, VTech has disclosed climate-related initiatives using the TCFD’s framework. A number of potential risks and opportunities have been identified and our RMSC performs close oversight of these potential risks to make sure they are monitored, measured, and mitigated appropriately.

In FY2022, we further analysed our climate-related risks by adopting climate scenarios during the risk assessment process. Risks exposure level and likelihood of occurrence were evaluated under two scenarios selected with reference to the TCFD recommendations. The business-as-usual scenario was selected to assess the physical risks under high GHG emissions and limited climate action. The Paris-aligned scenario was selected to help in developing our climate strategy and actions in achieving the Paris ambition of limiting the temperature at well below 2°C above pre-industrial levels. The results are shown at the climate risk matrix with risk level indicated. We strive to integrate this analysis into the existing risk management mechanism and continue to evaluate our climate risks periodically in order to reflect the latest development of the Group and the industry as well as government policy changes.

	Business-as-usual Scenario	Paris-aligned Scenario
<b>Model Referenced</b>	IPCC Representative Concentration Pathway (RCP) 8.5	International Energy Agency’s Sustainable Development Scenario (SDS)
<b>Rationale</b>	RCP 8.5 is selected to assess the impact of physical risks under a high-emissions scenario, consistent with a future with no policy changes to reduce emissions. This would enable evaluation of our adaptability to severe consequences of climate change.	SDS is selected to assess the impact of transition risks as we shift towards a low-carbon economy. This would enable our strategic planning in contributing to the Paris Agreement commitment.
<b>Assumptions</b>	Global average temperature increases by around 4°C by 2100, with high frequency and intensity of extreme weather events. <sup>7</sup>	All current net zero pledges are achieved in full, with extensive policy efforts and technological advancement to realize emissions reductions. The temperature rise could be limited to below 2°C by 2100. <sup>8</sup>



Rainwater Harvesting System at VTech Factory

<sup>7</sup> We consider the assumptions and potential physical impact (including extreme weather, flooding, heat waves, sea level rise etc.) under the Business-as-usual scenario with reference to TCFD (2020) Guidance on Risk Management Integration and Disclosure.

<sup>8</sup> We consider the assumptions and potential impact of transition risks (including shifts in energy mix, net-zero assumptions, clean technology development of the industry sector etc.) under the Paris-aligned scenario with reference to the International Energy Agency (IEA) World Energy Outlook 2021.



### Climate-related Risk Matrix



We have identified the climate change risks over the short- (0-1 year), medium- (1-5 years), and long-term (5+ years). While mitigation and adaptation measures are formulated in response to the various risks, some challenges brought by transition risks also present opportunities for us to align our strategies and action towards a positive change. We will continue to gear up and collaborate with suppliers and business partners to seize climate change opportunities through designing low carbon products and services through innovation, setting benchmark for the industry on climate action.

#### Climate-related Physical Risks

In medium term, physical risks include acute risk from extreme weather events such as flood, tropical cyclone and breaking out of natural disasters. While for long term, we anticipate chronic physical risk including water shortage, changes in precipitation pattern and extreme variability in weather patterns. Both medium-term and long-term acute and chronic physical risks affect VTech's operation which could lead to assets write-offs, increased insurance premiums and reduction in revenue from decreased production capacity and supply chain disruption. We mitigate physical risks through implementing and reviewing the Business Continuity Management (BCM) programme and other emergency measures to ensure adequate climate change resilience capacity.

#### Climate-related Transition Risks

Transition risks are also identified for moving towards a low-carbon, less polluting, greener economy. For VTech, the major transition risks are related to the shifts towards low-carbon technology which lead to increased capital expenditure in the long term. The unexpected shifts in fuel and energy price due to changing climate policies will also increase our procurement cost. In short term, we anticipate that the regulatory authorities will keep enhancing the emissions-reporting obligations which will increase our costs in meeting the new requirements. New regulatory requirements in relation to climate change on operation, product and service are expected to be released in the medium term. With the requirement for companies to bear the cost of GHG emission, such as carbon tax and GHG emissions trading scheme, we expect increases in operation costs in the long term.

Market risk in medium term has been identified as loss of market share due to changing customer preference towards sustainable products. A failure to address stakeholder concerns and their changing perceptions of an organisation's contribution to the transition to a low carbon economy can also damage our reputation.

These transition risks will lead to substantial cost increase, including operation cost, compliance cost and R&D expenditure, as well as decreased revenues arising from change in consumers' preference. We keep abreast of the regulatory changes and build internal capabilities to minimise the adverse impact of such risks on our business.

## Climate-related Opportunities

The pressure stemming from climate risk also creates significant opportunities for VTech to align our strategies with the direction of climate change. To fully seize the opportunities and mitigate the climate-related risks, VTech has established the Sustainability Plan 2025 to use sustainable materials in our products, recycle our products in a responsible way, increase the use of renewable energy and reduce the natural resources consumption in our production process, and use more eco-friendly transportation modes in our supply chain management.

In short, medium and long term, we will continue to transform towards high performance production chain and collaborate with suppliers to maximise our resources efficiency and reduce our material used, electricity consumption and thus the manufacturing costs. Our green logistic practice will lead to efficient distribution processes, minimising the transportation distance and thus the GHG emissions. We will accelerate the launch of innovative green products to address consumer preference in the medium and long terms.

By switching to lower-emission or renewable sources of energy and investing in low-GHG emission technology in the long term, it could reduce our exposure to future fossil fuel price fluctuations. We aim to increase the use of renewable energy by 100% by FY2025 compared with FY2020.

	Risks Description	Potential Financial Impact	Timeframe	Impact Level <sup>9</sup>	VTech's Response – Risks and Opportunities
<b>Physical Risks</b>					
Acute Risk	<b>Frequent extreme weather events</b>	<ul style="list-style-type: none"> <li>Reduced revenue from decreased production capacity and supply chain disruption</li> <li>Increased operation cost from increased insurance premiums, increased expenditure on emergency response</li> <li>Write-offs and early retirement of existing assets due to facility damage</li> </ul>	Mid-term	***	<b>Risk Mitigation:</b> The RMSC reviews the Business Continuity Management programme annually to ensure adequacy of contingency policy to protect employees and minimize loss under extreme weather events. Building capability on climate resilience, including necessary financial resources, equipment and employee training.
	<b>Chronic Physical Risks</b>	<ul style="list-style-type: none"> <li>Increased operation cost from expenditure on maintaining productivity</li> <li>Reduced revenue from decreased production capacity and supply chain disruption</li> <li>Increased operation cost from increased water and energy cost</li> </ul>	Long-term	**	
	<b>Shortage of natural resources</b>	<ul style="list-style-type: none"> <li>Reduced revenue from decreased production capacity and supply chain disruption</li> <li>Increased operation cost from increased water and energy cost</li> </ul>	Long-term	**	<b>Risk Mitigation:</b> Use of more efficient production and distribution processes. Close monitoring of our operation sites that are highly exposed to chronic physical risks. Integrating such risks into key business decisions such as adding new manufacturing sites.
	<b>Rise of sea levels</b>	<ul style="list-style-type: none"> <li>Increased capital costs, write-offs and early retirement of existing assets</li> <li>Reduced revenue from supply chain disruption</li> </ul>	Long-term	**	
<b>Transition Risks</b>					
Technology Risk	<b>Shifts to low-carbon technology</b>	<ul style="list-style-type: none"> <li>Increase in production and product development costs to explore eco-friendly solutions for products and services</li> <li>Uncertain investment returns on lower emissions technology</li> <li>Write-offs and early retirement of existing equipment due to adoption of new technology</li> </ul>	Long-term	***	<b>Opportunities:</b> Development and/or expansion of low GHG emission products and services through R&D and innovation and collaboration with suppliers. Strive to achieve sustainable use of energy and resources through adopting efficient production process. Transforming towards high automation and smart manufacturing model to further reduce resources consumption.

<sup>9</sup> Impact level of climate risks: "\*\*\*\*" denotes the highest impact level.



	Risks Description	Potential Financial Impact	Timeframe	Impact Level <sup>9</sup>	VTech's Response – Risks and Opportunities
Policy and Legal Risks	<b>Increased carbon pricing</b>	<ul style="list-style-type: none"> <li>Increased GHG emissions cost from carbon tax and/or GHG emissions trading scheme</li> </ul>	Long-term	*	<b>Risk Adaptation:</b> Keep updated on the carbon tax implementation and emissions trading market at the locations where we operate, and continue to develop and maintain our carbon inventory for future assessments.
	<b>Tightened climate-related regulations</b>	<ul style="list-style-type: none"> <li>New regulatory requirements in relation to climate change on operation, product and service resulting in increased operation cost, change in revenue mix and sources leading to decreased revenues</li> </ul>	Mid-term	**	<b>Risk Adaptation:</b> Developing adaptive capability, including an improved organizational structure to handle updated policy and legal requirements
	<b>Tightened emissions-reporting obligations</b>	<ul style="list-style-type: none"> <li>Enhanced emissions reporting obligations resulting in higher compliance cost</li> </ul>	Short-term	*	<b>Risk Adaptation:</b> Continue to modify our data collection system according to relevant disclosure requirements
	<b>Exposure to litigation</b>	<ul style="list-style-type: none"> <li>Increased compliance cost due to significant fines and penalty from environmental non-compliance</li> </ul>	Mid-term	*	<b>Risk Adaptation:</b> Keep abreast of the latest environmental laws and regulations through periodical reviews. Adjust internal policies when necessary to ensure compliance.
Market Risks	<b>Increased procurement cost</b>	<ul style="list-style-type: none"> <li>Increased operational cost from increased cost of raw materials due to abrupt and unexpected increase in fuel and energy price</li> </ul>	Long-term	***	<b>Risk Adaptation:</b> Maintain emergency mechanism and use of lower emission or renewable sources of energy to reduce exposure to future fossil fuel price fluctuations. Invest in R&D to develop alternative materials.
	<b>Changing customer behaviour</b>	<ul style="list-style-type: none"> <li>Decline in product competitiveness and loss of market share due to shift in consumer preference</li> </ul>	Mid-term	**	<p><b>Opportunities:</b> Accelerate the innovation of green products, developing a better competitive position to address consumer preference</p> <p>e.g. Switching to bio-based plastic or reclaimed plastics, and sourcing FSC certified materials</p>
Reputational Risks	<b>Changing investor preference</b>	<ul style="list-style-type: none"> <li>Drop in share price due to reputation damage</li> <li>Reduced capital availability due to changing investor preferences</li> </ul>	Mid-term	*	<p><b>Opportunities:</b> Develop a green branding as our long-term business strategy, supported by innovation and R&amp;D. Strengthen reporting and communication with shareholders and stakeholders on our sustainability strategy.</p>
	<b>Stigmatization of sector</b>	<ul style="list-style-type: none"> <li>Decreased revenue due to increased stakeholder concern and their changing perceptions of an organisation's contribution to the transition to a low carbon economy, leading to deteriorating image of the industry</li> </ul>	Mid-term	*	
	<b>Workforce management</b>	<ul style="list-style-type: none"> <li>Increase operational cost from employee attraction and retention as employees are more concerned with companies' environmental performances</li> </ul>	Long-term	*	